

CHAPTER

34

NAVIGATION



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-EFFECTIVE PAGES			34-11-00 (cont)			34-11-00 (cont)		
1 thru 9	Sep 15/2023		203	Sep 15/2021		R 502	Sep 15/2023	
10	BLANK		R 204	Sep 15/2023		503	May 15/2023	
34-CONTENTS			205	Sep 15/2021		504	May 15/2023	
1	Jan 15/2022		206	Sep 15/2021		505	May 15/2023	
2	May 15/2023		207	Sep 15/2021		506	Sep 15/2021	
3	Sep 15/2022		R 208	Sep 15/2023		507	Sep 15/2021	
O 4	Sep 15/2023		209	Jan 15/2023		508	Sep 15/2021	
5	Sep 15/2022		210	Jan 15/2023		R 509	Sep 15/2023	
6	May 15/2023		211	Sep 15/2021		510	Jan 15/2023	
7	Sep 15/2022		212	Sep 15/2021		511	Sep 15/2021	
8	Sep 15/2022		213	Sep 15/2021		512	Sep 15/2021	
9	Sep 15/2022		214	Sep 15/2021		513	Sep 15/2021	
10	Sep 15/2022		215	Sep 15/2021		514	Sep 15/2021	
11	Sep 15/2022		216	BLANK		R 515	Sep 15/2023	
12	Jan 15/2022		34-11-00			516	May 15/2023	
13	May 15/2022		301	Sep 15/2021		517	May 15/2023	
O 14	Sep 15/2023		302	Jan 15/2023		518	May 15/2023	
O 15	Sep 15/2023		303	Sep 15/2021		519	Sep 15/2021	
O 16	Sep 15/2023		304	Sep 15/2021		R 520	Sep 15/2023	
17	Jan 15/2022		305	Sep 15/2021		521	May 15/2023	
18	May 15/2022		306	Sep 15/2021		522	May 15/2023	
O 19	Sep 15/2023		307	Sep 15/2021		R 523	Sep 15/2023	
20	Jan 15/2022		308	Sep 15/2021		524	May 15/2023	
34-00-00			309	Sep 15/2021		525	May 15/2023	
901	Jan 15/2022		310	Sep 15/2021		R 526	Sep 15/2023	
902	Sep 15/2021		311	Sep 15/2021		527	May 15/2023	
903	Sep 15/2021		312	Sep 15/2021		528	May 15/2023	
904	Jan 15/2022		313	Sep 15/2021		R 529	Sep 15/2023	
905	Jan 15/2022		314	Sep 15/2021		530	May 15/2023	
906	Sep 15/2021		315	Sep 15/2021		531	May 15/2023	
907	Sep 15/2021		316	Sep 15/2021		532	May 15/2023	
908	Jan 15/2022		317	Sep 15/2021		533	May 15/2023	
909	Sep 15/2021		318	Sep 15/2021		534	May 15/2023	
910	BLANK		319	Sep 15/2021		R 535	Sep 15/2023	
34-11-00			320	Jan 15/2023		536	May 15/2023	
201	Sep 15/2021		34-11-00			537	May 15/2023	
202	Sep 15/2021		501	Sep 15/2021				

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-11-00 (cont)			34-11-00 (cont)			34-11-01 (cont)		
538	May 15/2023		574	May 15/2023		605	Sep 15/2021	
539	May 15/2023		575	May 15/2023		606	May 15/2023	
R 540	Sep 15/2023		576	May 15/2023		34-11-01		
541	May 15/2023		R 577	Sep 15/2023		701	Sep 15/2022	
542	May 15/2023		578	May 15/2023		702	Jan 15/2022	
543	May 15/2023		579	May 15/2023		703	Sep 15/2021	
544	May 15/2023		580	May 15/2023		704	BLANK	
545	May 15/2023		581	May 15/2023		34-11-02		
546	May 15/2023		582	May 15/2023		401	Jan 15/2023	
R 547	Sep 15/2023		583	May 15/2023		402	Sep 15/2021	
R 548	Sep 15/2023		584	May 15/2023		403	Sep 15/2021	
R 549	Sep 15/2023		585	May 15/2023		404	Sep 15/2021	
550	May 15/2023		586	May 15/2023		405	Jan 15/2023	
551	May 15/2023		587	May 15/2023		406	Sep 15/2021	
552	May 15/2023		588	May 15/2023		407	Sep 15/2021	
R 553	Sep 15/2023		589	May 15/2023		408	May 15/2023	
R 554	Sep 15/2023		590	BLANK		409	Sep 15/2021	
555	May 15/2023		34-11-01			410	Sep 15/2021	
R 556	Sep 15/2023		401	May 15/2023		411	Sep 15/2021	
R 557	Sep 15/2023		402	May 15/2023		412	Sep 15/2021	
558	May 15/2023		403	May 15/2023		413	Sep 15/2021	
559	May 15/2023		404	Sep 15/2021		414	Sep 15/2021	
560	May 15/2023		405	Sep 15/2021		34-11-02		
561	May 15/2023		406	Sep 15/2021		601	Jan 15/2023	
562	May 15/2023		407	Sep 15/2021		602	Jan 15/2023	
563	May 15/2023		408	Sep 15/2022		603	May 15/2022	
564	May 15/2023		R 409	Sep 15/2023		604	May 15/2023	
565	May 15/2023		410	May 15/2023		605	May 15/2023	
566	May 15/2023		411	May 15/2023		606	May 15/2023	
567	May 15/2023		412	May 15/2023		607	Sep 15/2021	
568	May 15/2023		413	Sep 15/2022		608	Sep 15/2021	
569	May 15/2023		414	BLANK		609	Sep 15/2021	
570	May 15/2023		34-11-01			610	Sep 15/2021	
571	May 15/2023		601	Sep 15/2021		34-16-00		
572	May 15/2023		602	May 15/2023		501	May 15/2023	
573	May 15/2023		603	May 15/2023		502	BLANK	
			604	May 15/2023				

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-21-00			34-21-00 (cont)			34-21-04 (cont)		
201	May 15/2022		R 520	Sep 15/2023		407	Sep 15/2021	
202	May 15/2022		521	May 15/2023		408	Sep 15/2021	
203	Sep 15/2021		522	May 15/2023		409	Sep 15/2021	
204	Sep 15/2021		523	May 15/2023		410	Sep 15/2021	
R 205	Sep 15/2023		524	May 15/2023		411	Sep 15/2021	
R 206	Sep 15/2023		525	May 15/2023		412	Sep 15/2021	
O 207	Sep 15/2023		526	May 15/2023		413	Sep 15/2021	
R 208	Sep 15/2023		527	May 15/2023		414	BLANK	
R 209	Sep 15/2023		528	May 15/2023		34-21-05		
R 210	Sep 15/2023		529	May 15/2023		401	May 15/2023	
O 211	Sep 15/2023		530	BLANK		R 402	Sep 15/2023	
O 212	Sep 15/2023		34-21-01			403	Sep 15/2021	
O 213	Sep 15/2023		401	Sep 15/2021		404	Sep 15/2021	
O 214	Sep 15/2023		402	Sep 15/2021		405	Sep 15/2022	
A 215	Sep 15/2023		403	Sep 15/2021		R 406	Sep 15/2023	
A 216	BLANK		404	Sep 15/2022		R 407	Sep 15/2023	
34-21-00			405	Sep 15/2022		408	BLANK	
501	May 15/2023		406	Sep 15/2022		34-21-05		
502	May 15/2023		34-21-02			R 501	Sep 15/2023	
503	May 15/2023		401	Sep 15/2021		R 502	Sep 15/2023	
504	May 15/2023		402	Sep 15/2021		R 503	Sep 15/2023	
505	May 15/2023		403	Sep 15/2021		R 504	Sep 15/2023	
506	May 15/2023		404	Sep 15/2022		R 505	Sep 15/2023	
507	May 15/2023		405	Sep 15/2021		R 506	Sep 15/2023	
508	May 15/2023		406	BLANK		R 507	Sep 15/2023	
509	May 15/2023		34-21-03			R 508	Sep 15/2023	
510	May 15/2023		401	Sep 15/2021		R 509	Sep 15/2023	
511	May 15/2023		402	Sep 15/2021		510	Sep 15/2021	
512	May 15/2023		403	Sep 15/2022		34-21-05		
513	May 15/2023		404	Sep 15/2021		601	Sep 15/2021	
514	May 15/2023		34-21-04			602	Sep 15/2021	
515	May 15/2023		401	Sep 15/2021		603	Sep 15/2021	
516	May 15/2023		402	Sep 15/2021		604	Sep 15/2021	
517	May 15/2023		403	Sep 15/2021		34-21-06		
518	May 15/2023		404	Sep 15/2021		401	Jan 15/2023	
519	May 15/2023		405	Sep 15/2021		402	Jan 15/2023	
			406	Sep 15/2021		403	Jan 15/2023	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-21-06 (cont)			34-23-00 (cont)			34-24-01 (cont)		
404	Jan 15/2023		218	May 15/2023		406	Sep 15/2022	
405	Jan 15/2023		34-23-00			407	Sep 15/2022	
406	Jan 15/2023		401	Sep 15/2021		408	BLANK	
407	Jan 15/2023		402	Sep 15/2021		34-24-02		
408	BLANK		403	May 15/2023		401	Sep 15/2021	
34-21-06			404	May 15/2023		402	Sep 15/2021	
R 601	Sep 15/2023		34-23-01			403	Sep 15/2021	
R 602	Sep 15/2023		201	Sep 15/2021		404	May 15/2022	
603	Sep 15/2021		202	Sep 15/2021		405	May 15/2022	
604	Sep 15/2021		203	Sep 15/2021		406	BLANK	
605	Sep 15/2021		204	BLANK		34-31-00		
606	BLANK		34-24-00			201	Jan 15/2023	
34-21-07			201	Sep 15/2021		202	Jan 15/2023	
401	Sep 15/2021		202	Sep 15/2021		203	Sep 15/2021	
402	Sep 15/2021		203	Sep 15/2021		204	BLANK	
403	Sep 15/2021		204	BLANK		34-31-00		
404	Sep 15/2021		34-24-00			501	Jan 15/2022	
405	Sep 15/2021		501	Sep 15/2021		502	Jan 15/2022	
406	BLANK		502	Sep 15/2021		503	Jan 15/2022	
34-23-00			503	Sep 15/2021		504	Jan 15/2022	
201	May 15/2023		504	Sep 15/2021		R 505	Sep 15/2023	
202	Sep 15/2021		R 505	Sep 15/2023		O 506	Sep 15/2023	
203	Sep 15/2021		506	May 15/2023		O 507	Sep 15/2023	
204	Sep 15/2021		507	May 15/2023		O 508	Sep 15/2023	
205	Sep 15/2022		508	May 15/2023		34-31-21		
206	Sep 15/2022		509	May 15/2023		401	Sep 15/2021	
207	Sep 15/2022		510	May 15/2023		402	Sep 15/2021	
208	Sep 15/2022		511	May 15/2023		403	Sep 15/2021	
209	Sep 15/2021		512	May 15/2023		404	Sep 15/2021	
210	Jan 15/2022		513	May 15/2023		405	May 15/2023	
211	Sep 15/2021		514	BLANK		406	Jan 15/2023	
212	Jan 15/2022		34-24-01			407	Jan 15/2023	
213	Jan 15/2022		401	Sep 15/2021		408	Jan 15/2023	
214	May 15/2023		402	Sep 15/2022		34-31-31		
215	May 15/2023		403	Sep 15/2022		R 401	Sep 15/2023	
216	May 15/2023		404	Sep 15/2022		R 402	Sep 15/2023	
217	May 15/2023		405	Sep 15/2022		403	Sep 15/2021	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-31-31 (cont)			34-31-72 (cont)			34-33-00		
404	Sep 15/2021		406	Jan 15/2023		501	May 15/2023	
R 405	Sep 15/2023		407	Jan 15/2023		502	May 15/2023	
R 406	Sep 15/2023		408	Jan 15/2023		503	May 15/2022	
R 407	Sep 15/2023		34-32-00			R 504	Sep 15/2023	
O 408	Sep 15/2023		201	Sep 15/2021		505	May 15/2022	
A 409	Sep 15/2023		202	Sep 15/2021		506	May 15/2022	
A 410	BLANK		203	Sep 15/2021		507	May 15/2022	
34-31-42			204	BLANK		508	May 15/2022	
201	May 15/2023		34-32-00			509	May 15/2022	
202	May 15/2023		501	Sep 15/2021		510	May 15/2022	
34-31-42			502	May 15/2023		511	May 15/2022	
401	Sep 15/2021		503	Jan 15/2022		512	May 15/2022	
402	Sep 15/2021		504	Jan 15/2022		513	May 15/2022	
403	Sep 15/2021		34-32-11			514	BLANK	
404	Sep 15/2021		401	May 15/2023		34-33-11		
405	Jan 15/2023		402	Sep 15/2021		401	May 15/2023	
406	Jan 15/2023		403	Sep 15/2021		402	Sep 15/2022	
34-31-52			404	May 15/2023		403	Sep 15/2021	
401	Sep 15/2021		405	Jan 15/2023		404	May 15/2023	
402	Sep 15/2021		406	Jan 15/2023		405	May 15/2023	
403	Sep 15/2022		34-33-00			406	Sep 15/2022	
404	Sep 15/2021		R 201	Sep 15/2023		R 407	Sep 15/2023	
34-31-62			R 202	Sep 15/2023		R 408	Sep 15/2023	
401	Sep 15/2021		203	Sep 15/2021		R 409	Sep 15/2023	
402	Sep 15/2021		R 204	Sep 15/2023		R 410	Sep 15/2023	
403	Sep 15/2021		O 205	Sep 15/2023		411	Sep 15/2022	
404	May 15/2023		R 206	Sep 15/2023		412	BLANK	
405	May 15/2023		R 207	Sep 15/2023		34-33-11		
406	May 15/2023		R 208	Sep 15/2023		601	Sep 15/2022	
407	May 15/2023		O 209	Sep 15/2023		602	Jan 15/2022	
408	BLANK		O 210	Sep 15/2023		34-33-21		
34-31-72			O 211	Sep 15/2023		401	Jan 15/2022	
401	Sep 15/2021		O 212	Sep 15/2023		402	Sep 15/2021	
402	Sep 15/2021		R 213	Sep 15/2023		403	Sep 15/2021	
403	Sep 15/2021		R 214	Sep 15/2023		404	Jan 15/2022	
404	Sep 15/2021		A 215	Sep 15/2023		405	Sep 15/2021	
405	May 15/2023		A 216	BLANK		406	BLANK	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-41-00			34-41-42			34-45-00 (cont)		
201	May 15/2022		401	Sep 15/2021		519	Sep 15/2021	
202	Sep 15/2021		402	Sep 15/2021		R 520	Sep 15/2023	
203	Sep 15/2021		403	Sep 15/2021		521	May 15/2023	
204	Sep 15/2021		404	Sep 15/2021		522	May 15/2023	
205	Sep 15/2021		405	Sep 15/2021		523	May 15/2023	
206	BLANK		406	Sep 15/2021		524	May 15/2023	
34-41-00			34-41-53			525	May 15/2023	
501	Sep 15/2021		401	Sep 15/2021		R 526	Sep 15/2023	
502	Sep 15/2021		402	Sep 15/2021		527	Jan 15/2023	
503	Sep 15/2021		403	Sep 15/2021		528	Jan 15/2023	
504	Sep 15/2021		404	Sep 15/2022		529	Jan 15/2023	
R 505	Sep 15/2023		405	Sep 15/2021		530	Jan 15/2023	
R 506	Sep 15/2023		406	Sep 15/2021		531	Jan 15/2023	
R 507	Sep 15/2023		34-45-00			532	Jan 15/2023	
R 508	Sep 15/2023		201	Sep 15/2021		533	Jan 15/2023	
A 509	Sep 15/2023		202	Sep 15/2021		534	BLANK	
A 510	BLANK		203	Sep 15/2021		34-45-01		
34-41-11			204	BLANK		401	Sep 15/2021	
R 401	Sep 15/2023		34-45-00			402	Sep 15/2021	
O 402	Sep 15/2023		R 501	Sep 15/2023		403	Sep 15/2021	
403	Sep 15/2021		502	May 15/2022		404	Sep 15/2021	
R 404	Sep 15/2023		503	May 15/2022		34-45-02		
R 405	Sep 15/2023		504	Sep 15/2021		401	May 15/2023	
R 406	Sep 15/2023		R 505	Sep 15/2023		402	May 15/2022	
407	Sep 15/2021		506	May 15/2023		403	Sep 15/2021	
408	May 15/2023		507	May 15/2023		404	May 15/2023	
R 409	Sep 15/2023		508	May 15/2023		405	May 15/2023	
O 410	Sep 15/2023		509	May 15/2023		406	May 15/2022	
34-41-41			510	May 15/2023		R 407	Sep 15/2023	
401	Sep 15/2021		511	May 15/2023		408	BLANK	
402	Sep 15/2021		R 512	Sep 15/2023		34-49-00		
403	Sep 15/2021		513	May 15/2023		201	May 15/2022	
404	Sep 15/2021		514	May 15/2023		R 202	Sep 15/2023	
405	Sep 15/2021		515	May 15/2023		203	May 15/2022	
406	BLANK		516	May 15/2023		204	May 15/2022	
			517	Sep 15/2021		205	May 15/2022	
			518	Sep 15/2021		206	Sep 15/2021	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-49-00 (cont)			34-49-01 (cont)			34-51-02		
R 207	Sep 15/2023		402	Sep 15/2021		401	Sep 15/2021	
R 208	Sep 15/2023		403	Sep 15/2021		402	Sep 15/2021	
R 209	Sep 15/2023		404	Jan 15/2023		403	Jan 15/2023	
R 210	Sep 15/2023		405	Jan 15/2023		404	Jan 15/2023	
O 211	Sep 15/2023		406	BLANK		34-53-00		
O 212	Sep 15/2023		34-49-02			201	Sep 15/2021	
O 213	Sep 15/2023		401	Sep 15/2021		202	Sep 15/2021	
O 214	Sep 15/2023		402	Sep 15/2021		R 203	Sep 15/2023	
O 215	Sep 15/2023		403	Sep 15/2021		R 204	Sep 15/2023	
O 216	Sep 15/2023		404	Sep 15/2021		205	Sep 15/2021	
A 217	Sep 15/2023		405	Sep 15/2021		206	Sep 15/2021	
A 218	Sep 15/2023		406	Sep 15/2021		34-53-00		
34-49-00			34-51-00			R 501	Sep 15/2023	
501	Jan 15/2023		201	Sep 15/2021		R 502	Sep 15/2023	
502	Jan 15/2023		202	Sep 15/2021		R 503	Sep 15/2023	
503	Jan 15/2023		203	Sep 15/2021		R 504	Sep 15/2023	
504	May 15/2023		204	BLANK		O 505	Sep 15/2023	
R 505	Sep 15/2023		34-51-00			O 506	Sep 15/2023	
506	May 15/2023		R 501	Sep 15/2023		O 507	Sep 15/2023	
507	May 15/2023		R 502	Sep 15/2023		O 508	Sep 15/2023	
508	May 15/2023		R 503	Sep 15/2023		O 509	Sep 15/2023	
509	May 15/2023		O 504	Sep 15/2023		O 510	Sep 15/2023	
510	May 15/2023		O 505	Sep 15/2023		O 511	Sep 15/2023	
511	May 15/2023		O 506	Sep 15/2023		O 512	Sep 15/2023	
512	May 15/2023		O 507	Sep 15/2023		O 513	Sep 15/2023	
513	May 15/2023		O 508	Sep 15/2023		O 514	Sep 15/2023	
514	May 15/2023		O 509	Sep 15/2023		O 515	Sep 15/2023	
515	May 15/2023		O 510	Sep 15/2023		O 516	Sep 15/2023	
516	May 15/2023		O 511	Sep 15/2023		517	Jan 15/2022	
517	May 15/2023		512	BLANK		518	Jan 15/2022	
518	May 15/2023		34-51-01			519	Jan 15/2022	
519	May 15/2023		401	May 15/2023		520	Jan 15/2022	
520	May 15/2023		402	May 15/2023		521	Jan 15/2022	
521	May 15/2023		403	May 15/2023		522	Jan 15/2022	
522	May 15/2023		404	May 15/2023		523	Sep 15/2022	
34-49-01			405	May 15/2023		524	May 15/2023	
401	Sep 15/2021		406	BLANK		525	May 15/2023	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-53-00 (cont)			34-53-04			34-57-00		
R 526	Sep 15/2023		401	Sep 15/2021		201	Sep 15/2021	
R 527	Sep 15/2023		402	Sep 15/2021		202	Sep 15/2021	
R 528	Sep 15/2023		403	Sep 15/2021		203	Sep 15/2021	
O 529	Sep 15/2023		404	May 15/2023		204	BLANK	
R 530	Sep 15/2023		405	May 15/2023		34-57-00		
R 531	Sep 15/2023		406	BLANK		R 501	Sep 15/2023	
R 532	Sep 15/2023		34-55-00			R 502	Sep 15/2023	
R 533	Sep 15/2023		201	Sep 15/2021		R 503	Sep 15/2023	
R 534	Sep 15/2023		202	Sep 15/2021		R 504	Sep 15/2023	
R 535	Sep 15/2023		34-55-00			34-57-01		
R 536	Sep 15/2023		501	Jan 15/2022		401	May 15/2023	
R 537	Sep 15/2023		502	Jan 15/2022		402	Sep 15/2021	
R 538	Sep 15/2023		503	May 15/2023		403	Sep 15/2021	
R 539	Sep 15/2023		504	Sep 15/2021		404	Sep 15/2021	
R 540	Sep 15/2023		505	Sep 15/2021		405	May 15/2023	
R 541	Sep 15/2023		506	Sep 15/2021		406	Jan 15/2022	
542	BLANK		507	Sep 15/2021		407	Sep 15/2021	
34-53-01			508	Sep 15/2021		408	Sep 15/2021	
401	Sep 15/2021		509	Sep 15/2021		34-57-02		
402	Sep 15/2021		510	BLANK		401	Sep 15/2021	
403	Sep 15/2021		34-55-11			402	Sep 15/2021	
404	May 15/2023		401	Sep 15/2021		403	Sep 15/2022	
405	Jan 15/2022		402	Sep 15/2021		404	BLANK	
406	Sep 15/2021		403	May 15/2023		34-57-03		
34-53-02			404	May 15/2023		401	May 15/2022	
401	Sep 15/2021		405	May 15/2023		402	May 15/2022	
402	Sep 15/2021		406	May 15/2023		403	Sep 15/2021	
403	Sep 15/2021		407	May 15/2023		404	May 15/2022	
R 404	Sep 15/2023		408	BLANK		405	May 15/2022	
R 405	Sep 15/2023		34-55-21			406	BLANK	
406	BLANK		401	Sep 15/2021		34-58-00		
34-53-03			402	Sep 15/2021		201	Jan 15/2023	
401	Sep 15/2021		403	Sep 15/2021		202	May 15/2022	
402	Sep 15/2021		404	Sep 15/2021		203	Jan 15/2023	
403	Sep 15/2022		405	Sep 15/2021		204	BLANK	
404	Sep 15/2021		406	BLANK				

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
34-58-00			34-61-00 (cont)			34-61-03 (cont)		
501	Sep 15/2021		O 511	Sep 15/2023		403	Sep 15/2021	
502	Sep 15/2021		R 512	Sep 15/2023		404	Sep 15/2021	
503	Sep 15/2021		O 513	Sep 15/2023		405	Sep 15/2021	
504	BLANK		O 514	Sep 15/2023		406	Sep 15/2021	
34-58-02			O 515	Sep 15/2023				
401	May 15/2023		O 516	Sep 15/2023				
402	Jan 15/2023		O 517	Sep 15/2023				
403	Sep 15/2021		O 518	Sep 15/2023				
404	May 15/2023		O 519	Sep 15/2023				
405	Jan 15/2023		520	BLANK				
406	Sep 15/2021		34-61-01					
407	Sep 15/2021		201	Sep 15/2022				
408	BLANK		202	Sep 15/2021				
34-61-00			203	Sep 15/2021				
201	Sep 15/2021		204	Sep 15/2021				
202	Sep 15/2021		205	Sep 15/2021				
R 203	Sep 15/2023		206	Sep 15/2021				
R 204	Sep 15/2023		207	Sep 15/2021				
R 205	Sep 15/2023		208	Sep 15/2021				
R 206	Sep 15/2023		34-61-01					
O 207	Sep 15/2023		301	Sep 15/2021				
O 208	Sep 15/2023		302	BLANK				
O 209	Sep 15/2023		34-61-01					
O 210	Sep 15/2023		401	Sep 15/2021				
A 211	Sep 15/2023		402	Sep 15/2021				
A 212	BLANK		403	Sep 15/2021				
34-61-00			404	Sep 15/2022				
R 501	Sep 15/2023		405	Sep 15/2022				
R 502	Sep 15/2023		406	BLANK				
R 503	Sep 15/2023		34-61-02					
R 504	Sep 15/2023		401	Sep 15/2021				
R 505	Sep 15/2023		402	Sep 15/2021				
R 506	Sep 15/2023		R 403	Sep 15/2023				
R 507	Sep 15/2023		404	Sep 15/2021				
O 508	Sep 15/2023		34-61-03					
O 509	Sep 15/2023		401	Sep 15/2021				
O 510	Sep 15/2023		402	Sep 15/2021				

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

34-EFFECTIVE PAGES



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>NAVIGATION - DDG MAINTENANCE PROCEDURES</u>	34-00-00		901	SIA ALL
DDG 34-33-01 Radio Altimeter Systems Inoperative - Preparation TASK 34-00-00-040-801			901	SIA ALL
DDG 34-33-01 Radio Altimeter Systems Inoperative - Restoration TASK 34-00-00-440-801			903	SIA ALL
DDG 34-45-01 Traffic Collision and Avoidance System (TCAS) Inoperative - Preparation TASK 34-00-00-040-802			903	SIA ALL
DDG 34-45-01 Traffic Collision and Avoidance System (TCAS) Inoperative - Restoration TASK 34-00-00-440-802			903	SIA ALL
DDG 34-58-01B Global Positioning System (GPS) Inoperative - Preparation TASK 34-00-00-040-804			904	SIA ALL
DDG 34-61-01-01 Flight Management Computer System (FMCS) - Computer Inoperative - Preparation TASK 34-00-00-040-803			904	SIA ALL
DDG 34-61-01-01 Flight Management Computer System (FMCS) - Computer Inoperative - Restoration TASK 34-00-00-440-803			908	SIA ALL
<u>STATIC AND TOTAL AIR PRESSURE SYSTEM - MAINTENANCE PRACTICES</u>	34-11-00		201	SIA ALL
Static and Total Air Pressure System - Deactivation TASK 34-11-00-040-801			201	SIA ALL
Static and Total Air Pressure System - Activation TASK 34-11-00-440-801			203	SIA ALL
Captain's Total Air Pressure System - Pressurization TASK 34-11-00-790-801			203	SIA ALL
Static and Total Air Pressure System - Pressurization TASK 34-11-00-790-802			207	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>STATIC AND TOTAL AIR PRESSURE SYSTEM - SERVICING</u>	34-11-00		301	SIA ALL
Pitot Static System - Flushing TASK 34-11-00-170-802			301	SIA ALL
Pitot Static System - Draining TASK 34-11-00-680-801			319	SIA ALL
Pitot System - Detailed Inspection of Drains TASK 34-11-00-210-801			319	SIA ALL
Static System - Detailed Inspection of Drains TASK 34-11-00-210-802			320	SIA ALL
<u>STATIC AND TOTAL AIR PRESSURE SYSTEM - ADJUSTMENT/TEST</u>	34-11-00		501	SIA ALL
Left Static System Low-range Leak Test TASK 34-11-00-790-803			501	SIA ALL
Right Static System Low-range Leak Test TASK 34-11-00-790-804			509	SIA ALL
Alternate Static System Low-range Leak Test TASK 34-11-00-790-805			514	SIA ALL
Left Pitot System Leak Test TASK 34-11-00-790-806			519	SIA ALL
Right Pitot System Leak Test TASK 34-11-00-790-807			523	SIA ALL
Alternate Pitot System Leak Test TASK 34-11-00-790-808			526	SIA ALL
Left Static System Full-range Leak Test TASK 34-11-00-790-809			529	SIA ALL
Right Static System Full-range Leak Test TASK 34-11-00-790-810			534	SIA ALL
Alternate Static System Full-range Leak Test TASK 34-11-00-790-811			539	SIA ALL
Altimetry System Test TASK 34-11-00-780-801			546	SIA ALL
Alternative Test: PFD - Static System Only TASK 34-11-00-780-802			577	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>PITOT PROBE - REMOVAL/INSTALLATION</u>	34-11-01		401	SIA ALL
Pitot Probe - Removal TASK 34-11-01-000-801			401	SIA ALL
Pitot Probe - Installation TASK 34-11-01-400-801			409	SIA ALL
<u>PITOT PROBE - INSPECTION/CHECK</u>	34-11-01		601	SIA ALL
Pitot Probe Detailed Inspection TASK 34-11-01-200-801			601	SIA ALL
Pitot Probe Special Detailed Inspection TASK 34-11-01-200-802			602	SIA ALL
<u>PITOT PROBE - CLEANING/PAINTING</u>	34-11-01		701	SIA ALL
Pitot Probe Cleaning TASK 34-11-01-100-801			701	SIA ALL
<u>STATIC PORT - REMOVAL/INSTALLATION</u>	34-11-02		401	SIA ALL
Primary Static Port Removal TASK 34-11-02-020-801			401	SIA ALL
Primary Static Port Installation TASK 34-11-02-400-801			405	SIA ALL
Alternate Static Port Removal TASK 34-11-02-000-801			407	SIA ALL
Alternate Static Port Installation TASK 34-11-02-400-802			412	SIA ALL
<u>STATIC PORT - INSPECTION/CHECK</u>	34-11-02		601	SIA ALL
Static Port - Detailed Inspection TASK 34-11-02-200-801			601	SIA ALL
Static Port - Special Detailed Inspection TASK 34-11-02-200-802			602	SIA ALL
<u>MACH AIRSPEED WARNING SYSTEM - ADJUSTMENT/TEST</u>	34-16-00		501	SIA ALL
Mach Airspeed Warning System - Aural Warning Discrete Output Test TASK 34-16-00-730-801			501	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>AIR DATA INERTIAL REFERENCE SYSTEM - MAINTENANCE PRACTICES</u>	34-21-00		201	SIA ALL
Air Data Inertial Reference System - Deactivation TASK 34-21-00-040-801			201	SIA ALL
Air Data Inertial Reference System - Activation TASK 34-21-00-440-801			202	SIA ALL
Air Data Inertial Reference System - Alignment from the FMC CDU TASK 34-21-00-820-801			203	SIA ALL
Air Data Inertial Reference System - Alignment from the ISDU TASK 34-21-00-820-802			206	SIA ALL
Air Data Inertial Reference System - Automatic Alignment from the IRS MSU TASK 34-21-00-820-803			209	SIA 005-999; SIA 001-004 POST SB 737-34-3141
IR Radial Position Error Check TASK 34-21-00-200-801			211	SIA ALL
Inertial Reference Residual Groundspeed Error Check TASK 34-21-00-200-802			215	SIA ALL
<u>AIR DATA INERTIAL REFERENCE SYSTEM - ADJUSTMENT/TEST</u>	34-21-00		501	SIA ALL
Air Data Inertial Reference System - Operational Test TASK 34-21-00-710-801			501	SIA ALL
Inertial Reference System Source Select - Operational Test TASK 34-21-00-710-802			505	SIA ALL
Inertial Reference - System Test TASK 34-21-00-730-801			509	SIA ALL
Air Data Reference - System Test TASK 34-21-00-730-802			518	SIA ALL
<u>AIR DATA INERTIAL REFERENCE UNIT - REMOVAL/INSTALLATION</u>	34-21-01		401	SIA ALL
Air Data Inertial Reference Unit Removal TASK 34-21-01-000-801			401	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
Air Data Inertial Reference Unit Installation TASK 34-21-01-400-801			404	SIA ALL
<u>INERTIAL SYSTEM DISPLAY UNIT - REMOVAL/INSTALLATION</u>	34-21-02		401	SIA ALL
Inertial System Display Unit Removal TASK 34-21-02-000-801			401	SIA ALL
Inertial System Display Unit Installation TASK 34-21-02-400-801			404	SIA ALL
<u>IRS MODE SELECT UNIT - REMOVAL/INSTALLATION</u>	34-21-03		401	SIA ALL
IRS Mode Select Unit Removal TASK 34-21-03-000-801			401	SIA ALL
IRS Mode Select Unit Installation TASK 34-21-03-400-801			403	SIA ALL
<u>AIR DATA MODULE - REMOVAL/INSTALLATION</u>	34-21-04		401	SIA ALL
Pitot Air Data Module Removal TASK 34-21-04-000-801			401	SIA ALL
Pitot Air Data Module Installation TASK 34-21-04-400-801			405	SIA ALL
Static Air Data Module Removal TASK 34-21-04-000-802			407	SIA ALL
Static Air Data Module Installation TASK 34-21-04-400-802			411	SIA ALL
<u>ANGLE OF ATTACK SENSOR - REMOVAL/INSTALLATION</u>	34-21-05		401	SIA ALL
Angle of Attack Sensor Removal TASK 34-21-05-000-801			401	SIA ALL
Angle of Attack Sensor - Installation TASK 34-21-05-400-801			405	SIA ALL
<u>ANGLE OF ATTACK SENSOR - ADJUSTMENT/TEST</u>	34-21-05		501	SIA ALL
Angle of Attack Sensor System Test TASK 34-21-05-730-801			501	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>ANGLE OF ATTACK SENSOR - INSPECTION/CHECK</u>	34-21-05		601	SIA ALL
Angle of Attack (AOA) Sensor - Inspection TASK 34-21-05-200-801			601	SIA ALL
<u>TOTAL AIR TEMPERATURE PROBE - REMOVAL/INSTALLATION</u>	34-21-06		401	SIA ALL
Total Air Temperature Probe - Removal TASK 34-21-06-000-801			401	SIA ALL
Total Air Temperature Probe - Installation TASK 34-21-06-400-801			404	SIA ALL
<u>TOTAL AIR TEMPERATURE PROBE - INSPECTION/CHECK</u>	34-21-06		601	SIA ALL
Total Air Temperature Probe - Inspection TASK 34-21-06-000-802			601	SIA ALL
<u>IRS MASTER CAUTION UNIT - REMOVAL/INSTALLATION</u>	34-21-07		401	SIA ALL
IRS Master Caution Unit Removal TASK 34-21-07-000-801			401	SIA ALL
IRS Master Caution Unit Installation TASK 34-21-07-400-801			404	SIA ALL
<u>STANDBY MAGNETIC COMPASS - MAINTENANCE PRACTICES</u>	34-23-00		201	SIA ALL
Standby Magnetic Compass - Deactivation TASK 34-23-00-040-801			201	SIA ALL
Standby Magnetic Compass - Activation TASK 34-23-00-440-801			204	SIA ALL
Standby Magnetic Compass Calibrator Procedure TASK 34-23-00-820-801			204	SIA ALL
Standby Magnetic Compass Taxi/Tow Around Procedure TASK 34-23-00-820-802			210	SIA ALL
Standby Magnetic Compass - Degaussing TASK 34-23-00-820-803			213	SIA ALL
Standby Magnetic Compass System (Spot Check) - Inspection TASK 34-23-00-730-801			217	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>STANDBY MAGNETIC COMPASS - REMOVAL/INSTALLATION</u>	34-23-00		401	SIA ALL
Standby Magnetic Compass Removal TASK 34-23-00-000-801			401	SIA ALL
Standby Magnetic Compass Installation TASK 34-23-00-400-801			403	SIA ALL
<u>STANDBY MAGNETIC COMPASS LIGHT - MAINTENANCE PRACTICES</u>	34-23-01		201	SIA ALL
Standby Magnetic Compass Light - Removal TASK 34-23-01-000-801			201	SIA ALL
Standby Magnetic Compass Light - Installation TASK 34-23-01-400-801			203	SIA ALL
<u>INTEGRATED STANDBY FLIGHT DISPLAY SYSTEM- MAINTENANCE PRACTICES</u>	34-24-00		201	SIA ALL
Integrated Standby Flight Display System - Deactivation TASK 34-24-00-040-801			201	SIA ALL
Standby Attitude Reference System - Activation TASK 34-24-00-440-801			203	SIA ALL
<u>INTEGRATED STANDBY FLIGHT DISPLAY SYSTEM - ADJUSTMENT/TEST</u>	34-24-00		501	SIA ALL
Integrated Standby Flight Display System - Operational Test TASK 34-24-00-710-801			501	SIA ALL
Integrated Standby Flight Display System - System Test TASK 34-24-00-730-801			504	SIA ALL
Integrated Standby Flight Display Dedicated Battery System - Operational Test TASK 34-24-00-710-802			510	SIA ALL
<u>INTEGRATED STANDBY FLIGHT DISPLAY - REMOVAL/INSTALLATION</u>	34-24-01		401	SIA ALL
Integrated Standby Flight Display (ISFD) Removal TASK 34-24-01-000-802			401	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
Integrated Standby Flight Display (ISFD) Installation TASK 34-24-01-400-802			405	SIA ALL
<u>ISFD DEDICATED BATTERY CHARGER - REMOVAL/INSTALLATION</u>	34-24-02		401	SIA ALL
ISFD Dedicated Battery Charger Removal TASK 34-24-02-000-801			401	SIA ALL
ISFD Dedicated Battery Charger Installation TASK 34-24-02-400-801			404	SIA ALL
<u>INSTRUMENT LANDING SYSTEM - MAINTENANCE PRACTICES</u>	34-31-00		201	SIA ALL
Instrument Landing System - Deactivation TASK 34-31-00-040-801			201	SIA ALL
Instrument Landing System - Activation TASK 34-31-00-440-801			202	SIA ALL
<u>INSTRUMENT LANDING SYSTEM - ADJUSTMENT/TEST</u>	34-31-00		501	SIA ALL
Instrument Landing System - Operational Test TASK 34-31-00-710-801			501	SIA ALL
Instrument Landing System - System Test TASK 34-31-00-730-801			505	SIA ALL
<u>ILS GLIDE SLOPE ANTENNA - REMOVAL/INSTALLATION</u>	34-31-21		401	SIA ALL
ILS Glide Slope Antenna Removal TASK 34-31-21-000-801			401	SIA ALL
ILS Glide Slope Antenna Installation TASK 34-31-21-400-801			405	SIA ALL
<u>LOCALIZER ANTENNA - REMOVAL/INSTALLATION</u>	34-31-31		401	SIA ALL
Localizer Antenna Removal TASK 34-31-31-000-801			401	SIA ALL
Localizer Antenna Installation TASK 34-31-31-400-801			405	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>MULTI-MODE RECEIVER - MAINTENANCE PRACTICES</u>	34-31-42		201	SIA 006-999
MMR Software Installation with Onboard Network System TASK 34-31-42-470-801			201	SIA 006-999
MMR Configuration Check TASK 34-31-42-750-801			202	SIA 006-999
<u>MULTI-MODE RECEIVER - REMOVAL/INSTALLATION</u>	34-31-42		401	SIA ALL
Multi-Mode Receiver - Removal TASK 34-31-42-000-801			401	SIA ALL
Multi-Mode Receiver - Installation TASK 34-31-42-400-801			404	SIA ALL
<u>NAVIGATION CONTROL PANEL - REMOVAL/INSTALLATION</u>	34-31-52		401	SIA ALL
Navigation Control Panel Removal TASK 34-31-52-000-801			401	SIA ALL
Navigation Control Panel Installation TASK 34-31-52-400-801			403	SIA ALL
<u>RF POWER DIVIDER - REMOVAL/INSTALLATION</u>	34-31-62		401	SIA 001-005
RF Power Divider Removal TASK 34-31-62-000-801			401	SIA 001-005
RF Power Divider Installation TASK 34-31-62-400-801			404	SIA 001-005
<u>LOCALIZER ANTENNA SWITCH - REMOVAL/INSTALLATION</u>	34-31-72		401	SIA 001-005
Localizer Antenna Switch Removal TASK 34-31-72-000-801			401	SIA 001-005
Localizer Antenna Switch Installation TASK 34-31-72-400-801			405	SIA 001-005
<u>MARKER BEACON SYSTEM - MAINTENANCE PRACTICES</u>	34-32-00		201	SIA ALL
Marker Beacon System - Deactivation TASK 34-32-00-040-801			201	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
Marker Beacon System - Activation TASK 34-32-00-440-801			202	SIA ALL
<u>MARKER BEACON SYSTEM - ADJUSTMENT/TEST</u>	34-32-00		501	SIA ALL
Marker Beacon System - Operational Test TASK 34-32-00-710-801			501	SIA ALL
Marker Beacon System - System Test TASK 34-32-00-730-801			502	SIA ALL
<u>MARKER BEACON ANTENNA - REMOVAL/INSTALLATION</u>	34-32-11		401	SIA ALL
Marker Beacon Antenna Removal TASK 34-32-11-000-801			401	SIA ALL
Marker Beacon Antenna Installation TASK 34-32-11-400-801			404	SIA ALL
<u>LOW RANGE RADIO ALTIMETER (LRRA) SYSTEM - MAINTENANCE PRACTICES</u>	34-33-00		201	SIA ALL
Low Range Radio Altimeter System - Deactivation TASK 34-33-00-040-801			201	SIA ALL
Low Range Radio Altimeter System - Activation TASK 34-33-00-440-801			204	SIA ALL
Radio Altitude Simulation Test TASK 34-33-00-700-801			204	SIA ALL
<u>LOW RANGE RADIO ALTIMETER (LRRA) SYSTEM - ADJUSTMENT/TEST</u>	34-33-00		501	SIA ALL
Low Range Radio Altimeter (LRRA) System - Operational Test TASK 34-33-00-710-801			501	SIA ALL
Low Range Radio Altimeter (LRRA) System - System Test TASK 34-33-00-730-801			502	SIA ALL
Low Range Radio Altimeter (LRRA) System - Health Check TASK 34-33-00-700-802			508	SIA ALL
Low Range Radio Altimeter (LRRA) System - BITE Test TASK 34-33-00-740-801			512	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>LOW RANGE RADIO ALTIMETER ANTENNA - REMOVAL/INSTALLATION</u>	34-33-11		401	SIA ALL
Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal TASK 34-33-11-000-801			401	SIA ALL
Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation TASK 34-33-11-400-801			404	SIA ALL
<u>LOW RANGE RADIO ALTIMETER ANTENNA - INSPECTION/CHECK</u>	34-33-11		601	SIA ALL
Low Range Radio Altimeter (LRRRA) Antenna Inspection TASK 34-33-11-211-801			601	SIA ALL
<u>LRRRA RECEIVER/TRANSMITTER - REMOVAL/INSTALLATION</u>	34-33-21		401	SIA ALL
Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Removal TASK 34-33-21-000-801			401	SIA ALL
Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation TASK 34-33-21-400-801			404	SIA ALL
<u>WEATHER RADAR (WXR) SYSTEM - MAINTENANCE PRACTICES</u>	34-41-00		201	SIA ALL
Weather Radar (WXR) System Deactivation TASK 34-41-00-040-801			201	SIA ALL
Weather Radar (WXR) System - Activation TASK 34-41-00-440-801			204	SIA ALL
<u>WEATHER RADAR (WXR) SYSTEM - ADJUSTMENT/TEST</u>	34-41-00		501	SIA ALL
Weather Radar (WXR) Operational Test TASK 34-41-00-710-801			501	SIA ALL
Weather Radar (WXR) System Test TASK 34-41-00-730-801			505	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>WEATHER RADAR ANTENNA - REMOVAL/INSTALLATION</u>	34-41-11		401	SIA ALL
Weather Radar Antenna Flat Plate Removal TASK 34-41-11-000-803			401	SIA ALL
Weather Radar Antenna Flat Plate Installation TASK 34-41-11-400-803			404	SIA ALL
Weather Radar Antenna Drive Unit Removal TASK 34-41-11-000-804			405	SIA ALL
Weather Radar Antenna Drive Unit Installation TASK 34-41-11-400-804			408	SIA ALL
<u>WEATHER RADAR RECEIVER/TRANSMITTER - REMOVAL/INSTALLATION</u>	34-41-41		401	SIA ALL
Weather Radar Receiver/Transmitter Removal TASK 34-41-41-000-804			401	SIA ALL
Weather Radar Receiver/Transmitter Installation TASK 34-41-41-400-804			404	SIA ALL
<u>WEATHER RADAR PROCESSOR - REMOVAL/INSTALLATION</u>	34-41-42		401	SIA ALL
Weather Radar Processor Removal TASK 34-41-42-000-801			401	SIA ALL
Weather Radar Processor Installation TASK 34-41-42-400-801			405	SIA ALL
<u>WEATHER RADAR CONTROL PANEL - REMOVAL/INSTALLATION</u>	34-41-53		401	SIA ALL
Weather Radar Control Panel Removal TASK 34-41-53-000-801			401	SIA ALL
Weather Radar Control Panel Installation TASK 34-41-53-400-801			404	SIA ALL
<u>TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) - MAINTENANCE PRACTICES</u>	34-45-00		201	SIA ALL
Traffic Alert and Collision Avoidance System - Deactivation TASK 34-45-00-040-801			201	SIA ALL
Traffic Alert and Collision Avoidance System - Activation TASK 34-45-00-440-801			203	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) - ADJUSTMENT/TEST</u>	34-45-00		501	SIA ALL
TCAS - Operational Test TASK 34-45-00-710-801			501	SIA ALL
TCAS - System Test (With the IFR TCAS-201 Test Set) TASK 34-45-00-730-801			505	SIA ALL
TCAS – System Test (With the TIC TR-220 Test Set) TASK 34-45-00-730-804			511	SIA ALL
TCAS - System Test (with the TIC T-49 Test Set) TASK 34-45-00-730-802			520	SIA ALL
TCAS - System Test (With the IFR-6000 Test Set) TASK 34-45-00-730-803			525	SIA ALL
<u>TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) COMPUTER - REMOVAL/INSTALLATION</u>	34-45-01		401	SIA ALL
TCAS Computer Removal TASK 34-45-01-000-801			401	SIA ALL
TCAS Computer Installation TASK 34-45-01-400-801			403	SIA ALL
<u>TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) ANTENNA - REMOVAL/INSTALLATION</u>	34-45-02		401	SIA ALL
TCAS Antenna Removal TASK 34-45-02-000-801			401	SIA ALL
TCAS Antenna Installation TASK 34-45-02-400-801			404	SIA ALL
<u>ENHANCED GROUND PROXIMITY WARNING SYSTEM (EGPWS) - MAINTENANCE PRACTICES</u>	34-49-00		201	SIA ALL
Install Software into the EGPWS Computer TASK 34-49-00-470-801			201	SIA ALL
Install the EGPWC Software with the ONS TASK 34-49-00-470-803			202	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
Verify the Operational Program Configuration (OPC) Part Number TASK 34-49-00-700-801			203	SIA ALL
Load the Terrain Database with USB Drive Load TASK 34-49-00-470-804			207	SIA ALL
Load the Terrain Database with ARINC 615A Dataloader TASK 34-49-00-470-808			212	SIA ALL
Verify the Terrain Database Part Number TASK 34-49-00-700-802			215	SIA ALL
Flight History Data Download TASK 34-49-00-970-801			216	SIA ALL
<u>GROUND PROXIMITY WARNING SYSTEM - ADJUSTMENT/TEST</u>	34-49-00		501	SIA ALL
Ground Proximity Warning System Operational Test TASK 34-49-00-710-801			501	SIA ALL
Ground Proximity Warning System - System Test TASK 34-49-00-730-801			507	SIA ALL
<u>GROUND PROXIMITY WARNING COMPUTER - REMOVAL/INSTALLATION</u>	34-49-01		401	SIA ALL
Ground Proximity Warning Computer Removal TASK 34-49-01-000-801			401	SIA ALL
Ground Proximity Warning Computer Installation TASK 34-49-01-400-801			404	SIA ALL
<u>GROUND PROXIMITY WARNING MODULE - REMOVAL/INSTALLATION</u>	34-49-02		401	SIA ALL
Ground Proximity Warning Module Removal TASK 34-49-02-000-801			401	SIA ALL
Ground Proximity Warning Module Installation TASK 34-49-02-400-801			404	SIA ALL
<u>VOR SYSTEM - MAINTENANCE PRACTICES</u>	34-51-00		201	SIA ALL
VOR - Deactivation TASK 34-51-00-040-801			201	SIA ALL
VOR - Activation TASK 34-51-00-440-801			202	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>VOR SYSTEM - ADJUSTMENT/TEST</u>	34-51-00		501	SIA ALL
VOR System - Operational Test TASK 34-51-00-710-801			501	SIA ALL
VOR System - System Test TASK 34-51-00-730-801			506	SIA ALL
<u>VOR/MKR RECEIVER - REMOVAL/INSTALLATION</u>	34-51-01		401	SIA 001-005
VOR/MKR Receiver Removal TASK 34-51-01-000-801			401	SIA 001-005
VOR/MKR Receiver Installation TASK 34-51-01-400-801			404	SIA 001-005
<u>VOR/LOC ANTENNA - REMOVAL/INSTALLATION</u>	34-51-02		401	SIA ALL
VOR/LOC Antenna Removal TASK 34-51-02-000-801			401	SIA ALL
VOR/LOC Antenna Installation TASK 34-51-02-400-801			403	SIA ALL
<u>AIR TRAFFIC CONTROL (ATC) SYSTEM - MAINTENANCE PRACTICES</u>	34-53-00		201	SIA ALL
Air Traffic Control System - Deactivation TASK 34-53-00-040-801			201	SIA ALL
Air Traffic Control System - Activation TASK 34-53-00-440-801			202	SIA ALL
ATC Program Switch Module Switch Settings TASK 34-53-00-860-801			203	SIA ALL
<u>AIR TRAFFIC CONTROL (ATC) SYSTEM - ADJUSTMENT/TEST</u>	34-53-00		501	SIA ALL
ATC System - Operational Test TASK 34-53-00-710-801			501	SIA ALL
ATC System - System Test (With the ATC-601 Test Set) TASK 34-53-00-730-801			504	SIA ALL
ATC System - System Test (With the TIC T-48 or T-49 Series Test Set) TASK 34-53-00-730-802			518	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
ATC System - System Test (With the IFR 6000 Test Set) TASK 34-53-00-730-803			523	SIA ALL
ATC System - System Test (With the TR-220 Test Set) TASK 34-53-00-730-804			532	SIA ALL
<u>AIR TRAFFIC CONTROL (ATC) ANTENNA - REMOVAL/INSTALLATION</u>	34-53-01		401	SIA ALL
ATC Antenna Removal TASK 34-53-01-000-801			401	SIA ALL
ATC Antenna Installation TASK 34-53-01-400-801			404	SIA ALL
<u>AIR TRAFFIC CONTROL (ATC) TRANSPONDER - REMOVAL/INSTALLATION</u>	34-53-02		401	SIA ALL
ATC Transponder Removal TASK 34-53-02-020-801			401	SIA ALL
ATC Transponder Installation TASK 34-53-02-400-801			404	SIA ALL
<u>AIR TRAFFIC CONTROL (ATC) CONTROL PANEL - REMOVAL/INSTALLATION</u>	34-53-03		401	SIA ALL
ATC Control Panel Removal TASK 34-53-03-000-801			401	SIA ALL
ATC Control Panel Installation TASK 34-53-03-400-801			403	SIA ALL
<u>AIR TRAFFIC CONTROL (ATC) ANTENNA SWITCH - REMOVAL/INSTALLATION</u>	34-53-04		401	SIA ALL
ATC Antenna Switch Removal TASK 34-53-04-000-801			401	SIA ALL
ATC Antenna Switch Installation TASK 34-53-04-400-801			404	SIA ALL
<u>DME SYSTEM - MAINTENANCE PRACTICES</u>	34-55-00		201	SIA ALL
DME System Deactivation TASK 34-55-00-040-801			201	SIA ALL
DME System Activation TASK 34-55-00-440-801			202	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>DME SYSTEM - ADJUSTMENT/TEST</u>	34-55-00		501	SIA ALL
DME System - Operational Test TASK 34-55-00-710-801			501	SIA ALL
DME System - System Test TASK 34-55-00-730-801			503	SIA ALL
<u>DME ANTENNA - REMOVAL/INSTALLATION</u>	34-55-11		401	SIA ALL
DME Antenna Removal TASK 34-55-11-000-801			401	SIA ALL
DME Antenna Installation TASK 34-55-11-400-801			403	SIA ALL
<u>DME INTERROGATOR - REMOVAL/INSTALLATION</u>	34-55-21		401	SIA ALL
DME Interrogator Removal TASK 34-55-21-000-801			401	SIA ALL
DME Interrogator Installation TASK 34-55-21-400-801			404	SIA ALL
<u>AUTOMATIC DIRECTION FINDER SYSTEM - MAINTENANCE PRACTICES</u>	34-57-00		201	SIA ALL
Automatic Direction Finder System - Deactivation TASK 34-57-00-040-801			201	SIA ALL
Automatic Direction Finder System - Activation TASK 34-57-00-440-801			202	SIA ALL
<u>AUTOMATIC DIRECTION FINDER SYSTEM - ADJUSTMENT/TEST</u>	34-57-00		501	SIA ALL
Automatic Direction Finder System - System Test TASK 34-57-00-730-801			501	SIA ALL
<u>ADF ANTENNA - REMOVAL/INSTALLATION</u>	34-57-01		401	SIA ALL
ADF Antenna Removal TASK 34-57-01-000-801			401	SIA ALL
ADF Antenna Installation TASK 34-57-01-400-801			405	SIA ALL
<u>ADF CONTROL PANEL - REMOVAL/INSTALLATION</u>	34-57-02		401	SIA ALL
ADF Control Panel Removal TASK 34-57-02-000-801			401	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
ADF Control Panel Installation TASK 34-57-02-400-801			403	SIA ALL
<u>Automatic Direction Finder (ADF) RECEIVER - REMOVAL/INSTALLATION</u>	34-57-03		401	SIA ALL
ADF Receiver Removal TASK 34-57-03-000-801			401	SIA ALL
ADF Receiver Installation TASK 34-57-03-400-801			404	SIA ALL
<u>GLOBAL POSITIONING SYSTEM - MAINTENANCE PRACTICES</u>	34-58-00		201	SIA ALL
Global Positioning System - Deactivation TASK 34-58-00-040-801			201	SIA ALL
Global Positioning System - Activation TASK 34-58-00-440-801			203	SIA ALL
<u>GLOBAL POSITIONING SYSTEM - ADJUSTMENT/TEST</u>	34-58-00		501	SIA ALL
Global Positioning System - Operational Test TASK 34-58-00-710-801			501	SIA ALL
Global Positioning System - System Test TASK 34-58-00-730-801			502	SIA ALL
<u>GPS ANTENNA - REMOVAL/INSTALLATION</u>	34-58-02		401	SIA ALL
GPS Antenna Removal TASK 34-58-02-000-801			401	SIA ALL
GPS Antenna Installation TASK 34-58-02-400-801			404	SIA ALL
<u>FLIGHT MANAGEMENT COMPUTER SYSTEM - MAINTENANCE PRACTICES</u>	34-61-00		201	SIA ALL
FMC Deactivation TASK 34-61-00-040-801			201	SIA ALL
FMC Activation TASK 34-61-00-440-801			202	SIA ALL
FMC Software Installation with Onboard Network System TASK 34-61-00-470-801			203	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
FMC Software Crossload TASK 34-61-00-470-802			205	SIA ALL
FMC Software Configuration Check TASK 34-61-00-750-801			207	SIA ALL
CDU Software Installation with Onboard Network System TASK 34-61-00-470-805			208	SIA ALL
CDU Software Configuration Check (AIRPLANES WITH LIQUID CRYSTAL DISPLAY CDU) TASK 34-61-00-750-802			209	SIA ALL
FMC Diagnostic Data Transfer via Network Filer Server TASK 34-61-00-810-802			210	SIA ALL
Setting Zero Fuel Weight TASK 34-61-00-860-801			211	SIA ALL
<u>FLIGHT MANAGEMENT COMPUTER SYSTEM - ADJUSTMENT/TEST</u>	34-61-00		501	SIA ALL
Flight Management Computer System - Operational Test TASK 34-61-00-710-801			501	SIA ALL
Flight Management Computer System - System Test TASK 34-61-00-730-801			507	SIA ALL
FMCS Performance Factors - Adjustment TASK 34-61-00-750-803			517	SIA ALL
<u>FMCS CONTROL DISPLAY UNIT - MAINTENANCE PRACTICES</u>	34-61-01		201	SIA ALL
FMCS CDU Cooling Vent and Surfaces Cleaning TASK 34-61-01-100-801			201	SIA ALL
FMCS CDU Display Cleaning TASK 34-61-01-100-802			204	SIA ALL
FMCS CDU Keyboard Removal TASK 34-61-01-000-801			204	SIA ALL
FMCS CDU Keyboard Installation TASK 34-61-01-400-801			207	SIA ALL

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CHAPTER 34
NAVIGATION

<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>FMCS CONTROL DISPLAY UNIT - SERVICING</u>	34-61-01		301	SIA ALL
CDU Lamp Test			301	SIA ALL
TASK 34-61-01-710-801				
<u>FMCS CONTROL DISPLAY UNIT - REMOVAL/INSTALLATION</u>	34-61-01		401	SIA ALL
FMCS Control Display Unit (CDU) Removal			401	SIA ALL
TASK 34-61-01-000-802				
FMCS Control Display Unit (CDU) Installation			404	SIA ALL
TASK 34-61-01-400-802				
<u>FMCS COMPUTER - REMOVAL/INSTALLATION</u>	34-61-02		401	SIA ALL
FMCS Computer Removal			401	SIA ALL
TASK 34-61-02-000-801				
FMCS Computer Installation			403	SIA ALL
TASK 34-61-02-400-801				
<u>FMCS TRANSFER RELAYS - REMOVAL/INSTALLATION</u>	34-61-03		401	SIA ALL
FMCS Transfer Relay Removal			401	SIA ALL
TASK 34-61-03-000-801				
FMCS Transfer Relay Installation			405	SIA ALL
TASK 34-61-03-400-801				

34-CONTENTS



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

NAVIGATION - DDG MAINTENANCE PROCEDURES

1. General

- A. This procedure has the maintenance tasks for the Master Minimum Equipment List (MMEL) maintenance requirements as shown in the Dispatch Deviations Guide (DDG). These tasks prepare the airplane for flight with systems/components that are inoperative.
- B. This procedure also has the tasks that put the airplane back to its usual condition.
- C. These are the tasks for the components in the navigation system:
 - (1) DDG 34-33-01 Radio Altimeter Systems Inoperative - Preparation
 - (2) DDG 34-33-01 Radio Altimeter Systems Inoperative - Restoration
 - (3) DDG 34-45-01 Traffic Alert and Collision Avoidance System (TCAS) Inoperative - Preparation
 - (4) DDG 34-45-01 TCAS Inoperative - Restoration
 - (5) DDG 34-58-01B Global Positioning System (GPS) Inoperative - Preparation
 - (6) DDG 34-61-01-01 Flight Management Computer System (FMCS) - Computer Inoperative - Preparation
 - (7) DDG 34-61-01-01 FMCS - Computer Inoperative - Restoration.

TASK 34-00-00-040-801

2. DDG 34-33-01 Radio Altimeter Systems Inoperative - Preparation

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with one of the radio altimeters inoperative (deactivated).
- (2) Deactivation of a radio altimeter in position 1 will cause the MAINT light to be on and the STALL WARNING SYS L and STALL WARNING SYS R status messages to come on, which will prevent dispatch.
 - (a) If the radio altimeter transceiver in position 2 is operating correctly, then it may be possible to clear the associated active status message(s) and extinguish the MAINT light by interchanging the positions of the transceivers so that the radio altimeter transceiver that is inoperative is moved to position 2.

B. References

Reference	Title
31-65-00-750-801	Fault Interrogation for a Maintenance Message (P/B 201)
34-33-00-710-801	Low Range Radio Altimeter (LRRA) System - Operational Test (P/B 501)
34-33-21-000-801	Low Range Radio Altimeter (LRRA) Receiver/Transmitter (R/T) Removal (P/B 401)
34-33-21-400-801	Low Range Radio Altimeter (LRRA) Receiver/Transmitter (R/T) Installation (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-00-00

Page 901
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Dispatch the Airplane with Radio Altimeter 1 Inoperative

SUBTASK 34-00-00-740-002

- (1) If necessary, erase latched STALL WARNING SYS L and STALL WARNING SYS R status messages (TASK 31-65-00-750-801).

SUBTASK 34-00-00-710-001

- (2) Determine if dispatch per Master Minimum Equipment List (MMEL) is permitted.
- (a) Do this task: Low Range Radio Altimeter (LRRR) System - Operational Test, TASK 34-33-00-710-801.
 - (b) If the Onboard Maintenance Function (OMF) shows INACTIVE for maintenance message 34-33001 or if other radio altimeter maintenance messages are ACTIVE, then more troubleshooting is necessary and MMEL dispatch is not permitted.
 - (c) If the OMF only shows maintenance message 34-33001 as ACTIVE, then go to the next step.

SUBTASK 34-00-00-960-001

- (3) Interchange the radio altimeter transceiver that is inoperative from position 1 to position 2 and the operational radio altimeter transceiver from position 2 to position 1.
- (a) Do this task to remove the radio altimeter transceivers: Low Range Radio Altimeter (LRRR) Receiver/Transmitter (R/T) Removal, TASK 34-33-21-000-801.
 - (b) Interchange the radio altimeter transceivers.
NOTE: The radio altimeter transceiver that is inoperative should be moved from position 1 to position 2. The operational radio altimeter transceiver should be moved from position 2 to position 1.
 - (c) Do this task to install the radio altimeter transceivers: Low Range Radio Altimeter (LRRR) Receiver/Transmitter (R/T) Installation, TASK 34-33-21-400-801.

SUBTASK 34-00-00-860-005

- (4) Open this circuit breaker and install safety lock:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-00-00-210-001

- (5) Make sure that the MAINT light, the STALL WARNING SYS L and the STALL WARNING SYS R status messages do not come on.

NOTE: If the MAINT light and the STALL WARNING SYS L and STALL WARNING SYS R status messages come on, then more troubleshooting is necessary and MMEL dispatch is not permitted.

E. Dispatch the Airplane with Radio Altimeter 2 Inoperative

SUBTASK 34-00-00-040-003

- (1) Open this circuit breaker and install safety lock:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-00-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 902
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-00-00-440-801

3. DDG 34-33-01 Radio Altimeter Systems Inoperative - Restoration

A. General

- (1) This task puts the airplane back to its usual condition after flight with one of the Radio Altimeters inoperative.

B. Location Zones

Zone	Area

211	Flight Compartment - Left
212	Flight Compartment - Right

C. Put the Airplane Back to Its Usual Condition after Radio Altimeter Inoperative

SUBTASK 34-00-00-440-002

- (1) Remove the safety lock and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

————— END OF TASK —————

TASK 34-00-00-040-802

4. DDG 34-45-01 Traffic Collision and Avoidance System (TCAS) Inoperative - Preparation

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the Traffic Collision and Avoidance System (TCAS) inoperative.

B. Location Zones

Zone	Area

211	Flight Compartment - Left
212	Flight Compartment - Right

C. Dispatch the Airplane with the TCAS Inoperative (deactivated)

SUBTASK 34-00-00-040-007

- (1) Open this circuit breaker and install safety lock:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	6	C01195	TCAS

————— END OF TASK —————

TASK 34-00-00-440-802

5. DDG 34-45-01 Traffic Collision and Avoidance System (TCAS) Inoperative - Restoration

A. General

- (1) This task puts the airplane back to its usual condition after operation with the Traffic Collision and Avoidance System (TCAS) inoperative.

B. Location Zones

Zone	Area

211	Flight Compartment - Left

EFFECTIVITY
SIA ALL

34-00-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 903
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area

212	Flight Compartment - Right

C. Put the Airplane Back to It's Usual Condition after TCAS Inoperative (deactivated)

SUBTASK 34-00-00-440-005

- (1) Remove the safety lock and close this circuit breaker:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	6	C01195	TCAS

————— END OF TASK —————

TASK 34-00-00-040-804

6. DDG 34-58-01B Global Positioning System (GPS) Inoperative - Preparation

A. General

- (1) This task gives the maintenance steps that prepare the airplane for flight with the Global Positioning System (GPS) inoperative.
- (a) The Automatic Dependent Surveillance - Broadcast (ADS-B) squitter transmissions will be inoperative. The airplane must also be dispatched using Master Minimum Equipment List (MMEL) item 34-53-01-02.

B. References

Reference	Title
31-65-00-970-804	Airplane Config Data (ACD) Page Function (P/B 201)

C. Location Zones

Zone	Area

211	Flight Compartment - Left
212	Flight Compartment - Right

D. Dispatch the Airplane with the GPS Inoperative (deactivated)

SUBTASK 34-00-00-040-008

- (1) Manually enter the correct Universal Time Coordinated (UTC) time and date (TASK 31-65-00-970-804).

NOTE: UTC time and date will need to be re-entered each time the MAX Display System is powered down or the Display Processing Computer (DPC) are swapped out.

————— END OF TASK —————

TASK 34-00-00-040-803

7. DDG 34-61-01-01 Flight Management Computer System (FMCS) - Computer Inoperative - Preparation

(Figure 901)

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the Flight Management Computer System (FMCS) computer(s) inoperative.

EFFECTIVITY
SIA ALL

34-00-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 904
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

D. Dispatch the Airplane with the FMCS Computers Inoperative

SUBTASK 34-00-00-010-001

- (1) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-00-00-860-001

- (2) Re-configure the M2539 and M2540 Autothrottle switch modules as follows to deactivate the autothrottle:

NOTE: M2539 and M2540 switch modules are located on the left side of the E1-1 electronics rack.

- (a) Loosen the captive screws [4] and washers [5] to remove the security cover [3] from the autopilot switch modules [1].
 - (b) Move switch seals [2] to access the DIP switches [6].
 - (c) Set DIP switch No. 12 to ON on M2539 and M2540 switch modules.
 - (d) Position switch seals [2] to close.
 - (e) Install the security cover [3], washers [5], and captive screws [4].
- (3) Re-configure the M1992 and M1993 Autothrottle switch modules as follows:

NOTE: The M1992 and M1993 switch modules are located on the right side of the E1-1 electronics rack.

- (a) Loosen the captive screws [4] and washers [5] to remove the security cover [3] from the autopilot switch modules [1].
- (b) Move switch seals [2] to access the DIP switches [6].
- (c) Set DIP Switch No. 24 on M1992 and M1993 Autothrottle switch modules- Change from OFF to ON or from ON to OFF.

NOTE: Switch 24 is an Odd Parity input and changes with each change in switch position.

- (d) Position switch seals [2] to close.
- (e) Install the security cover [3], washers [5], and captive screws [4].

SUBTASK 34-00-00-410-005

- (4) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

————— **END OF TASK** —————

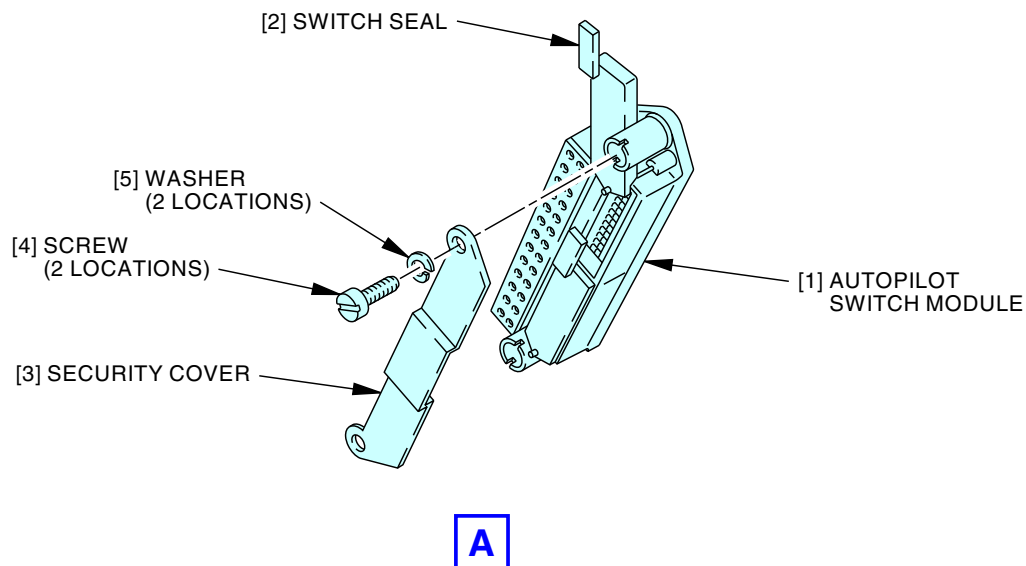
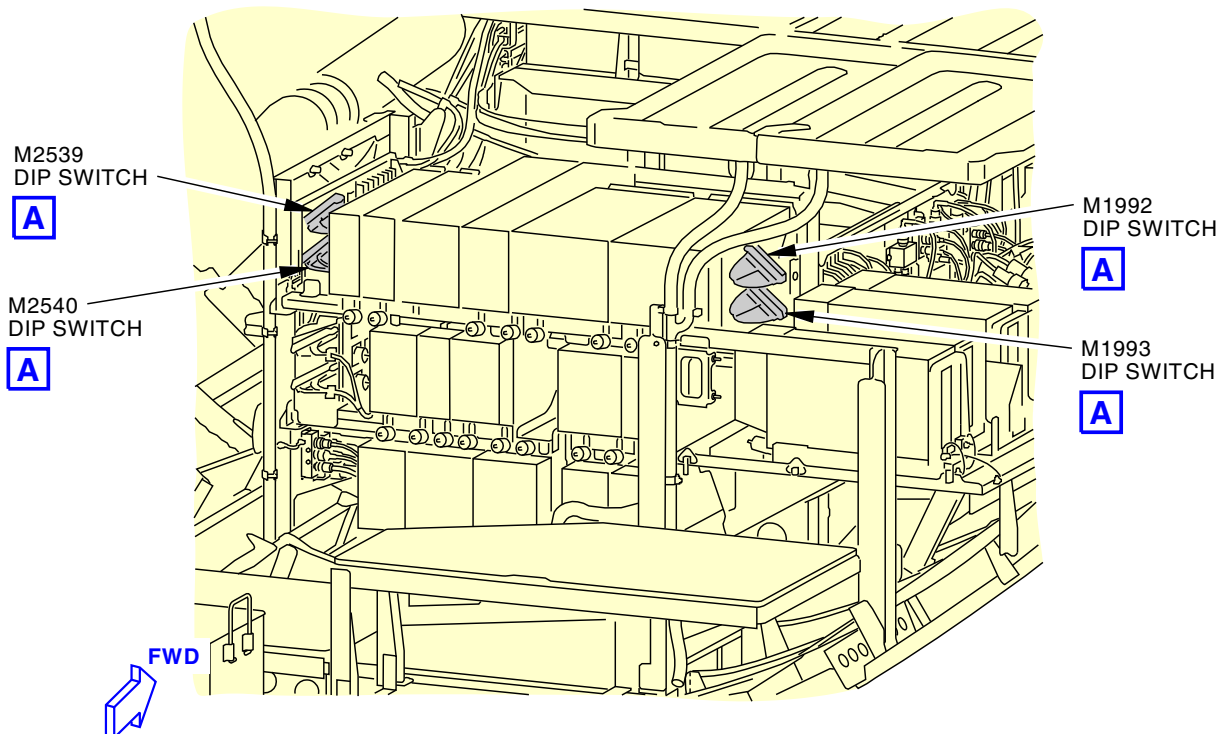
EFFECTIVITY
SIA ALL

34-00-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 905
Jan 15/2022



2792108 S0000635313_V1

Autopilot Program Switch Module
Figure 901/34-00-00-990-801 (Sheet 1 of 2)

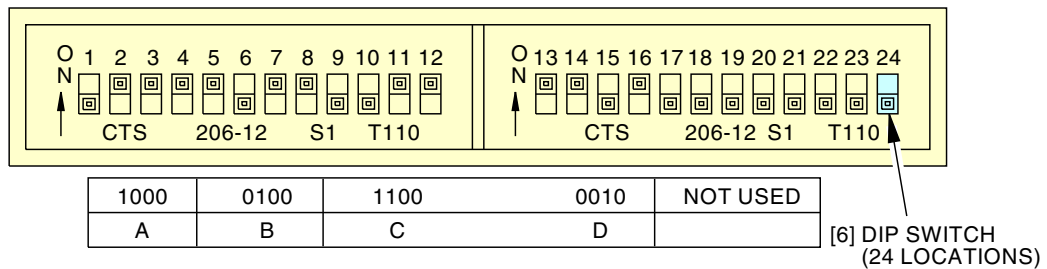
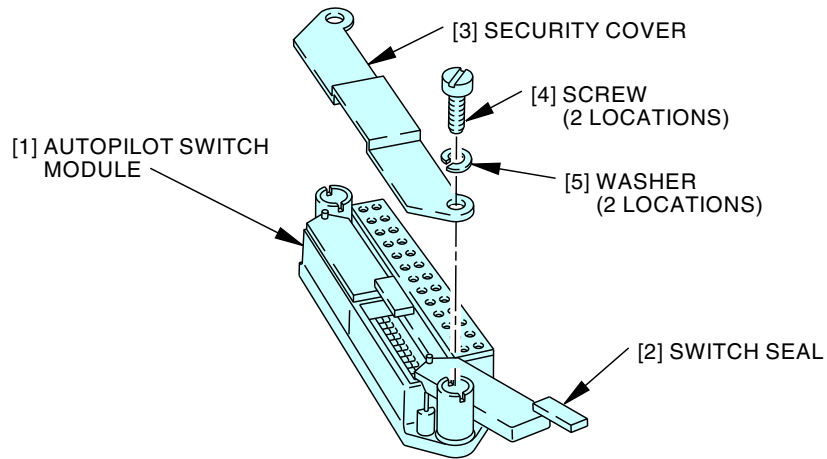
EFFECTIVITY
SIA ALL

34-00-00

D633AM101-SIA

Page 906
Sep 15/2021

**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**



2792764 S0000635317_V1

**Autopilot Program Switch Module
Figure 901/34-00-00-990-801 (Sheet 2 of 2)**

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-00-00



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-00-00-440-803

8. **DDG 34-61-01-01 Flight Management Computer System (FMCS) - Computer Inoperative - Restoration**

(Figure 901)

A. General

- (1) This task puts the airplane back to its usual condition after flight with the Flight Management Computer System (FMCS) computer(s) inoperative.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

D. Put the Airplane Back to It's Usual Condition after the FMCS Computers Inoperative

SUBTASK 34-00-00-010-002

- (1) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-00-00-860-003

- (2) Re-configure the M2539 and M2540 Autothrottle switch modules as follows to reactivate the autothrottle:

NOTE: M2539 and M2540 switch modules are located on the left side of the E1-1 electronics rack.

- (a) Loosen the captive screws [4] and washers [5] to remove the security cover [3] from the autopilot switch modules [1].
 - (b) Move switch seals [2] to access the DIP switches [6].
 - (c) Set DIP switch No. 12 to OFF on M2539 and M2540 switch modules.
 - (d) Position switch seals [2] to close.
 - (e) Install the security cover [3], washers [5], and captive screws [4].
- (3) Re-configure the M1992 and M1993 Autothrottle switch modules as follows:

NOTE: The M1992 and M1993 switch modules are located on the right side of the E1-1 electronics rack.

- (a) Loosen the captive screws [4] and washers [5] to remove the security cover [3] from the autopilot switch modules [1].
- (b) Move switch seals [2] to access the DIP switches [6].
- (c) Set DIP Switch No. 24 on M1992 and M1993 Autothrottle switch modules- Change from OFF to ON or from ON to OFF.

NOTE: Switch 24 is an Odd Parity input and changes with each change in switch position.

EFFECTIVITY
SIA ALL

34-00-00

D633AM101-SIA

Page 908
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Position switch seals [2] to close.
- (e) Install the security cover [3], washers [5], and captive screws [4].

SUBTASK 34-00-00-410-006

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-00-00

Page 909
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

STATIC AND TOTAL AIR PRESSURE SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) Static and Total Air Pressure System Deactivation.
- (2) Static and Total Air Pressure System Activation.
- (3) Pressurization of the Captain's Total Air Pressure System to simulate an airspeed.
- (4) Pressurization of the Static and Total Air Pressure System to simulate an altitude and airspeed.

TASK 34-11-00-040-801

2. Static and Total Air Pressure System - Deactivation

(Figure 201)

A. **General**

- (1) This procedure removes electrical power from the Static and Total Air Pressure System.

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Procedure**

SUBTASK 34-11-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

D. **Static and Total Air Pressure System - Tryout**

NOTE: This tryout is to make sure the Static and Total Air Pressure System is in a zero energy state.

SUBTASK 34-11-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-11-00-700-001

- (2) At the Probe Heat Panel on the FWD OVHD Panel (P5) do the following:
 - (a) Push the probe heat switches "A" and "B" to the ON position.
 - (b) Make sure the amber warning lights come on.

NOTE: Amber system warning lights come on when a probe does not have heat.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

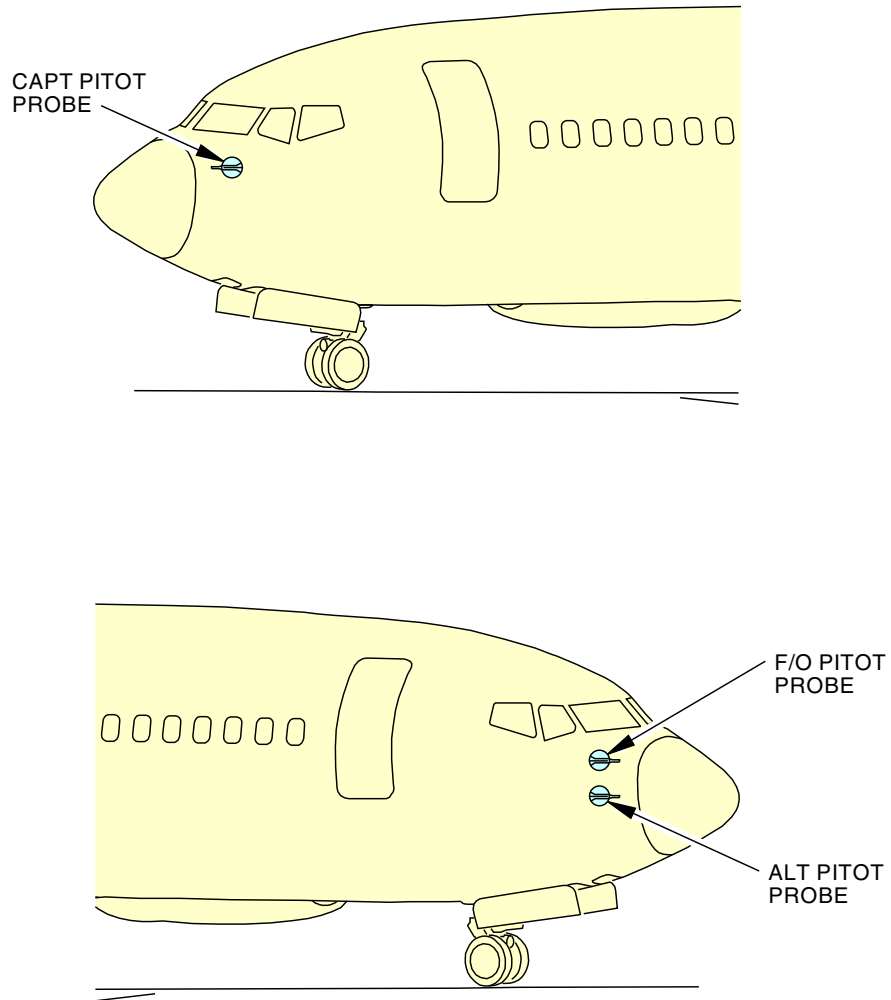
34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 201
Sep 15/2021

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414796 S00061536007_V2

Pitot Probe
Figure 201/34-11-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-440-801

3. Static and Total Air Pressure System - Activation

(Figure 201)

A. General

- (1) This procedure adds electrical power to the Static and Total Air Pressure System.

B. Location Zones

Zone	Area

211	Flight Compartment - Left

212	Flight Compartment - Right

C. Procedure

SUBTASK 34-11-00-860-003

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

————— END OF TASK —————

TASK 34-11-00-790-801

4. Captain's Total Air Pressure System - Pressurization

A. General

- (1) This task contains the steps to pressurize the Captain's Total Air Pressure System.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
SPL-1917	Fixture - Test, Angle of Attack Sensor, ROSEMOUNT AOA's Part #: J34002-19 Supplier: 81205 Opt Part #: A34012-19 Supplier: 81205 Opt Part #: A34012-24 Supplier: 81205 Opt Part #: J34002-18 Supplier: 81205

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 204
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

D. Prepare for the Captain's Total Air Pressure System - Pressurization

SUBTASK 34-11-00-860-004

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-730-001



OBEY THESE PRECAUTIONS BEFORE YOU APPLY PRESSURE TO THE PITOT - STATIC SYSTEM. IF YOU DO NOT OBEY THESE PRECAUTIONS, DAMAGE TO THE EQUIPMENT AND INSTRUMENTS CAN OCCUR.

- (2) Obey these precautions before you apply pressure to the pitot system.
- (a) Supply the electrical power for the ADIRS before you make the total pressure hook-up.
 - (b) Keep power on until the pressure hook-up is opened.
 - (c) Pressure changes must be flow controlled to prevent sudden changes in pressure and possible damage to the air data hardware.
 - (d) Keep the total pressure in the range of 3.26 to 41.34 inches Hg.
 - (e) When you adjust the pressure, make sure the rate of change of airspeed is less than 300 knots per minute.
 - (f) Make sure the difference between the static and pitot line pressure is not larger than 10 inches Hg.
 - (g) Make sure the autopilot system stays off during the test.



CAUTION

MAKE SURE THAT YOU DO NOT SUPPLY ELECTRICAL POWER TO THE PITOT PROBE HEATER. THIS CAN CAUSE DAMAGE TO THE PITOT PROBE.

- (h) Make sure the pitot probe heaters stay off during the test.
- (i) Make sure the AOA vanes are set to 0 ± 5 degree, with respect to the AOA sensor alignment pin with an angle of attack probe test fixture, SPL-1917.

E. Captain's Total Air Pressure System - Pressurization

SUBTASK 34-11-00-860-006

- (1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 205
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-003



WARNING

WHEN THE PITOT PROBES HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE PITOT PROBES HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE PITOT PROBES, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

- (2) Attach a red paper tag that has PITOT PROBES COVERED in black letters, to the left control wheel in the flight deck with wire.

SUBTASK 34-11-00-480-086



CAUTION

MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (3) Install the pitot test adapter, COM-1916, on the left pitot probe.

SUBTASK 34-11-00-480-004

- (4) Connect the air data model test set, COM-1914, to the pitot test adapter, COM-1916.

SUBTASK 34-11-00-790-001



CAUTION

MAKE SURE THAT THE PRESSURE IN THE ADM IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG WILL CAUSE DAMAGE TO THE ADM.



CAUTION

DO NOT DISCONNECT THE PITOT SYSTEM TEST ADAPTER WHEN THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE. IF YOU DO, DAMAGE TO THE ADM CAN OCCUR.

- (5) Operate the air data model test set, COM-1914, to apply the desired pressure to the pitot system.

SUBTASK 34-11-00-790-002

- (6) Stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-003

- (7) Read the applicable instrument.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-007

- (1) Put the system back to ambient pressure.

SUBTASK 34-11-00-080-001



CAUTION

DO NOT DISCONNECT THE PITOT SYSTEM TEST ADAPTER WHEN THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE. DAMAGE TO THE AIR DATA MODULES CAN OCCUR IF THE SYSTEM IS NOT AT AMBIENT PRESSURE.

- (2) Disconnect the air data model test set, COM-1914, from the pitot test adapter, COM-1916.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 206
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-080-002

- (3) Remove the pitot test adapter, COM-1916, from the pitot probe.

SUBTASK 34-11-00-860-008

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-080-003

- (5) Remove the red paper tag that has PITOT PROBES COVERED in black letters, from the left control wheel in the flight deck.

————— END OF TASK —————

TASK 34-11-00-790-802

5. Static and Total Air Pressure System - Pressurization

A. General

- (1) This task contains the steps to pressurize the static and total air pressure system.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. References

<u>Reference</u>	<u>Title</u>
34-11-00-990-811	Figure: Static System Drains (P/B 301)
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 207
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984
SPL-1917	Fixture - Test, Angle of Attack Sensor, ROSEMOUNT AOA's Part #: J34002-19 Supplier: 81205 Opt Part #: A34012-19 Supplier: 81205 Opt Part #: A34012-24 Supplier: 81205 Opt Part #: J34002-18 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 208
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

G. Prepare for the Static and Total Air Pressure System - Pressurization

SUBTASK 34-11-00-730-002



OBEY THESE PRECAUTIONS BEFORE YOU APPLY PRESSURE TO THE PITOT - STATIC SYSTEM. IF YOU DO NOT OBEY THESE PRECAUTIONS, DAMAGE TO THE EQUIPMENT AND INSTRUMENTS CAN OCCUR.

- (1) Obey these precautions before you apply pressure to the pitot-static system.



MAKE SURE YOU DO NOT SUPPLY ELECTRICAL POWER TO THE PITOT PROBE HEATER. IF YOU DO, YOU CAN DAMAGE THE PITOT PROBE.

- (a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

- (b) Supply the electrical power to the ADIRS before you make the static or total pressure connections.
- (c) Keep electrical power on the ADIRS until all pressure connections are opened.
- (d) Make sure that the Autopilot Flight Director System is off during the test.
- (e) Pressure changes must be flow controlled to prevent sudden changes in pressure and possible damage to the air data hardware.
- 1) Static pressure will be applied to all systems at the same time.
- a) Keep the static pressure in the range of 3.26 to 33.31 inches Hg.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 209
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- b) Do not let the static pressure to be more than 28 inches Hg. from the ambient pressure.
- c) Keep the static line pressure less than the pitot line pressure.
- 2) Pitot pressure will be applied to all systems at the same time.
 - a) Keep the total pressure in the range of 3.26 to 41.34 inches Hg.
- 3) Make sure the difference between the static and pitot line pressure is not larger than 10 inches Hg.
- 4) When you adjust the static pressure, make sure the rate of change of altitude is less than 5,000 feet per minute.
- 5) When you adjust the pitot pressure, make sure the rate of change of airspeed is less than 300 knots per minute.
- (f) Do not connect or disconnect the test equipment while you have pressure in the pitot-static system.

SUBTASK 34-11-00-860-010

- (2) Turn the altimeter BARO knobs on the captain's EFIS control panel, F/O's EFIS control panel, and standby altimeter through the full range.

SUBTASK 34-11-00-860-011

- (3) Set the altimeter BARO knobs on the captain's EFIS control panel, F/O's EFIS control panel, and standby altimeter to 29.92 inches of Hg.

SUBTASK 34-11-00-860-012



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (4) Set the ATC mode switch on the ATC control panel, P8-29, to the STBY position.

SUBTASK 34-11-00-860-013

- (5) Set the AOA vanes to 0 ± 5 degrees, with respect to the AOA sensor alignment pin with an angle of attack probe test fixture, SPL-1917.

H. Installation of Pitot Probe Adapter

SUBTASK 34-11-00-480-085



WHEN THE PITOT PROBES HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE PITOT PROBES HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE PITOT PROBES, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

- (1) Attach a red paper tag that has PITOT PROBES COVERED in black letters, to the left control wheel in the flight deck with wire.



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-075



CAUTION

MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (2) Install the pitot test adapter, COM-1916 on the Captains, First Officers, and Alternate pitot probes.

SUBTASK 34-11-00-480-076

- (3) Connect the adapters to the air data model test set, COM-1914.

I. Installation of Drain Coupling (Recommended)

SUBTASK 34-11-00-480-084



WARNING

WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

- (1) Attach a red paper tag that has STATIC PORTS COVERED in black letters, to the left control wheel in the flight deck with wire.

SUBTASK 34-11-00-480-006



CAUTION

DO NOT EXTEND THE TAPE INTO THE STATIC PORTS. DAMAGE TO THE SURFACE OF THE PORT CAN OCCUR WHEN YOU REMOVE THE TAPE.

- (2) Seal these static ports with vinyl adhesive Scotch Brand No.471 tape, G02219:
 - (a) Seal the upper and lower primary static ports and the alternate static port on the right side of the fuselage.
 - (b) Seal the upper and lower primary static ports and the alternate static port on the left side of the fuselage.

SUBTASK 34-11-00-480-007

- (3) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment.
 - (a) Do this task: Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801.

SUBTASK 34-11-00-010-001

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-480-008

- (5) Remove the caps from the left, right and alternate static system drains, refer to (Figure 34-11-00-990-811).

SUBTASK 34-11-00-480-009

- (6) Install the coupling, COM-1927, on the left, right and alternate static system drains.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 211
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-010

- (7) Connect the air data model test set, COM-1914 to each coupling, COM-1927.

J. Installation of Static Port Adapter (Optional to the Drain Coupling)

SUBTASK 34-11-00-480-011



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the static ports at these locations:
 - (a) The captain's static port on the right side of the fuselage.
 - (b) The first officer's static port on the right side of the fuselage.
 - (c) The alternate static port on the right side of the fuselage.

SUBTASK 34-11-00-480-077

- (2) Connect the air data model test set, COM-1914 to the static test adapter, COM-1921.

SUBTASK 34-11-00-480-083



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

- (3) Attach a red paper tag that has STATIC PORTS COVERED in black letters, to the left control wheel in the flight deck with wire.

SUBTASK 34-11-00-480-012



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (4) Seal the static ports at these locations with Scotch Brand No.471 tape, G02219:
 - (a) The captain's static port on the left side of the fuselage.
 - (b) The first officer's static port on the left side of the fuselage.
 - (c) The alternate static port on the left side of the fuselage.

K. Static and Total Air Pressure System - Pressurization

SUBTASK 34-11-00-780-001

- (1) Apply the desired pressures to the static and total air pressure system.

SUBTASK 34-11-00-800-001

- (2) Stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-970-001

- (3) Read the appropriate instrument.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 212
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

L. Removal of Drain Coupling (If installed in previous step for test set-up)

SUBTASK 34-11-00-080-044



CAUTION

MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914 from each coupling, COM-1927.

SUBTASK 34-11-00-080-043

- (2) Disconnect each coupling, COM-1927, from the left, right and alternate static system drains.

SUBTASK 34-11-00-480-078

- (3) Install the cap on the left, right and alternate static system drains.

SUBTASK 34-11-00-210-011

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
- (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-079

- (5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment.
- (a) Do this task: Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801.

SUBTASK 34-11-00-410-014

- (6) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-020-055



WARNING

FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



CAUTION

DO NOT CAUSE A BLOCKAGE OR DAMAGE THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

- (7) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:
- (a) The Captain, First Officers and the Alternate static ports on the right side of the fuselage.
- (b) The Captain, First Officers and the Alternate static ports on the left side of the fuselage.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 213
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

M. Removal of Static Port Adapter (If installed in previous step for test set-up)

SUBTASK 34-11-00-080-045



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921.

SUBTASK 34-11-00-080-046



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the static ports at these locations:
- (a) The captain's static port on the right side of the fuselage.
 - (b) The first officer's static port on the right side of the fuselage.
 - (c) The alternate static port on the right side of the fuselage.

SUBTASK 34-11-00-020-056



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT CAUSE A BLOCKAGE OR DAMAGE THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

- (3) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:
- (a) The captain's static port on the left side of the fuselage.
 - (b) The first officer's static port on the left side of the fuselage.
 - (c) The alternate static port on the right side of the fuselage.

N. Removal of Pitot Probe Adapter

SUBTASK 34-11-00-080-047



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914 from each pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-048

- (2) Remove the pitot test adapter, COM-1916 from the Captains, First Officers, and Alternate pitot probes.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 214
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

O. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-014

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-080-051

- (2) Remove the red paper tags that have PITOT PROBES COVERED or STATIC PORTS COVERED in black letters, from the left control wheel in the flight deck.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 215
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

STATIC AND TOTAL AIR PRESSURE SYSTEM - SERVICING

1. General

- A. This procedure supplies instructions for the servicing of the Static and Pitot Systems.
- B. The draining procedure removes or assures the absence of liquid collected in the pitot static system drains. The flushing procedure removes or assures the absence of any foreign matter in the pitot static lines.

TASK 34-11-00-170-802

2. Pitot Static System - Flushing

(Figure 301 and Figure 302)

A. General

- (1) This task is used to flush the pitot static system. The tasks are listed separately by system:
 - (a) Captain's static system (right static)
 - (b) First Officer (F/O) static system (left static)
 - (c) Captain's pitot system (left pitot)
 - (d) F/O pitot system (right pitot)
 - (e) Alternate static system to the Integrated Standby Flight Display (ISFD) and the Cabin Altitude and Differential Pressure Indicator
 - (f) Auxiliary pitot system to the ISFD.

B. References

Reference	Title
21-33-02-000-801	Cabin Altitude and Differential Pressure Indicator Removal (P/B 401)
21-33-02-400-801	Cabin Altitude and Differential Pressure Indicator Installation (P/B 401)
34-11-00-790-803	Left Static System Low-range Leak Test (P/B 501)
34-11-00-790-804	Right Static System Low-range Leak Test (P/B 501)
34-11-00-790-805	Alternate Static System Low-range Leak Test (P/B 501)
34-11-00-790-806	Left Pitot System Leak Test (P/B 501)
34-11-00-790-807	Right Pitot System Leak Test (P/B 501)
34-11-00-790-808	Alternate Pitot System Leak Test (P/B 501)
34-11-01-000-801	Pitot Probe - Removal (P/B 401)
34-11-01-100-801	Pitot Probe Cleaning (P/B 701)
34-11-01-200-801	Pitot Probe Detailed Inspection (P/B 601)
34-11-01-400-801	Pitot Probe - Installation (P/B 401)
34-11-02-020-801	Primary Static Port Removal (P/B 401)
34-11-02-200-801	Static Port - Detailed Inspection (P/B 601)
34-11-02-400-801	Primary Static Port Installation (P/B 401)
34-24-01-000-802	Integrated Standby Flight Display (ISFD) Removal (P/B 401)
34-24-01-400-802	Integrated Standby Flight Display (ISFD) Installation (P/B 401)
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)
50-10-03-000-801	Cargo Compartment Ceiling Liner Removal (P/B 401)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 301
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Title
50-10-03-400-801	Cargo Compartment Ceiling Liner Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-1926	Coupling - Quick Disconnect, Pitot System Drain Line Part #: 1QF2-2-64A Supplier: 24984
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984
SPL-15058	Test Adapter Kit - Pitot Static Continuity Leak and Flushing Part #: A34017-24 Supplier: 81205
STD-3940	Air Source - Regulated, Dry Filtered, 0-150 psig
STD-6777	Assembly - Cap, Pressure Seal, Flareless Tube (Standard MS9513-04 or BACC14AD-04)

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

F. Access Panels

Number	Name/Location
112A	Forward Access Door
117A	Electronic Equipment Access Door

G. Prepare for the Pitot-Static System Flushing

SUBTASK 34-11-00-040-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 302
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT
D	8	C01946	PROBE AUTO HEAT CAPT
D	9	C01947	PROBE AUTO HEAT F/O

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-11-00-860-108

- (2) Make sure that the pitot static systems are at ambient pressure.

SUBTASK 34-11-00-010-023

- (3) Remove the applicable forward cargo sidewall liners to access the left and right static drains.
(a) Do this task: Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801.

SUBTASK 34-11-00-680-004

- (4) Do this task: Pitot Static System - Draining, TASK 34-11-00-680-801.

H. Left Static System Flushing

SUBTASK 34-11-00-211-001

- (1) Inspect the left static system ports, do this task: Static Port - Detailed Inspection, TASK 34-11-02-200-801.

SUBTASK 34-11-00-170-075

- (2) Apply Scotch Brand No.471 tape, G02219, to the lower right static port located at STA 410, WL 218, RBL 72.5 (Captain's lower right hand side).

SUBTASK 34-11-00-010-018

- (3) Remove applicable forward cargo compartment ceiling liner, do this task: Cargo Compartment Ceiling Liner Removal, TASK 50-10-03-000-801.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 303
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-020-068



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (4) Disconnect the static hose from the Left Static Air Data Module (ADM) located at STA 409, WL 205, LBL 0.35.

SUBTASK 34-11-00-420-023

- (5) Put a protective cover on the pneumatic connector of the ADM.

SUBTASK 34-11-00-020-069



MAKE SURE THAT YOU TEMPORARILY ATTACH THE DISCONNECTED HOSES TO PREVENT MOVEMENT. IF YOU DO NOT, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (6) Temporarily secure the static hose to prevent movement.

SUBTASK 34-11-00-170-076

- (7) Connect coupling, COM-1927, to the left static system drain fitting No. 3 located STA 410, WL 180, LBL 56.

SUBTASK 34-11-00-170-077

- (8) Connect regulated air source, STD-3940, to the coupling, COM-1927.

SUBTASK 34-11-00-170-078

- (9) Apply 15 psi (103 kPa) of dry filtered air to the Captain's left static system.
 - (a) Make sure that air comes out freely and unrestricted from the Captain's left upper static port located at STA 410, WL 220, LBL 73.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-079

- (10) Continue for three minutes or more.
 - (a) If debris can not be cleared on the Captain's left upper static port, do the following steps:
 - 1) Remove the static port (TASK 34-11-02-020-801).
 - 2) Apply 15 psi (103 kPa) of dry filtered air to the Captain's static system.
 - 3) Reinstall static port (TASK 34-11-02-400-801).
 - 4) Apply 15 psi (103 kPa) of dry filtered air to the Captain's static system to make sure that there is no more debris.

SUBTASK 34-11-00-170-081

- (11) Stop blowing air into the left static system to return system to ambient pressure.

SUBTASK 34-11-00-170-080

- (12) Apply Scotch Brand No.471 tape, G02219, to the Captain's left upper static port located at STA 410, WL 218, LBL 72.7.

SUBTASK 34-11-00-080-060

- (13) Remove Scotch Brand No.471 tape, G02219, from the Captain's lower right static port located at STA 410, WL 218, RBL 72.5.

SUBTASK 34-11-00-170-082

- (14) Apply 15 psi (103 kPa) of dry filtered air to the Captain's left static system.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 304
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that air comes out freely and unrestricted from the Captain's lower right static port.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-083

- (15) Continue for three minutes or more.

- (a) If debris can not be cleared on the Captain's lower right static port, do the following steps:
- 1) Remove the static port (TASK 34-11-02-020-801).
 - 2) Apply 15 psi (103 kPa) of dry filtered air to the Captain's static system.
 - 3) Reinstall static port (TASK 34-11-02-400-801).
 - 4) Apply 15 psi (103 kPa) of dry filtered air to the Captain's static system to make sure that there is no more debris.

SUBTASK 34-11-00-170-084

- (16) Stop blowing air into the left static system to return system to ambient pressure.

SUBTASK 34-11-00-420-024

- (17) Apply Scotch Brand No.471 tape, G02219, to the Captain's right lower static port located at STA 410, WL 220, RBL 72.5.

SUBTASK 34-11-00-480-101

- (18) Connect the coupling, P/N 1QM1-4-64A, from Test Adapter Kit - Pitot, SPL-15058, to the left static ADM hose at STA 409, WL 205, LBL 0.35.

SUBTASK 34-11-00-170-085

- (19) Apply 15 psi (103 kPa) of dry filtered air to the Captain's left static system.

- (a) Make sure that air comes out freely and unrestricted from the left static ADM hose located at STA 409, WL 205, LBL 0.35.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-086

- (20) Continue for three minutes or more.

SUBTASK 34-11-00-170-093

- (21) Stop blowing air into the left static system to return system to ambient pressure.

SUBTASK 34-11-00-080-061

- (22) Disconnect the coupling, P/N 1QM1-4-64A, from the left static ADM hose located at STA 409, WL 205, LBL 0.35.

SUBTASK 34-11-00-080-062

- (23) Remove regulated air source, STD-3940, and coupling, COM-1927, from the left static system drain fitting No. 3 located STA 410, WL 180, LBL 56.

SUBTASK 34-11-00-080-063

- (24) Remove the protective cover from the left static ADM.

SUBTASK 34-11-00-410-018



CAUTION

MAKE SURE THAT THE SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU CONNECT, OR DISCONNECT A HOSE TO, OR FROM AN AIR DATA MODULE. IF YOU DO NOT, DAMAGE TO THE AIR DATA MODULE CAN OCCUR.

- (25) Connect left static hose to the left static ADM located at STA 409, WL 205, LBL 0.35.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 305
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pin and you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-080-064

- (26) Do this task: Left Static System Low-range Leak Test, TASK 34-11-00-790-803.

- (a) Make sure that you remove the tape from the Captain's left upper and right lower static ports after the leak check.

I. Right Static System Flushing

SUBTASK 34-11-00-211-002

- (1) Inspect the right static system ports, do this task: Static Port - Detailed Inspection, TASK 34-11-02-200-801.

SUBTASK 34-11-00-170-087

- (2) Apply Scotch Brand No.471 tape, G02219, to the lower left static port located at STA 410, WL 220, LBL 72.5 (F/O lower left hand side).

SUBTASK 34-11-00-010-019

- (3) Remove applicable forward cargo compartment ceiling liner, do this task: Cargo Compartment Ceiling Liner Removal, TASK 50-10-03-000-801.

SUBTASK 34-11-00-020-070



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (4) Disconnect the static hose from the Right Static Air Data Module (ADM) located at STA 430, WL 205, LBL 0.35.

SUBTASK 34-11-00-420-025

- (5) Put a protective cover on the pneumatic connector of the ADM.

SUBTASK 34-11-00-020-071



MAKE SURE THAT YOU TEMPORARILY ATTACH THE DISCONNECTED HOSES TO PREVENT MOVEMENT. IF YOU DO NOT, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (6) Temporarily secure the static hose to prevent movement.

SUBTASK 34-11-00-170-088

- (7) Connect coupling, COM-1927, to the right static system drain fitting No. 4 (aft drain) located at STA 410, WL 180, LBL 56.

SUBTASK 34-11-00-170-089

- (8) Connect regulated air source, STD-3940, to the coupling, COM-1927.

SUBTASK 34-11-00-170-090

- (9) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system.

- (a) Make sure that air comes out freely and unrestricted from the static port located at STA 410, WL 220, RBL 73 (F/O right upper static port).

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 306
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-170-091

- (10) Continue for three minutes or more.
- (a) If debris can not be cleared on the F/O right upper static port, do the following steps:
- 1) Remove the static port (TASK 34-11-02-020-801).
 - 2) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system.
 - 3) Reinstall static port (TASK 34-11-02-400-801).
 - 4) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system to make sure that there is no more debris.

SUBTASK 34-11-00-170-092

- (11) Stop blowing air into the right static system to return system to ambient pressure.

SUBTASK 34-11-00-410-019

- (12) Apply Scotch Brand No.471 tape, G02219, to the F/O right upper static port located at STA 410, WL 220, RBL 72.7.

SUBTASK 34-11-00-080-065

- (13) Remove Scotch Brand No.471 tape, G02219, from the F/O lower left static port located at STA 410, WL 220, LBL 72.5.

SUBTASK 34-11-00-170-094

- (14) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system.
- (a) Make sure that air comes out freely and unrestricted from the F/O lower left static port.
- NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-095

- (15) Continue for three minutes or more.
- (a) If debris can not be cleared on the F/O left lower static port, do the following steps:
- 1) Remove the static port (TASK 34-11-02-020-801).
 - 2) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system.
 - 3) Reinstall static port (TASK 34-11-02-400-801).
 - 4) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system to make sure that there is no more debris.

SUBTASK 34-11-00-170-096

- (16) Stop blowing air into the right static system to return system to ambient pressure.

SUBTASK 34-11-00-410-020

- (17) Apply Scotch Brand No.471 tape, G02219, to the F/O left lower static port located at STA 410, WL 220, LBL 72.5.

SUBTASK 34-11-00-410-021

- (18) Connect the coupling, P/N 1QM1-4-64A, from Test Adapter Kit - Pitot, SPL-15058, to the right static ADM hose at STA 430, WL 205, LBL 0.35.

SUBTASK 34-11-00-170-097

- (19) Apply 15 psi (103 kPa) of dry filtered air to the F/O static system.
- (a) Make sure that air comes out freely and unrestricted from the right static ADM hose located at STA 430, WL 205, LBL 0.35.
- NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 307
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-170-098

- (20) Continue for three minutes or more.

SUBTASK 34-11-00-170-099

- (21) Stop blowing air into the right static system to return system to ambient pressure.

SUBTASK 34-11-00-080-066

- (22) Disconnect the coupling, P/N 1QM1-4-64A, from the right static ADM hose located at STA 430, WL 205, LBL 0.35.

SUBTASK 34-11-00-080-067

- (23) Remove regulated air source, STD-3940, and coupling, COM-1927, from the right static system drain fitting No. 4 (aft drain) located STA 410, WL 180, LBL 56.

SUBTASK 34-11-00-080-068

- (24) Remove the protective cover from the right static ADM.

SUBTASK 34-11-00-410-022



MAKE SURE THAT THE SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU CONNECT, OR DISCONNECT A HOSE TO, OR FROM AN AIR DATA MODULE. IF YOU DO NOT, DAMAGE TO THE AIR DATA MODULE CAN OCCUR.

- (25) Connect the right static hose to the right static ADM located at STA 430, WL 205, LBL 0.35.
- (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pin and you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-790-042

- (26) Do this task: Right Static System Low-range Leak Test, TASK 34-11-00-790-804.
- (a) Make sure that you remove the tape from the F/O right upper and left lower static ports after the leak check.

J. Left Pitot System Flushing

SUBTASK 34-11-00-210-013

- (1) Inspect the left pitot probe, do this task: Pitot Probe Detailed Inspection, TASK 34-11-01-200-801.

SUBTASK 34-11-00-010-020

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
112A	Forward Access Door

SUBTASK 34-11-00-080-069



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (3) Disconnect the pitot hose from the Left Pitot Air Data Module (ADM) located STA 200, WL 175, LBL 13.

SUBTASK 34-11-00-420-026

- (4) Put a protective cover on the pneumatic connector of the ADM.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 308
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-410-023



WARNING

MAKE SURE THAT YOU TEMPORARILY ATTACH THE DISCONNECTED HOSES TO PREVENT MOVEMENT. IF YOU DO NOT, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) Temporarily secure the pitot hose to prevent movement.

SUBTASK 34-11-00-170-100

- (6) Connect coupling, COM-1926, to the left pitot system drain fitting No. 1 located at STA 210, WL 171, LBL 15.

SUBTASK 34-11-00-170-101

- (7) Connect regulated air source, STD-3940, to the coupling, COM-1926.

SUBTASK 34-11-00-170-102

- (8) Apply 15 psi (103 kPa) of dry filtered air to the Captain's pitot system.

- (a) Make sure that air comes out freely and unrestricted from the left pitot probe.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-103

- (9) Continue for three minutes or more.

- (a) If debris can not be cleared from the left pitot probe, do these tasks: Pitot Probe - Removal, TASK 34-11-01-000-801, Pitot Probe Cleaning, TASK 34-11-01-100-801, Pitot Probe - Installation, TASK 34-11-01-400-801.

- (b) Repeat steps 8 and 9 after installation of pitot probe.

SUBTASK 34-11-00-170-104

- (10) Stop blowing air into the left pitot system to return the system to ambient pressure.

SUBTASK 34-11-00-480-102

- (11) Install pitot test adapter, COM-1916, on the Captain's pitot probe located on the left side of the forward fuselage.

SUBTASK 34-11-00-480-103

- (12) Install a cap assembly, STD-6777, on the end of the pitot test adapter, COM-1916, to seal the probe.

SUBTASK 34-11-00-480-104

- (13) Connect the coupling, P/N 1QM1-4-64A, from Test Adapter Kit - Pitot, SPL-15058, to the left pitot ADM hose at STA 200, WL 175, LBL 13 (Left Pitot ADM).

SUBTASK 34-11-00-170-106

- (14) Apply 15 psi (103 kPa) of dry filtered air to the left pitot system.

- (a) Make sure that air comes out freely and unrestricted from the left pitot probe ADM hose coupling.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-107

- (15) Continue for three minutes or more.

SUBTASK 34-11-00-170-108

- (16) Stop blowing air into the left pitot system to return the system to ambient pressure.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 309
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-080-070

- (17) Disconnect the coupling, P/N 1QM1-4-64A, from the left pitot ADM hose at STA 200, WL 175, LBL 13 (Left Pitot ADM).

SUBTASK 34-11-00-080-071

- (18) Disconnect regulated air source, STD-3940, from the Captain's pitot drain fitting No. 1.

SUBTASK 34-11-00-080-072

- (19) Remove the protective cover from the left pitot ADM.

SUBTASK 34-11-00-410-024



CAUTION

MAKE SURE THAT THE SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU CONNECT, OR DISCONNECT A HOSE TO, OR FROM AN AIR DATA MODULE. IF YOU DO NOT, DAMAGE TO THE AIR DATA MODULE CAN OCCUR.

- (20) Connect the left pitot hose to left pitot ADM located at STA 200, WL 175, LBL 13.
 - (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pin and you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-790-043

- (21) Do this task: Left Pitot System Leak Test, TASK 34-11-00-790-806.
 - (a) Make sure that pitot test adapter, COM-1916, is removed after leak test.

K. Right Pitot System Flushing

SUBTASK 34-11-00-210-012

- (1) Inspect the right pitot probe, do this task: Pitot Probe Detailed Inspection, TASK 34-11-01-200-801.

SUBTASK 34-11-00-010-021

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
112A	Forward Access Door

SUBTASK 34-11-00-020-072



CAUTION

MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (3) Disconnect the pitot hose from the Right Pitot Air Data Module (ADM) located STA 200, WL 177, RBL 19.

SUBTASK 34-11-00-480-105

- (4) Put a protective cover on the pneumatic connector of the ADM.

SUBTASK 34-11-00-410-025



WARNING

MAKE SURE THAT YOU TEMPORARILY ATTACH THE DISCONNECTED HOSES TO PREVENT MOVEMENT. IF YOU DO NOT, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) Temporarily secure the pitot hose to prevent movement.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 310
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-170-110

- (6) Connect coupling, COM-1926, to the right pitot system drain fitting No. 2 located at STA 204, WL 171, RBL 15.

SUBTASK 34-11-00-170-111

- (7) Connect regulated air source, STD-3940, to the coupling, COM-1926.

SUBTASK 34-11-00-170-112

- (8) Apply 15 psi (103 kPa) of dry filtered air to the right pitot system.
 - (a) Make sure that air comes out freely and unrestricted from the right pitot probe.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-113

- (9) Continue for three minutes or more.
 - (a) If debris can not be cleared from the right pitot probe, do these tasks: Pitot Probe - Removal, TASK 34-11-01-000-801, Pitot Probe Cleaning, TASK 34-11-01-100-801, Pitot Probe - Installation, TASK 34-11-01-400-801.
 - (b) Repeat steps 8 and 9 after installation of right pitot probe.

SUBTASK 34-11-00-170-114

- (10) Stop blowing air into the right pitot system to return the system to ambient pressure.

SUBTASK 34-11-00-480-106

- (11) Install pitot test adapter, COM-1916, on the F/O pitot probe located on the right side of the forward fuselage.

SUBTASK 34-11-00-480-107

- (12) Install a cap assembly, STD-6777, on the end of the pitot test adapter, COM-1916, to seal the probe.

SUBTASK 34-11-00-480-108

- (13) Connect the coupling, P/N 1QM1-4-64A, from Test Adapter Kit - Pitot, SPL-15058, to the right pitot ADM hose at STA 200, WL 177, RBL 18 (Right Pitot ADM).

SUBTASK 34-11-00-170-116

- (14) Apply 15 psi (103 kPa) of dry filtered air to the right pitot system.
 - (a) Make sure that air comes out freely and unrestricted from the right pitot probe ADM hose coupling.

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-117

- (15) Continue for three minutes or more.

SUBTASK 34-11-00-170-118

- (16) Stop blowing air into the right pitot system to return the system to ambient pressure.

SUBTASK 34-11-00-080-073

- (17) Disconnect the coupling, P/N 1QM1-4-64A, from the right pitot ADM hose at STA 200, WL 177, RBL 18 (Right Pitot ADM).

SUBTASK 34-11-00-080-074

- (18) Disconnect regulated air source, STD-3940, from the F/O pitot drain fitting No. 2.

SUBTASK 34-11-00-080-075

- (19) Remove the protective cover from the right pitot ADM.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 311
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-410-026



CAUTION

MAKE SURE THAT THE SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU CONNECT, OR DISCONNECT A HOSE TO, OR FROM AN AIR DATA MODULE. IF YOU DO NOT, DAMAGE TO THE AIR DATA MODULE CAN OCCUR.

- (20) Connect the right pitot hose to right pitot ADM located at STA 200, WL 177, RBL 18.
- (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pin and you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-790-044

- (21) Do this task: Right Pitot System Leak Test, TASK 34-11-00-790-807.
- (a) Make sure that pitot test adapter, COM-1916, is removed after leak test.

L. Alternate Static System Flushing

SUBTASK 34-11-00-211-003

- (1) Inspect the alternate system static ports, do this task: Static Port - Detailed Inspection, TASK 34-11-02-200-801.

SUBTASK 34-11-00-480-109

- (2) Apply Scotch Brand No.471 tape, G02219, to the right alternate static port located at STA 430, WL 167, RBL 49 (right hand side of the fuselage).

SUBTASK 34-11-00-010-022

- (3) Do this task: Cabin Altitude and Differential Pressure Indicator Removal, TASK 21-33-02-000-801,

SUBTASK 34-11-00-480-110



WARNING

MAKE SURE THAT YOU TEMPORARILY ATTACH THE DISCONNECTED HOSES TO PREVENT MOVEMENT. IF YOU DO NOT, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Temporarily secure the Cabin Altitude and Differential Pressure Indicator static hose to prevent movement.

SUBTASK 34-11-00-480-111

- (5) Do this task: Integrated Standby Flight Display (ISFD) Removal, TASK 34-24-01-000-802.



WARNING

MAKE SURE THAT YOU TEMPORARILY ATTACH THE DISCONNECTED HOSES TO PREVENT MOVEMENT. IF YOU DO NOT, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (a) Temporarily secure the ISFD static and pitot hoses to prevent movement.

SUBTASK 34-11-00-010-024

- (6) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 312
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-112



DO NOT APPLY PRESSURE TO THE SYSTEM WHEN AN AIR DATA INSTRUMENT IS CONNECTED TO THE SYSTEM. IF YOU DO, DAMAGE TO THE AIR DATA INSTRUMENT CAN OCCUR.

- (7) Connect coupling, COM-1927, to the alternate static system drain fitting No. 5 located at STA 326, WL 155, RBL 18.

SUBTASK 34-11-00-480-113

- (8) Connect regulated air source, STD-3940, to the coupling, COM-1927.

SUBTASK 34-11-00-170-120

- (9) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system.

- (a) Make sure that air comes out freely and unrestricted from the left alternate static port located at STA 430, WL 167, LBL 49 (left hand side of the fuselage).

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-121

- (10) Continue for three minutes or more.

- (a) If debris can not be cleared on the left alternate static port, do the following steps:

- 1) Remove the static port (TASK 34-11-02-020-801).
- 2) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system.
- 3) Reinstall static port (TASK 34-11-02-400-801).
- 4) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system to make sure that there is no more debris.

SUBTASK 34-11-00-170-122

- (11) Stop blowing air into the alternate static system to return the system to ambient pressure.

SUBTASK 34-11-00-480-114

- (12) Apply Scotch Brand No.471 tape, G02219, to the left alternate static port located at STA 430, WL 167, LBL 49.

SUBTASK 34-11-00-080-076

- (13) Remove Scotch Brand No.471 tape, G02219, from the right alternate static port located at STA 430, WL 167, RBL 49 (right hand side of the fuselage).

SUBTASK 34-11-00-170-124

- (14) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system.

- (a) Make sure that air comes out freely and unrestricted from the right alternate static port located at STA 430, WL 167, RBL 49 (right hand side of the fuselage).

NOTE: Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-125

- (15) Continue for three minutes or more.

- (a) If debris can not be cleared on the right alternate static port, do the following steps:

- 1) Remove the static port (TASK 34-11-02-020-801).
- 2) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system.
- 3) Reinstall static port (TASK 34-11-02-400-801).

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 313
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 4) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system to make sure that there is no more debris.

SUBTASK 34-11-00-170-140

- (16) Stop blowing air into the alternate static system to return the system to ambient pressure.

SUBTASK 34-11-00-480-115

- (17) Apply Scotch Brand No.471 tape, G02219, to the right alternate static port located at STA 430, WL 167, RBL 49 (right hand side of the fuselage).

SUBTASK 34-11-00-480-116

- (18) Connect the coupling, P/N 1QM1-3-64A, from Test Adapter Kit - Pitot, SPL-15058, to the Cabin Altitude and Differential Pressure Indicator static hose quick disconnect at STA 220, WL 260, RBL 3.

SUBTASK 34-11-00-170-128

- (19) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system.
- (a) Make sure that air comes out freely and unrestricted from the Cabin Altitude and Differential Pressure Indicator static hose coupling located at STA 220, WL 260, RBL 3.
- NOTE:** Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-129

- (20) Continue for three minutes or more.

SUBTASK 34-11-00-170-130

- (21) Stop blowing air into the alternate static system to return the system to ambient pressure.

SUBTASK 34-11-00-080-077

- (22) Disconnect the coupling, P/N 1QM1-3-64A from the Cabin Altitude and Differential Pressure Indicator static hose quick disconnect at STA 220, WL 260, RBL 3.

SUBTASK 34-11-00-480-117

- (23) Connect the coupling, P/N 1QM1-3-64A, from Test Adapter Kit - Pitot, SPL-15058, to the ISFD static hose quick disconnect.

SUBTASK 34-11-00-170-132

- (24) Apply 15 psi (103 kPa) of dry filtered air to the alternate static system.
- (a) Make sure that air comes out freely and unrestricted from the ISFD static hose coupling.
- NOTE:** Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-133

- (25) Continue for three minutes or more.

SUBTASK 34-11-00-170-134

- (26) Stop blowing air into the alternate static system to return the system to ambient pressure.

SUBTASK 34-11-00-080-078

- (27) Disconnect the coupling, P/N 1QM1-3-64A, from the ISFD static hose quick disconnect.

SUBTASK 34-11-00-080-079

- (28) Remove the regulated air source, STD-3940, from the alternate static drain fitting No. 5 located at STA 226, WL 155, RBL 18.

SUBTASK 34-11-00-410-027

- (29) Do this task: Cabin Altitude and Differential Pressure Indicator Installation, TASK 21-33-02-400-801.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 314
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-410-028

- (30) If auxiliary pitot system needs to be flushed, do not reinstall ISFD and proceed to the alternate pitot flushing steps.

SUBTASK 34-11-00-410-032

- (31) If does not need to be flushed, do these steps:
- (a) Do this task: Integrated Standby Flight Display (ISFD) Installation, TASK 34-24-01-400-802.
 - (b) Do this task: Alternate Static System Low-range Leak Test, TASK 34-11-00-790-805.
 - 1) Make sure that you remove the tape on the alternate static ports after the leak test.

M. Auxiliary Pitot System Flushing

SUBTASK 34-11-00-210-014

- (1) Inspect the auxiliary pitot probe, do this task: Pitot Probe Detailed Inspection, TASK 34-11-01-200-801.

SUBTASK 34-11-00-480-118

- (2) Connect the coupling, P/N 1QM1-2-64A, from Test Adapter Kit - Pitot, SPL-15058, to the disconnected ISFD pitot hose quick disconnect.

SUBTASK 34-11-00-480-119

- (3) Connect regulated air source, STD-3940, to the coupling, P/N 1QM1-2-64A, on the ISFD pitot hose.

SUBTASK 34-11-00-170-136

- (4) Apply 15 psi (103 kPa) of dry filtered air to the auxiliary pitot system.
- (a) Make sure that air comes out freely and unrestricted from the auxiliary pitot probe.
- NOTE:** Differences in sound and feel of the airflow may be a sign of debris in the system.

SUBTASK 34-11-00-170-137

- (5) Continue for three minutes or more.
- (a) If debris can not be cleared from the auxiliary pitot system, do these tasks: Pitot Probe - Removal, TASK 34-11-01-000-801, Pitot Probe Cleaning, TASK 34-11-01-100-801, Pitot Probe - Installation, TASK 34-11-01-400-801.
 - (b) Repeat steps 4 and 5 after installation of auxiliary pitot probe.

SUBTASK 34-11-00-170-138

- (6) Stop blowing air into the alternate pitot system to return the system to ambient pressure.

SUBTASK 34-11-00-080-080

- (7) Disconnect the coupling, P/N 1QM1-2-64A, and the regulated air source, STD-3940, from the ISFD pitot hose quick disconnect.

SUBTASK 34-11-00-410-029

- (8) Install the ISFD, do this task: Integrated Standby Flight Display (ISFD) Installation, TASK 34-24-01-400-802.

SUBTASK 34-11-00-790-045

- (9) Do this task: Alternate Static System Low-range Leak Test, TASK 34-11-00-790-805.
- (a) Make sure that you remove the tape on the alternate static ports after the leak test.

SUBTASK 34-11-00-790-046

- (10) Do this task: Alternate Pitot System Leak Test, TASK 34-11-00-790-808.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 315
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

N. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-020-073

- (1) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
112A	Forward Access Door
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-410-031

- (2) Install cargo compartment ceiling liner, do this task: Cargo Compartment Ceiling Liner Installation, TASK 50-10-03-400-801.

SUBTASK 34-11-00-410-030

- (3) Install cargo compartment sidewall liner, do this task: Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801.

SUBTASK 34-11-00-440-001

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT
D	8	C01946	PROBE AUTO HEAT CAPT
D	9	C01947	PROBE AUTO HEAT F/O

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

————— **END OF TASK** —————

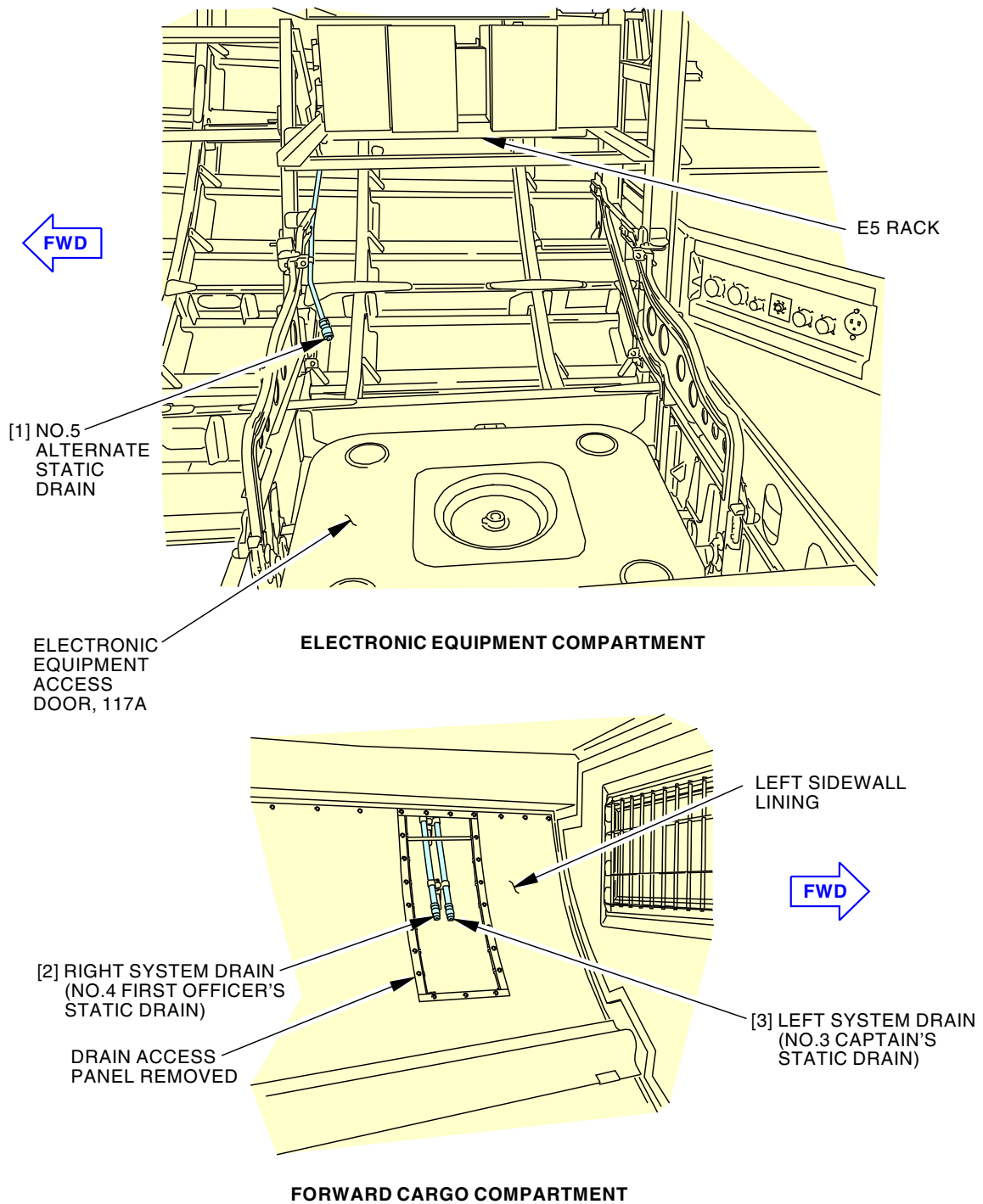
EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 316
Sep 15/2021



2414797 S00061536013_V1

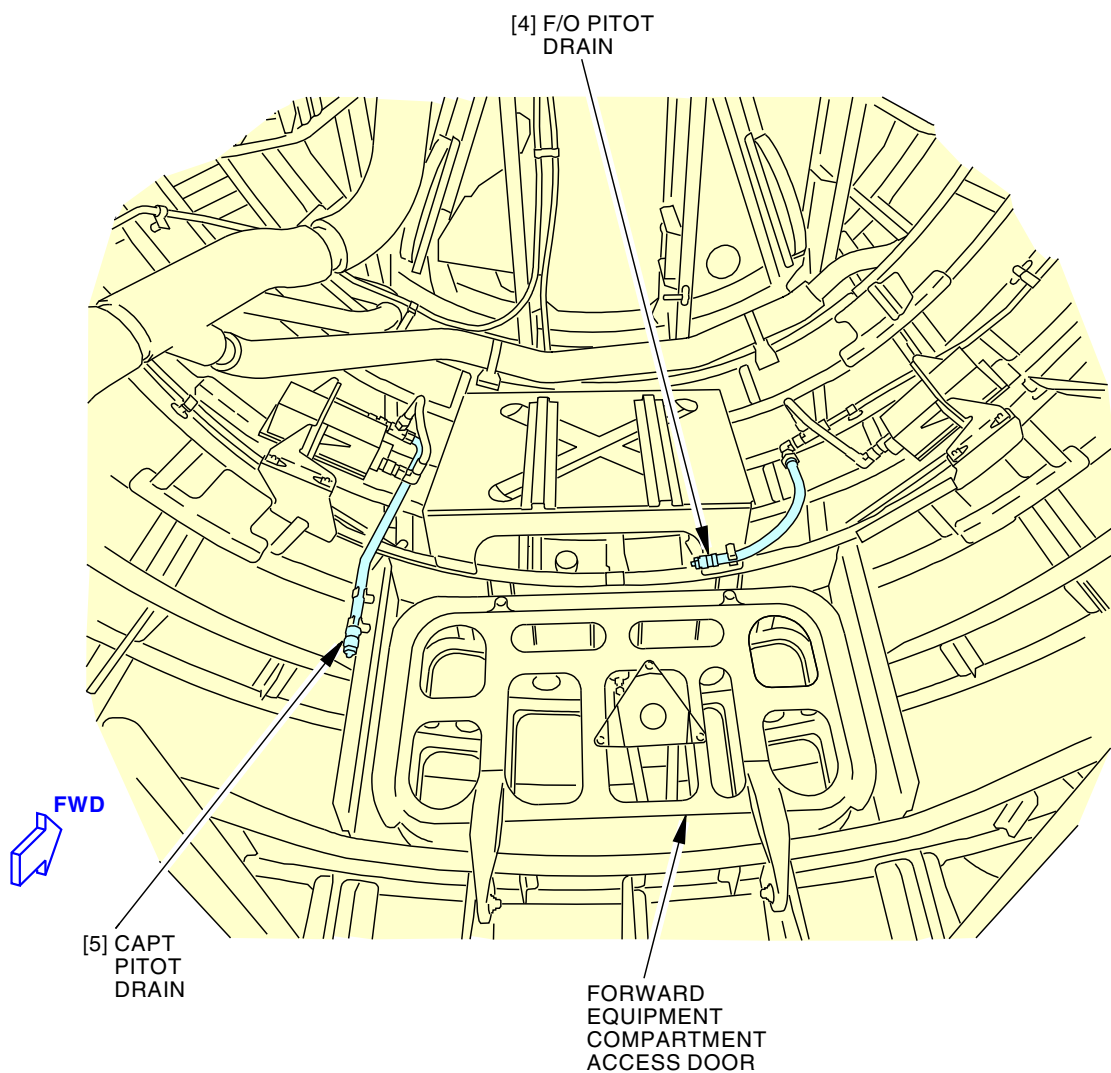
Static System Drains
Figure 301/34-11-00-990-811

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 317
Sep 15/2021



FORWARD EQUIPMENT COMPARTMENT

2414798 S00061536014_V1

Pitot System Drains
Figure 302/34-11-00-990-812

EFFECTIVITY SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-680-801

3. Pitot Static System - Draining

A. General

- (1) There are five drain assemblies for the pitot static system.
 - (a) Captain's Pitot system drain (Figure 302).
 - (b) First Officer's Pitot system drain (Figure 302).
 - (c) Captain's Static system drain (Figure 301).
 - (d) First Officer's Static system drain (Figure 301).
 - (e) Alternate Static system drain (Figure 301).

B. Standard Tools and Equipment

- (1) Receptacle and/or absorbent cloth for collecting small amount of liquid from each drain.

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
121	Forward Cargo Compartment - Left

D. Procedure

SUBTASK 34-11-00-680-001

- (1) Examine the drain assembly for moisture in the system.
- (2) Do these steps to drain the assembly, if moisture is visible.
 - (a) To remove the drain cap push up and twist to release the cap.
 - (b) Turn the drain cap over and put the raised part of the cap into the bottom of the drain body.
 - (c) Push the drain cap into the drain body to open the spring-loaded seal.
 - (d) Drain all of the fluid from the assembly onto the absorbent cloth or into the receptacle.
 - (e) Reinstall the drain cap on the drain assembly.
 - (f) Make sure that the drain cap is securely connected to the drain assembly.

————— **END OF TASK** —————

TASK 34-11-00-210-801

4. Pitot System - Detailed Inspection of Drains

(Figure 302)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task is for the detailed inspection of the pitot system drain.

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
121	Forward Cargo Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 319
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

C. Procedure

SUBTASK 34-11-00-210-002

- (1) Do a detailed inspection for moisture for the Captains and First Officers pitot system drains.

NOTE: The auxiliary pitot system does not have a drain fitting. The probe is at the lowest part of the system line so that moisture can drain from the probe.

SUBTASK 34-11-00-680-002

- (2) If you find moisture in at least one of the locations above, do this task: Pitot Static System - Draining, TASK 34-11-00-680-801.

————— **END OF TASK** —————

TASK 34-11-00-210-802

5. Static System - Detailed Inspection of Drains

(Figure 301)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task is for the detailed inspection of the static drain.

B. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
121	Forward Cargo Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

C. Static System Detailed Inspection of Drains

SUBTASK 34-11-00-210-003

- (1) Do a detailed inspection for moisture in the static system drains for these systems:

- (a) Alternate Static System
- (b) First Officers Static System
- (c) Captains Static System

SUBTASK 34-11-00-680-003

- (2) If you find moisture in at least one of the locations above, do this task: Pitot Static System - Draining, TASK 34-11-00-680-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 320
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

STATIC AND TOTAL AIR PRESSURE SYSTEM - ADJUSTMENT/TEST

1. General

- A. This procedure has these tasks:
- (1) Left Static System Low-range Leak Test
 - (2) Right Static System Low-range Leak Test
 - (3) Alternate Static System Low-range Leak Test
 - (4) Left Pitot System Leak Test
 - (5) Right Pitot System Leak Test
 - (6) Alternate Pitot System Leak Test
 - (7) Left Static System Full-range Leak Test
 - (8) Right Static System Full-range Leak Test
 - (9) Alternate Static System Full-range Leak Test
 - (10) Altimetry System Test
 - (11) Alternative Test: PFD - Static System Only

TASK 34-11-00-790-803

2. Left Static System Low-range Leak Test

(Figure 501)

A. General

- (1) You must do the static system low-range leak test when you remove a fitting other than a quick disconnect. You must do the low-range leak test after you flush the pitot-static system.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. References

Reference	Title
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 501
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 502
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Prepare for the Low-range Leak Test

SUBTASK 34-11-00-860-018



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-019

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-020

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-021

- (4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

G. Installation of Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-020



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal these two primary static ports with vinyl adhesive Scotch Brand No.471 tape, G02219:
 - (a) The CAPTAIN static port on the right side of the fuselage.
 - (b) The CAPTAIN static port on the left side of the fuselage.

SUBTASK 34-11-00-480-021

- (2) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 503
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-022

- (3) Remove the cap from the No. 3 Captain's Static Drain.

NOTE: The No. 3 Captain's Static Drain is the forward drain, and is connected to the left static system.

SUBTASK 34-11-00-480-023

- (4) Install the coupling, COM-1927, on the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-480-024

- (5) Connect the air data model test set, COM-1914, or the Air Data Test Set (non RVSM), COM-13545, to the coupling, COM-1927.

H. Installation of Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-001



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the CAPTAIN static port, on the right side of the fuselage.

SUBTASK 34-11-00-480-026

- (2) Connect the air data test set to the static test adapter, COM-1921.

SUBTASK 34-11-00-400-002



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the CAPTAIN static port on the left side of the fuselage with Scotch Brand No.471 tape, G02219.

I. Left Static System Low-range Leak Test

SUBTASK 34-11-00-790-005



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Operate the air data test set to apply a vacuum to the static system equal to 5000 ft (1524 m) of altitude above field elevation (ambient pressure minus 5.25 ±0.25 in/Hg (17.78 ±0.85 kPa).

SUBTASK 34-11-00-790-006

- (2) When the system reaches 5000 ft (1524 m) above field elevation, stop for one minute to allow the system to stabilize.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 504
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-790-007

- (3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-008

- (4) Make sure the altitude does not decrease more than 80 ft (24 m) and 0.07 in/Hg (0.24 kPa) in one minute.

SUBTASK 34-11-00-860-023

- (5) Put the system back to ambient pressure.

J. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-012



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the coupling, COM-1927.

SUBTASK 34-11-00-080-013

- (2) Disconnect the coupling, COM-1927, from the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-480-027

- (3) Install the cap on the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-210-004

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
 - (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-028

- (5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801.

SUBTASK 34-11-00-080-014



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (6) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:
 - (a) The CAPTAIN static port on the right side of the fuselage.
 - (b) The CAPTAIN static port on the left side of the fuselage.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 505
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

K. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-029



CAUTION

MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set, from the static test adapter, COM-1921.

SUBTASK 34-11-00-480-030



CAUTION

REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the CAPTAIN static port on the right side of the fuselage.

SUBTASK 34-11-00-080-015



WARNING

FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



CAUTION

DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (3) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219, from the CAPTAIN static port on the left side of the fuselage.

L. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-024

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-11-00

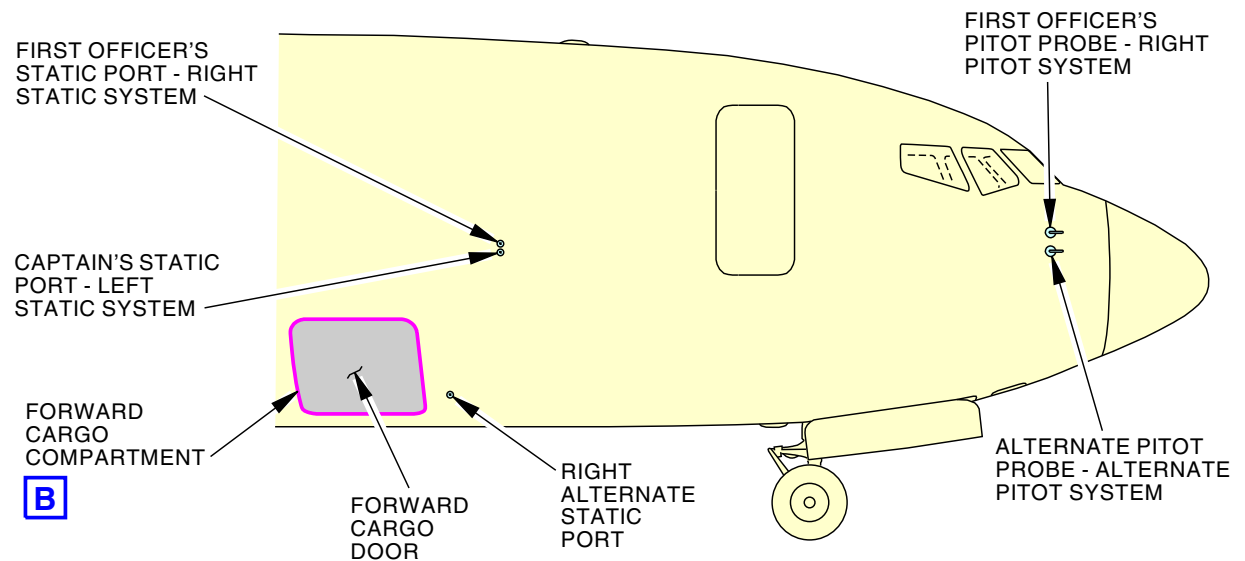
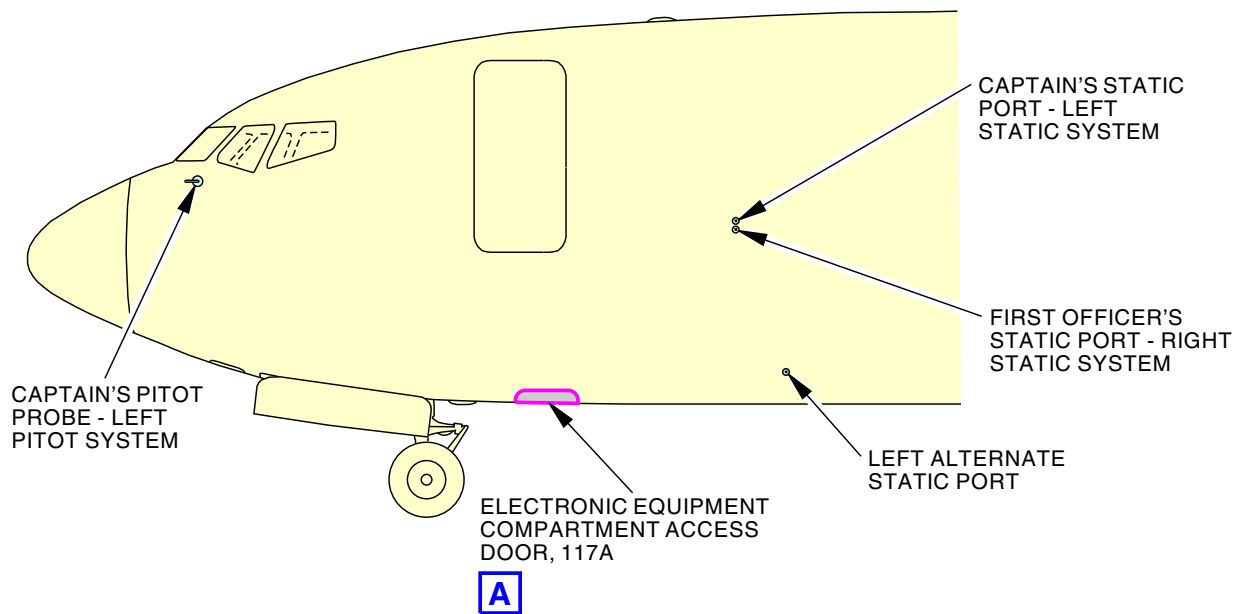
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414799 S00061536020_V1

Pitot Static Leakage Test
Figure 501/34-11-00-990-804 (Sheet 1 of 2)

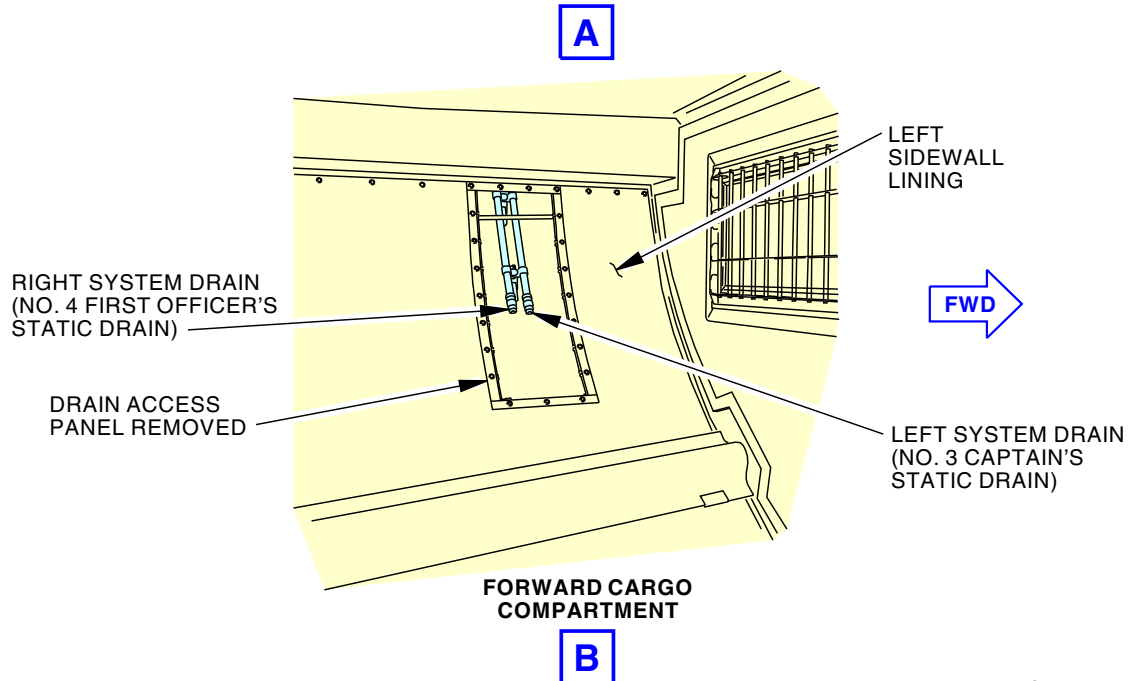
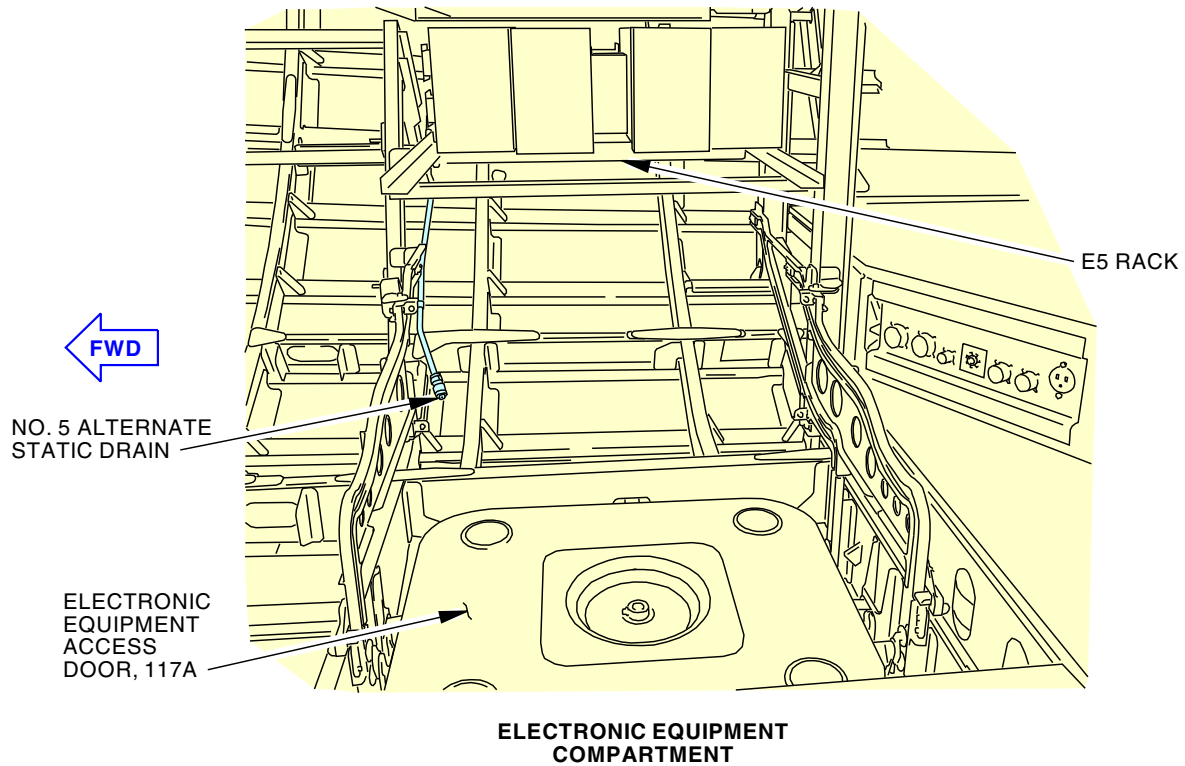
EFFECTIVITY	
SIA ALL	

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 507
Sep 15/2021



2414800 S00061536021_V1

Pitot Static Leakage Test
Figure 501/34-11-00-990-804 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 508
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-790-804

3. **Right Static System Low-range Leak Test**

(Figure 501)

A. General

- (1) You must do the static system low-range leak test when you remove a fitting other than a quick disconnect. You must do the low-range leak test after you flush the pitot-static system.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. References

Reference	Title
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 509
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Prepare for the Low-range Leak Test

SUBTASK 34-11-00-860-025



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-026

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-027

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-091

- (4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 510
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Installation of the Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-031



WARNING

WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



CAUTION

DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal these two primary static ports with vinyl adhesive Scotch Brand No.471 tape, G02219:
 - (a) The FIRST OFFICER static port on the left side of the fuselage.
 - (b) The FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-480-032

- (2) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801.

SUBTASK 34-11-00-480-033

- (3) Remove the cap from the No. 4 First Officer's Static Drain.

NOTE: The No. 4 First Officer's Static Drain is the aft drain, and is connected to the right static system.

SUBTASK 34-11-00-400-003

- (4) Install the coupling, COM-1927, on the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-400-004

- (5) Connect the air data model test set, COM-1914, or the Air Data Test Set (non RVSM), COM-13545, to the coupling, COM-1927.

H. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-006



CAUTION

INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-400-007

- (2) Connect the air data test set to the static test adapter, COM-1921.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 511
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-400-008



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the FIRST OFFICER static port on the left side of the fuselage with Scotch Brand No.471 tape, G02219.

I. Right Static System Low-range Leak Test

SUBTASK 34-11-00-790-009



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Operate the air data test set to apply a vacuum to the static system equal to 5000 ft (1524 m) of altitude above field elevation (ambient pressure minus 5.25 ± 0.25 in/Hg (17.78 ± 0.85 kPa)).

SUBTASK 34-11-00-790-010

- (2) When the system reaches 5000 ft (1524 m) above field elevation, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-011

- (3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-012

- (4) Make sure the altitude does not decrease more than 80 ft (24 m) and 0.07 in/Hg (0.24 kPa) in one minute.

SUBTASK 34-11-00-860-029

- (5) Put the system back to ambient pressure.

J. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-016



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the coupling, COM-1927.

SUBTASK 34-11-00-080-017

- (2) Disconnect the coupling, COM-1927, from the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-480-034

- (3) Install the cap on the No. 4 First Officer's Static Drain.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 512
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-210-005

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
 - (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-035

- (5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801.

SUBTASK 34-11-00-080-018



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (6) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:
 - (a) The FIRST OFFICER static port on the right side of the fuselage.
 - (b) The FIRST OFFICER static port on the left side of the fuselage.

K. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-036



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the static test adapter, COM-1921.

SUBTASK 34-11-00-480-037



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-080-019



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 513
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



CAUTION

DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (3) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219 from the FIRST OFFICER static port on the left side of the fuselage.

L. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-093

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— **END OF TASK** —————

TASK 34-11-00-790-805

4. Alternate Static System Low-range Leak Test

(Figure 501)

A. General

- (1) You must do the static system low-range leak test when you remove a fitting other than a quick disconnect. You must do the low-range leak test after you flush the pitot-static system.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 514
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: ORDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: ORDZ5 Opt Part #: ADC800 Supplier: 41364

C. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 515
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Low-range Leak Test

SUBTASK 34-11-00-860-030



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-031

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-032

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

G. Installation of the Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-038



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal the two alternate static ports with vinyl adhesive Scotch Brand No.471 tape, G02219, at these locations:
 - (a) The ALTERNATE static port on the right side of the fuselage.
 - (b) The ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-010-014

- (2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 516
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-039

- (3) Remove the cap from the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-400-009

- (4) Install the coupling, COM-1927, on the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-400-010

- (5) Connect the air data model test set, COM-1914, or the Air Data Test Set (non RVSM), COM-13545, to the coupling, COM-1927.

H. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-011



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-400-012

- (2) Connect the air data test set to the static test adapter, COM-1921.

SUBTASK 34-11-00-400-013



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the ALTERNATE static port on the right side of the fuselage with Scotch Brand No.471 tape, G02219.

I. Alternate Static System Low-range Leak Test

SUBTASK 34-11-00-790-013

- (1) Operate the air data test set to apply a vacuum to the static system equal to 5000 ft (1524 m) of altitude above field elevation (ambient pressure minus 5.25 $\pm$ 0.25 in/Hg (17.78 $\pm$ 0.85 kPa)).

SUBTASK 34-11-00-790-014

- (2) When the system reaches 5000 ft (1524 m) above field elevation, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-015

- (3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-016

- (4) Make sure the altitude does not decrease more than 80 ft (24 m) and 0.07 in/Hg (0.24 kPa) in one minute.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 517
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-860-034

- (5) Put the system back to ambient pressure.

J. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-020



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the coupling, COM-1927.

SUBTASK 34-11-00-080-021

- (2) Disconnect the coupling, COM-1927, from the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-480-041

- (3) Install the cap on the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-210-006

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
 - (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-410-015

- (5) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-080-022



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (6) Remove the Scotch Brand No.471 tape, G02219, from the ALTERNATE static ports at these locations:
 - (a) The ALTERNATE static port on the right side of the fuselage.
 - (b) The ALTERNATE static port on the left side of the fuselage.

K. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-042



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the static test adapter, COM-1921.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 518
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-043



CAUTION

REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-080-023



WARNING

FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



CAUTION

DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (3) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219, from the ALTERNATE static port on the right side of the fuselage.

————— **END OF TASK** —————

TASK 34-11-00-790-806

5. Left Pitot System Leak Test

(Figure 501)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 519
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 520
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

C. Prepare for the Leak Test

SUBTASK 34-11-00-860-035



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-036

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-037

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-039

- (4) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

D. Installation of Pitot Probe Adapter

SUBTASK 34-11-00-480-044



WHEN THE PITOT PROBES ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT PITOT PROBES ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER PITOT PROBES BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (1) Install the pitot test adapter, COM-1916, on the pitot probe on the left side of the forward fuselage.

SUBTASK 34-11-00-480-045

- (2) Connect the air data model test set, COM-1914, or the Air Data Test Set (non RVSM), COM-13545, to the pitot test adapter, COM-1916.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 521
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

E. Left Pitot System Leak Test

SUBTASK 34-11-00-790-017



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Operate the air data test set to apply pressure of 4.53 ± 0.16 in/Hg (15.34 ± 0.54 kPa), $2.22 + 0.08 / - 0.80$ psig ($153.06 + 5.52 / - 55.16$ mBar), or 300 ± 5 knots (556 ± 9 km/h).

SUBTASK 34-11-00-790-018

- (2) When the test pressure is reached, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-019

- (3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-020

- (4) Make sure the pressure does not decrease more than 0.16 in/Hg (5.42 mBar) (approximately 5 knots (9 km/h)) in one minute.

SUBTASK 34-11-00-860-042

- (5) Put the system back to ambient pressure.

F. Removal of Pitot Probe Adapter

SUBTASK 34-11-00-080-024



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-025

- (2) Remove the pitot test adapter, COM-1916, from the pitot probe.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-043

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 522
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-790-807

6. Right Pitot System Leak Test

(Figure 501)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 523
Sep 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

C. Prepare for the Leak Test

SUBTASK 34-11-00-860-044



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-045

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-046

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-048

- (4) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

D. Installation of Pitot Probe Adapter

SUBTASK 34-11-00-480-047



WHEN THE PITOT PROBES ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT PITOT PROBES ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER PITOT PROBES BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (1) Install the pitot test adapter, COM-1916, on the upper pitot probe on the right side of the forward fuselage.

SUBTASK 34-11-00-480-048

- (2) Connect the air data model test set, COM-1914, or the Air Data Test Set (non RVSM), COM-13545, to the pitot test adapter, COM-1916.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 524
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

E. Right Pitot System Leak Test

SUBTASK 34-11-00-790-021



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Operate the air data test set to apply pressure of 4.53 ± 0.16 in/Hg (15.34 ± 0.54 kPa) (gauge), 2.22 ± 0.08 psig (153.06 ± 5.52 mBar), or 300 ± 5 knots (556 ± 9 km/h).

SUBTASK 34-11-00-790-022

- (2) When the test pressure is reached, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-023

- (3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-024

- (4) Make sure the pressure does not decrease more than 0.16 in/Hg (5.42 mBar) (approximately 5 knots (9 km/h)) in one minute.

SUBTASK 34-11-00-860-050

- (5) Put the system back to ambient pressure.

F. Removal of the Pitot Probe Adapter

SUBTASK 34-11-00-080-026



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-027

- (2) Remove the pitot test adapter, COM-1916, from the pitot probe.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-051

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 525
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-790-808

7. Alternate Pitot System Leak Test

(Figure 501)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 526
Sep 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

C. Prepare for the Leak Test

SUBTASK 34-11-00-860-052



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-053

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-054

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-056

- (4) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

D. Installation of the Pitot Probe Adapter

SUBTASK 34-11-00-480-050



WHEN THE PITOT PROBES ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT PITOT PROBES ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER PITOT PROBES BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (1) Install the pitot test adapter, COM-1916, on the lower pitot probe on the right side of the forward fuselage.

SUBTASK 34-11-00-480-051

- (2) Connect the air data model test set, COM-1914, or the Air Data Test Set (non RVSM), COM-13545, to the pitot test adapter, COM-1916.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 527
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

E. Alternate Pitot System Leak Test

SUBTASK 34-11-00-790-025



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Operate the air data test set to apply pressure of 4.53 ± 0.16 in/Hg (15.34 ± 0.54 kPa) (gauge), 2.22 ± 0.08 psig (153.06 ± 5.52 mBar), or 300 ± 5 knots (556 ± 9 km/h).

SUBTASK 34-11-00-790-026

- (2) When the test pressure is reached, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-027

- (3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-028

- (4) Make sure the pressure does not decrease more than 0.16 in/Hg (5.42 mBar) (approximately 5 knots (9 km/h)) in one minute.

SUBTASK 34-11-00-860-058

- (5) Put the system back to ambient pressure.

F. Removal of the Pitot Probe Adapter

SUBTASK 34-11-00-080-028



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data test set from the pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-029

- (2) Remove the pitot test adapter, COM-1916, from the pitot probe.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-059

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 528
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-790-809

8. Left Static System Full-range Leak Test

(Figure 501)

A. General

- (1) The static system full-range leak test is not required. However, leaks are easier to detect with the higher pressure.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. References

Reference	Title
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 529
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

F. Prepare for the Leak Test

SUBTASK 34-11-00-860-060



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-061

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-062

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-063

- (4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 530
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Installation of the Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-400-014



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal these static ports on the with Scotch Brand No.471 tape, G02219:
 - (a) The CAPTAIN static port on the right side of the fuselage.
 - (b) The CAPTAIN static port on the left side of the fuselage.

SUBTASK 34-11-00-480-053

- (2) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801.

SUBTASK 34-11-00-480-054

- (3) Remove the cap from the No. 3 Captain's Static Drain.

NOTE: The No. 3 Captain's Static Drain is the forward drain and is connected to the left static system.

SUBTASK 34-11-00-400-015

- (4) Install the coupling, COM-1927, on the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-400-016

- (5) Connect the air data model test set, COM-1914, to the coupling, COM-1927.

H. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-017



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the CAPTAIN static port, on the right side of the fuselage.

SUBTASK 34-11-00-400-018

- (2) Connect the air data model test set, COM-1914 to the static test adapter, COM-1921.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 531
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-400-019



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the CAPTAIN static port on the left side of the fuselage with Scotch Brand No.471 tape, G02219.

I. Left Static System Full-range Leak Test

SUBTASK 34-11-00-790-029



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Use the air data model test set, COM-1914 to supply a vacuum of 18.82 in/Hg (637.32 mBar), but do not make the static pressure less than 4.3 in/Hg (145.6 mBar) absolute.
 - (a) When you apply pressure to the static system, make sure that the rate is less than 5000 ft (1524 m) for each minute.

SUBTASK 34-11-00-790-030

- (2) When the system reaches 25,000 ft (7620 m), stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-031

- (3) Set the air data model test set, COM-1914, for the leak check.

SUBTASK 34-11-00-790-032

- (4) Make sure the pressure does not decrease more than 0.20 in/Hg (6.77 mBar) (approximately 400 ft (122 m)) in one minute.

SUBTASK 34-11-00-860-065

- (5) Put the system back to ambient pressure.
 - (a) When you release pressure from the static system, make sure that the rate is less than 5000 ft (1524 m) for each minute.

J. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-030



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the coupling, COM-1927.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 532
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-080-031

- (2) Disconnect the coupling, COM-1927, from the No. 3 Captains Static Drain.

SUBTASK 34-11-00-480-055

- (3) Install the cap on the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-210-007

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
 - (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-056

- (5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801.

SUBTASK 34-11-00-480-057



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (6) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:
 - (a) The CAPTAIN static port on the right side of the fuselage.
 - (b) The CAPTAIN static port on the left side of the fuselage.

K. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-058



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921.

SUBTASK 34-11-00-480-059



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the CAPTAIN static port on the right side of the fuselage.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 533
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-480-060



WARNING

FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



CAUTION

DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (3) Remove the Scotch Brand No.471 tape, G02219, from the CAPTAIN static port on the left side of the fuselage.

L. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-066

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— END OF TASK —————

TASK 34-11-00-790-810

9. Right Static System Full-range Leak Test

(Figure 501)

A. General

- (1) The static system full-range leak test is not required. However, leaks are easier to detect with the higher pressure.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. References

<u>Reference</u>	<u>Title</u>
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 534
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 535
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Prepare for the Leak Test

SUBTASK 34-11-00-860-067



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-068

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-069

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

G. Installation of Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-400-020



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal these static ports with vinyl adhesive Scotch Brand No.471 tape, G02219:
 - (a) The FIRST OFFICER static port on the left side of the fuselage.
 - (b) The FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-400-021

- (2) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801.

SUBTASK 34-11-00-400-022

- (3) Remove the cap from the No. 4 First Officer's Static Drain.

NOTE: The No. 4 First Officer's Static Drain is the aft drain, and is connected to the right static system.

SUBTASK 34-11-00-400-023

- (4) Install the coupling, COM-1927, on the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-400-024

- (5) Connect the air data model test set, COM-1914, to the coupling, COM-1927.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 536
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

H. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-025



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-400-026

- (2) Connect the air data model test set, COM-1914, to the static test adapter, COM-1921.

SUBTASK 34-11-00-400-027



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the FIRST OFFICER static port on the left side of the fuselage with vinyl adhesive Scotch Brand No.471 tape, G02219.

I. Right Static System Full-range Leak Test

SUBTASK 34-11-00-790-033



MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

- (1) Use the air data model test set, COM-1914, to supply a vacuum of 18.82 in/Hg (637.32 mBar), but do not make the static pressure less than 4.3 in/Hg (145.6 mBar) absolute.
 - (a) When you apply pressure to the static system, make sure that the rate is less than 5000 ft (1524 m) for each minute.

SUBTASK 34-11-00-790-034

- (2) When the system reaches 25,000 ft (7620 m), stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-035

- (3) Set the air data model test set, COM-1914, for the leak check.

SUBTASK 34-11-00-790-036

- (4) Make sure the pressure does not decrease more than 0.20 in/Hg (6.77 mBar) (approximately 400 ft (122 m)) in one minute.

SUBTASK 34-11-00-860-071

- (5) Put the system back to ambient pressure.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 537
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) When you release pressure from the static system, make sure that the rate is less than 5000 ft (1524 m) for each minute.

J. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-032



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914 from the coupling, COM-1927.

SUBTASK 34-11-00-080-033

- (2) Disconnect the coupling, COM-1927, from the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-480-061

- (3) Install the cap on the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-210-008

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
- (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-062

- (5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment, do this task: Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801.

SUBTASK 34-11-00-080-034



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (6) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:
- (a) The FIRST OFFICER static port on the right side of the fuselage.
- (b) The FIRST OFFICER static port on the left side of the fuselage.

K. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-063



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 538
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-080-035



CAUTION

REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-080-036



WARNING

FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



CAUTION

DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (3) Remove the Scotch Brand No.471 tape, G02219, from the FIRST OFFICER static port on the left side of the fuselage.

————— END OF TASK —————

TASK 34-11-00-790-811

10. Alternate Static System Full-range Leak Test

(Figure 501)

A. General

- (1) The static system full-range leak test is not required. However, leaks are easier to detect with the higher pressure.
- (2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 539
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

C. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
121	Forward Cargo Compartment - Left

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 540
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Leak Test

SUBTASK 34-11-00-860-072



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

SUBTASK 34-11-00-860-073

- (2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-074

- (3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-075

- (4) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

G. Installation of Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-064



WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 541
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



CAUTION

DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal these static ports with vinyl adhesive Scotch Brand No.471 tape, G02219:
 - (a) The ALTERNATE static port on the right side of the fuselage.
 - (b) The ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-010-015

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-480-065

- (3) Remove the cap from the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-480-066

- (4) Install the coupling, COM-1927, on the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-480-067

- (5) Connect the air data model test set, COM-1914, to the coupling, COM-1927.

H. Installation of Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-028



CAUTION

INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (1) Install the static test adapter, COM-1921, on the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-480-068

- (2) Connect the air data model test set, COM-1914, to the static test adapter, COM-1921.

SUBTASK 34-11-00-400-029



WARNING

WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT THE STATIC PORTS ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



CAUTION

DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the ALTERNATE static port on the right side of the fuselage with Scotch Brand No.471 tape, G02219.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 542
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

I. Installation of the Pitot Probe Adapter

SUBTASK 34-11-00-480-070



WHEN THE PITOT PROBES ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. IN ADDITION, ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT DECK AS A REMINDER THAT PITOT PROBES ARE COVERED. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER PITOT PROBES BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.



MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (1) Install the pitot test adapter, COM-1916, on the lower pitot probe on the right side of the forward fuselage.

SUBTASK 34-11-00-480-071

- (2) Connect the air data model test set, COM-1914, to the pitot test adapter, COM-1916.

J. Alternate Static System Full-range Leak Test

SUBTASK 34-11-00-790-037



KEEP THE RATE OF STATIC CHANGE BELOW 5000 FEET FOR EACH MINUTE. KEEP THE DIFFERENTIAL PRESSURE BETWEEN THE PITOT AND STATIC SYSTEM LESS THAN 10 INCHES OF MERCURY (339 MILLIBARS). IF YOU DO NOT OBEY, DAMAGE TO THE INDICATORS CAN OCCUR.

- (1) Operate the air data model test set, COM-1914, to apply vacuum to the alternate pitot system to keep the pressure difference between the pitot and static systems less than 10 in/Hg (339 mBar).

SUBTASK 34-11-00-790-038



DO NOT MAKE THE STATIC PRESSURE LESS THAN 4 INCH HG (135.5 MILLIBARS). STATIC PRESSURE LESS THAN 4 INCH HG (135.5 MILLIBARS) CAN CAUSE DAMAGE TO THE AIR DATA MODULE.

- (2) Use the air data model test set, COM-1914 to supply a vacuum of 18.82 in/Hg (637.32 mBar), but do not make the static pressure less than 4.3 in/Hg (145.6 mBar) absolute.
 - (a) When you apply pressure to the static system, make sure that the rate is less than 5000 ft (1524 m) for each minute.

SUBTASK 34-11-00-790-039

- (3) When the system reaches 25,000 ft (7620 m), stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-040

- (4) Set the air data model test set, COM-1914, for the leak check.

SUBTASK 34-11-00-790-041

- (5) Make sure the pressure does not decrease more than 0.20 in/Hg (6.77 mBar) (approximately 400 ft (122 m)) in one minute.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 543
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-860-077

- (6) Put the system back to ambient pressure.
 - (a) When you release pressure from the static system, make sure that the rate is less than 5000 ft (1524 m) for each minute.

K. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-037



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the coupling, COM-1927.

SUBTASK 34-11-00-080-038

- (2) Disconnect the coupling, COM-1927, from the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-080-039

- (3) Install the cap on the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-210-009

- (4) Do a visual inspection of the quick-disconnect fittings that you connected.
 - (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-410-016

- (5) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-080-040



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (6) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219, from the alternate static ports at these locations:
 - (a) The ALTERNATE static port on the right side of the fuselage.
 - (b) The ALTERNATE static port on the left side of the fuselage.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 544
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

L. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-072



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921.

SUBTASK 34-11-00-480-073



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (2) Remove the static test adapter, COM-1921, from the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-480-074



FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT CAN CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PLUG OR DEFORM HOLES. INDICATED AREAS MUST BE SMOOTH AND CLEAN.

- (3) Remove the Scotch Brand No.471 tape, G02219, from the ALTERNATE static port on the right side of the fuselage.

M. Removal of the Probe Adapters

SUBTASK 34-11-00-080-041



MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (1) Disconnect the air data model test set, COM-1914, from the pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-042

- (2) Remove the pitot test adapter, COM-1916, from the auxiliary pitot probe.

N. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-078

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 545
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

————— **END OF TASK** —————

TASK 34-11-00-780-801

11. Altimetry System Test

(Figure 502, Figure 503, Figure 504)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives instructions to test the Altimetry System for correct operation of the Air Data Module (ADM).
- (2) You can use one of the two methods below to pressurize the static system:
 - (a) The drain coupling method (recommended)
 - (b) The static port adapter method (if the drain coupling is not available).

B. References

<u>Reference</u>	<u>Title</u>
24-22-00-860-803	Supply External Power (P/B 201)
24-22-00-860-804	Remove External Power (P/B 201)
34-21-04 P/B 401	AIR DATA MODULE - REMOVAL/INSTALLATION
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

<u>Reference</u>	<u>Description</u>
COM-1562	Analyzer - Data Bus, ARINC 429 Part #: 01-1001-05 Supplier: 0Z3C6 Part #: 01-1001-12 Supplier: 0Z3C6 Part #: 403557 Supplier: CG603 Part #: 800-0630 Supplier: 1JSZ6 Part #: DT400H-01 Supplier: 0Z3C6 Part #: TYPE 030/026 Supplier: \$0494 Part #: UA1410 Supplier: 0H231 Opt Part #: 01-1001-10 Supplier: 0Z3C6 Opt Part #: 01-1404-00 Supplier: 41364 Opt Part #: 1116-4000-21 Supplier: A0197 Opt Part #: 429EBP Supplier: 41364 Opt Part #: 429EX Supplier: 41364 Opt Part #: 702125-01 Supplier: CG603 Opt Part #: DT400H Supplier: 0Z3C6 Opt Part #: MODEL 429HBA Supplier: 5J927

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 546
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1579	Analyzer - Databus, Datatrak Models 600, 650, 650H Part #: DT-600 Supplier: 0Z3C6 Opt Part #: 01-1405-00 Supplier: 41364 Opt Part #: 01-1406-00 Supplier: 41364 Opt Part #: 01-1407-00 Supplier: 41364 Opt Part #: 100-600-001 Supplier: 41364 Opt Part #: 100-650-001 Supplier: 41364 Opt Part #: 100-655-001 Supplier: 41364
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1926	Coupling - Quick Disconnect, Pitot System Drain Line Part #: 1QF2-2-64A Supplier: 24984
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 547
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
SPL-3896	Box - Breakout, Multipurpose, 100/124 pin Part #: C22005-22 Supplier: 81205
SPL-3897	Assembly - Cable, Flight Control Computer and/or Digital Flight Control System Testing Part #: C22005-32 Supplier: 81205

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

G. Prepare for the System Test

SUBTASK 34-11-00-010-016

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-010-017

- (2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-710-001



MAKE SURE YOU DO NOT SUPPLY ELECTRICAL POWER TO THE PITOT PROBE HEATER. IF YOU DO, YOU CAN DAMAGE THE PITOT PROBE.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 548
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(CAUTION PRECEDES)



CAUTION

MAKE SURE THAT YOU USE EXTERNAL POWER TO DO THE TEST. IF YOU DO NOT OBEY, THE APU WILL NOT SUPPLY SUFFICIENT POWER AND FAULT MESSAGES WILL SHOW.

(3) Do this task: Supply External Power, TASK 24-22-00-860-803.

SUBTASK 34-11-00-400-030

(4) Follow these maintenance practices for the altimetry system test:

- (a) Do not connect or disconnect the test equipment while you have pressure in the pitot-static system.
- (b) Make sure that the test equipment, pitot system and static systems are clean and free of contamination.
- (c) Make sure that there are no leaks in the test equipment.
- (d) Make sure that the tape used to seal the static ports does not get inside the static port holes.
- (e) Make sure that the tape and/or test adapters do not damage or change the surfaces of the pitot probes or static ports.
- (f) Make sure that the air data test set is placed on the same level (0 ± 1 ft (0.00 ± 0.30 m)) as the passenger cabin floor, cargo compartment floor, or on the ground.
 - 1) The location of the test set determines the height correction values used to calculate ADM error (Figure 502).
- (g) Keep the static pressure applied within the range of 3.26 in/Hg (110.40 mBar) to 39.865 in/Hg (1349.98 mBar).



CAUTION

MAKE SURE THAT PRESSURE APPLIED TO THE PITOT -STATIC SYSTEM IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1350 MBAR) WILL CAUSE DAMAGE TO THE ADM.

- (h) Make sure that the total pressure applied to the pitot system is static pressure only and does not include pitot pressure. This test requires zero airspeed.
- (i) During adjustment of static pressure, make sure that the rate of change of altitude is less than 5,000 feet per minute.
- (j) Make sure that the Autopilot Flight Director System is OFF during the test.
- (k) Supply electrical power to the Air Data Inertial Reference System (ADIRS) before you make the Static or Total pressure connection.



WARNING

MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (l) Make sure that the Air Traffic Control (ATC) transponders are in standby mode.
 - 1) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 549
Sep 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

H. Captain (CAPT) Altimetry System Test Set Installation

SUBTASK 34-11-00-420-020



SUPPORT THE TEST HOSES AND THE ADAPTER SO THEY ADD NO WEIGHT ON THE PITOT PROBES. FAILURE TO DO SO COULD CAUSE THE PITOT PROBES TO NOT BE ALIGNED AND TO BE DAMAGED.

- (1) Connect the air data test set to the CAPT pitot and static systems with one test setup from these options:

Option 1: Static Adapter Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 1)	Supply pitot and static pressure from air data test set to Left Pitot and Left Static ADM	
Figure 503 (Sheet 2)	Supply static pressure from air data test set to Left Pitot and Left Static ADM	
Figure 503 (Sheet 9)	Supply Pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
Figure 503 (Sheet 10)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (a) Install the pitot test adapter, COM-1916, on the CAPT pitot probe.



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (b) Install the static test adapter, COM-1921, on the CAPT static port.
- (c) Connect the air data model test set, COM-1914, to the pitot test adapter, COM-1916, and static test adapter, COM-1921.



WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (d) Seal the remaining CAPT static ports with Scotch Brand No.471 tape, G02219.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 550
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Option 2: System Drain Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 3)	Supply pitot and static pressure from air data test set to Left Pitot and Left Static ADM through system drain fittings	
Figure 503 (Sheet 4)	Supply static pressure from air data test set to Left Pitot and Left Static ADM through system drain fittings	
Figure 503 (Sheet 11)	Supply pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
Figure 503 (Sheet 12)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (e) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801).
- (f) Remove the caps on the CAPT pitot and static system drain fittings.
- (g) Install the quick-disconnect coupling, COM-1926, on the CAPT pitot system drain fitting.
- (h) Install the quick-disconnect coupling, COM-1927, on the CAPT static system drain fitting.
- (i) Install the pitot test adapter, COM-1916, on the CAPT pitot probe.
- (j) Install caps on the pitot test adapter, COM-1916.



WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (k) Seal the remaining CAPT static ports with, Scotch Brand No.471 tape, G02219.
- (l) Connect the air data model test set, COM-1914, to the quick-disconnect couplings, coupling, COM-1926, and coupling, COM-1927.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 551
May 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

I. First Officer (F/O) Altimetry System Test Set Installation

SUBTASK 34-11-00-420-021



SUPPORT THE TEST HOSES AND THE ADAPTER SO THEY ADD NO WEIGHT ON THE PITOT PROBES. FAILURE TO DO SO COULD CAUSE THE PITOT PROBES TO NOT BE ALIGNED AND TO BE DAMAGED.

- (1) Connect the air data model test set, COM-1914, to the F/O pitot and static systems with one test setup from these options:

Option 3: Static Adapter Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 5)	Supply pitot and static pressure from air data test set to Right Pitot and Right Static ADM	
Figure 503 (Sheet 6)	Supply static pressure from air data test set to Right Pitot and Right Static ADM	
Figure 503 (Sheet 9)	Supply Pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
Figure 503 (Sheet 10)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (a) Install the pitot test adapter, COM-1916, on the F/O pitot probe.



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (b) Install the static test adapter, COM-1921, on the F/O static port.
- (c) Connect the air data model test set, COM-1914, to the pitot test adapter, COM-1916, and static test adapter, COM-1921.



WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (d) Seal the remaining F/O static ports with, Scotch Brand No.471 tape, G02219.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 552
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

Option 4: System Drain Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 7)	Supply pitot and static pressure from air data test set to Right Pitot and Right Static ADM through system drain fittings	
Figure 503 (Sheet 8)	Supply static pressure from air data test set to Right Pitot and Right Static ADM through system drain fittings	
Figure 503 (Sheet 11)	Supply pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
Figure 503 (Sheet 12)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (e) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801).
- (f) Remove the caps on the F/O pitot and static system drain fittings.
- (g) Install the quick-disconnect coupling, COM-1926, on the F/O Pitot System Drain Fitting.
- (h) Install the quick-disconnect coupling, COM-1927, on the F/O Static System Drain Fitting.
- (i) Install the pitot test adapter, COM-1916, on the F/O pitot probe.
- (j) Install caps on the pitot test adapter, COM-1916.



WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (k) Seal the remaining F/O static ports with, Scotch Brand No.471 tape, G02219.
- (l) Connect the air data model test set, COM-1914, to the quick-disconnect couplings, coupling, COM-1926, and coupling, COM-1927.

J. Captain (CAPT) Altimetry System Test - ARINC 429 Bus Analyzer Method

NOTE: Two methods are available to test the accuracy of the altimetry system: the ARINC 429 Bus Analyzer Method or the Primary Flight Display (PFD) Method (TASK 34-11-00-780-802). Either method may be used to accomplish the test.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 553
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-700-002

- (1) Do the CAPT FCC-A (M01875) altimetry System Test as follows:

NOTE: The ARINC 429 bus analyzer testing method tests the pitot and static ADMs. Testing of the pitot ADM accuracy is optional, but recommended when this method is used.

- (a) Connect the ARINC 429 Bus analyzer, COM-1562, or databus analyzer, COM-1579, Hi/Lo probes to the Flight Control Computer (FCC) on the E1 shelf, left test connector J3, to pin 51 (Hi) and pin 52 (Lo).

NOTE: A breakout box, SPL-3896, and cable, SPL-3897, can be used to connect the data bus analyzer and the FCC.

- 1) Set equipment ID to 038 on the ARINC 429 Bus Analyzer for the instrument to display the correct engineering units.

NOTE: Figure 503 may be used to change binary data to the correct engineering units if the bus analyzer does not have this function.

SUBTASK 34-11-00-600-001



MAKE SURE THAT PRESSURE APPLIED TO THE PITOT -STATIC SYSTEM IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1350 MBAR) WILL CAUSE DAMAGE TO THE ADM.

- (2) Apply Static pressure with the air data model test set, COM-1914, for each test point and record test results with one of the following and the appropriate height offset table:

Table of Test Input and Tolerance Requirements

Figure	Description
Figure 503 (Sheet 13)	Measurement Unit: inches of Mercury (inHg)
Figure 503 (Sheet 14)	Measurement Unit: millibars (mb)
Figure 502	Height Offset Tables

SUBTASK 34-11-00-020-065

- (3) If the CAPT altimetry system test fails, do the following:

- (a) Remove and replace the ADM (AIR DATA MODULE - REMOVAL/INSTALLATION, PAGEBLOCK 34-21-04/401).
- (b) Do the CAPT altimetry system test.

K. First Officers (F/O) Altimetry System Test - ARINC 429 Bus Analyzer Method

NOTE: Two methods are available to test the accuracy of the altimetry system: the ARINC 429 Bus Analyzer Method or the PFD Method (TASK 34-11-00-780-802). Either method may be used to accomplish the test.

SUBTASK 34-11-00-700-003

- (1) Do the F/O FCC-B (M01876) altimetry System Test as follows:

NOTE: The ARINC 429 bus analyzer testing method tests the pitot and static ADMs. Testing of the pitot ADM accuracy is optional, but recommended when this method is used.

- (a) Connect the ARINC 429 Bus analyzer, COM-1562, or databus analyzer, COM-1579, Hi/Lo probes to the FCC on the E1 shelf, right test connector J3, to pin 51 (Hi) and pin 52 (Lo).

NOTE: A breakout box, SPL-3896, and cable, SPL-3897, can be used to connect the data bus analyzer and the FCC.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 554
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 1) Set equipment ID to 038 on the ARINC 429 Bus Analyzer for the instrument to display the correct engineering units.

NOTE: Figure 503 may be used to change binary data to the correct engineering units if the bus analyzer does not have this function.

SUBTASK 34-11-00-600-002



MAKE SURE THAT PRESSURE APPLIED TO THE PITOT -STATIC SYSTEM IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1350 MBAR) WILL CAUSE DAMAGE TO THE ADM.

- (2) Apply Static pressure with the air data model test set, COM-1914, for each test point and record test results with one of the following and the appropriate height offset table:

Table of Test Input and Tolerance Requirements

Figure	Description
Figure 503 (Sheet 15)	Measurement Unit: inches of Mercury (inHg)
Figure 503 (Sheet 16)	Measurement Unit: millibars (mb)
Figure 502	Height Offset Tables

SUBTASK 34-11-00-000-001

- (3) If the F/O altimetry system test fails, do the following:
 - (a) Remove and replace the ADM (AIR DATA MODULE - REMOVAL/INSTALLATION, PAGEBLOCK 34-21-04/401).
 - (b) Do the F/O altimetry system test.

L. Captain (CAPT) Altimetry System Test Set Removal

SUBTASK 34-11-00-020-066

- (1) Return CAPT pitot and static systems to ambient pressure state and remove air data model test set, COM-1914, set as follows:



RELEASE THE PRESSURE OR THE VACUUM CONTINUOUSLY AND AT THE SAME TIME FOR THE PITOT AND STATIC SYSTEMS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (a) Release the pressure or vacuum on the CAPT pitot and static systems to ambient pressure with the air data model test set, COM-1914.
- (b) Remove the ARINC 429 Data Bus analyzer, COM-1562, or databus analyzer, COM-1579, if one was used.
- (c) Disconnect the air data model test set, COM-1914, from the CAPT pitot and static systems as follows:
 - 1) Option 1, static adapter test setup:
 - a) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921, and pitot test adapter, COM-1916.
 - b) Remove pitot test adapter, COM-1916, from the CAPT pitot probe.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 555
May 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- c) Remove the static test adapter, COM-1921, from the CAPT static port.



ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- d) Remove the Scotch Brand No.471 tape, G02219, from the remaining CAPT static ports.
- 2) Option 2, system drain test setup:
- a) Disconnect the air data model test set, COM-1914, from the coupling, COM-1926, and coupling, COM-1927.



ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- b) Remove Scotch Brand No.471 tape, G02219, from the remaining CAPT static ports.
- c) Remove the pitot test adapter, COM-1916, on the CAPT pitot probe.
- d) Remove the quick-disconnect coupling, COM-1926, and the coupling, COM-1927, from the drain fittings.
- e) Install caps on the CAPT pitot and static system drain fittings.
- f) Do a General Visual Inspection (GVI) of the CAPT pitot and static system drain fittings.
- <1> Make sure that the actuation ring is fully engaged on the lock pins.
- <2> Make sure that the color lock ring indicator shows that the system drain fitting is connected correctly.
- g) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801).

M. First Officer (F/O) Altimetry System Test Set Removal

SUBTASK 34-11-00-020-067

- (1) Return F/O pitot and static systems to ambient pressure state and remove air data model test set, COM-1914, as follows:



RELEASE THE PRESSURE OR THE VACUUM CONTINUOUSLY AND AT THE SAME TIME FOR THE PITOT AND STATIC SYSTEMS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (a) Release the pressure or vacuum on the F/O pitot and static systems to ambient pressure using the air data model test set, COM-1914.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 556
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Remove the ARINC 429 Data Bus analyzer, COM-1562, or databus analyzer, COM-1579, if one was used.
- (c) Disconnect the air data model test set, COM-1914, from the F/O pitot and static systems as follows:
 - 1) Option 3, static adapter test setup:
 - a) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921, and pitot test adapter, COM-1916.
 - b) Remove pitot test adapters from the F/O pitot probe.



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- c) Remove static test adapter from the F/O static port.



ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- d) Remove Scotch Brand No.471 tape, G02219, from the remaining F/O static ports.
- 2) Option 4, system drain test setup:
 - a) Disconnect the air data model test set, COM-1914, from the coupling, COM-1926, and coupling, COM-1927.



ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- b) Remove the Scotch Brand No.471 tape, G02219, from the remaining F/O static ports.
- c) Remove the pitot test adapter, COM-1916, on the F/O pitot probe.
- d) Remove the quick-disconnect coupling, COM-1926, and the coupling, COM-1927, from the drain fittings.
- e) Install caps on the F/O pitot and static system drain fittings.
- f) Do a GVI of the F/O pitot and static system drain fittings.
 - <1> Make sure that the actuation ring of the drain fitting is fully engaged on the lock pins.
 - <2> Make sure that the color lock ring indicator shows that the system drain fitting is connected correctly.
- g) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 557
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

N. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-410-017

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-600-003

- (2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-420-022

- (3) If electrical power is not necessary, do this: Remove External Power, TASK 24-22-00-860-804.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 558
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CAPT AND F/O ALTIMETRY SYSTEM TEST - HEIGHT OFFSET TABLES

Height Offset (inHg)				Height Offset (mb)				Height Offset (ft)		
Test Set Location	Test Point	Total	Static	Test Set Location	Test Point	Total	Static	Test Set Location	Test Point	Static
Passenger floor	1	-0.002	0	Passenger floor	1	-0.073	0	Passenger floor	1	0
	2	-0.001	0		2	-0.029	0		2	0
	3	-0.001	0		3	-0.019	0		3	0
	4	-0.001	0		4	-0.029	0		4	0
	5	-0.002	0		5	-0.073	0		5	0
Cargo floor	1	0.002	0.004	Cargo floor	1	0.073	0.145	Cargo floor	1	4
	2	0.001	0.002		2	0.029	0.057		2	4
	3	0.001	0.001		3	0.019	0.038		3	4
	4	0.001	0.002		4	0.029	0.057		4	4
	5	0.002	0.004		5	0.073	0.145		5	4
Ground	1	0.007	0.010	Ground	1	0.256	0.330	Ground	1	9
	2	0.003	0.004		2	0.100	0.128		2	9
	3	0.002	0.002		3	0.066	0.085		3	9
	4	0.003	0.004		4	0.100	0.128		4	9
	5	0.007	0.010		5	0.256	0.330		5	9

NOTE:
SELECT THE SET OF HEIGHT CORRECTION VALUES FOR THE LOCATION
CLOSEST TO THE AIR DATA TEST SET.

2881375 S0000682774_V1

AIR DATA SYSTEM - CAPT AND F/O ALTIMETRY SYSTEM TEST - HEIGHT OFFSET TABLES
Figure 502/34-11-00-990-808

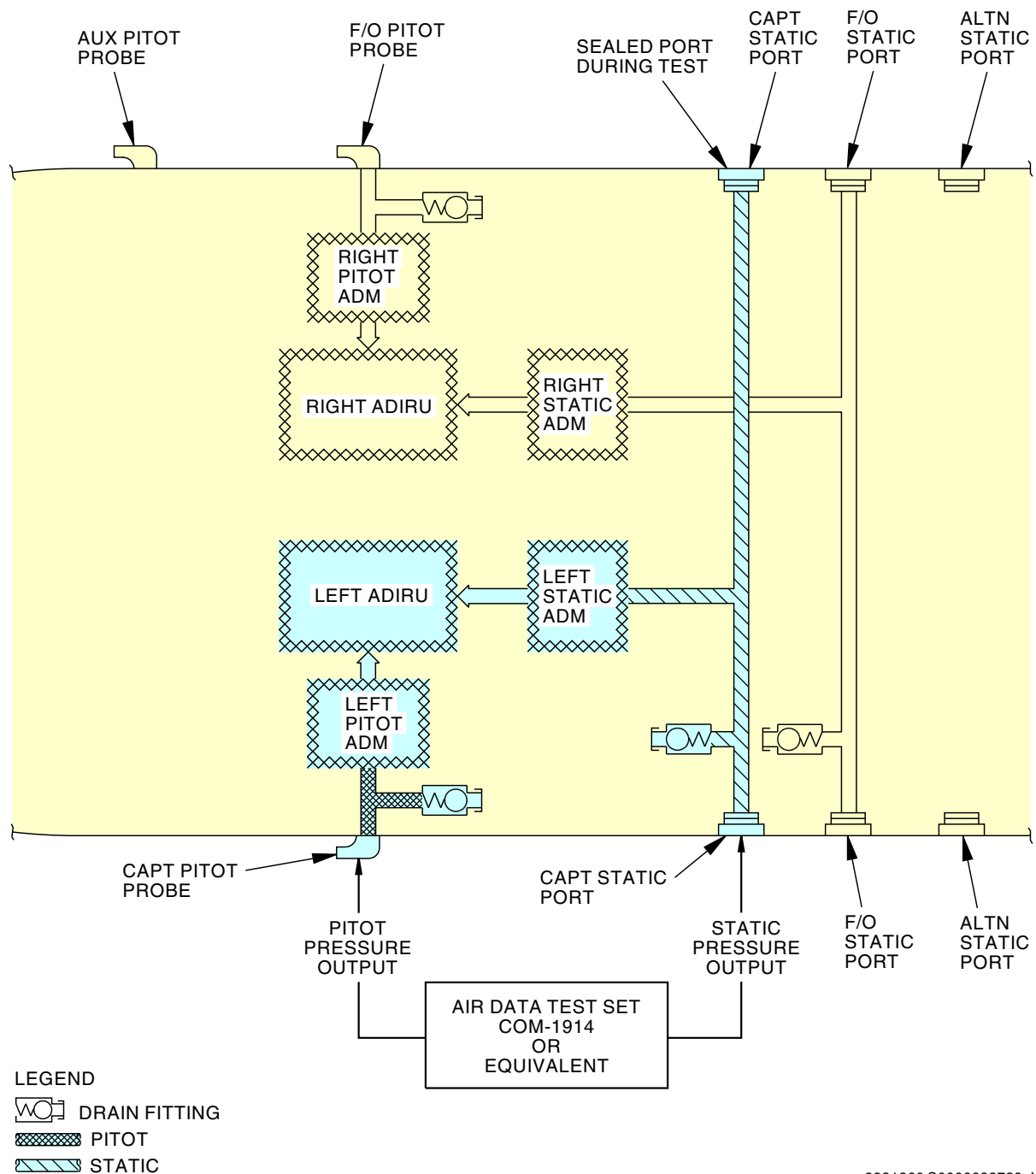
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 559
May 15/2023



2881360 S0000682739_V1

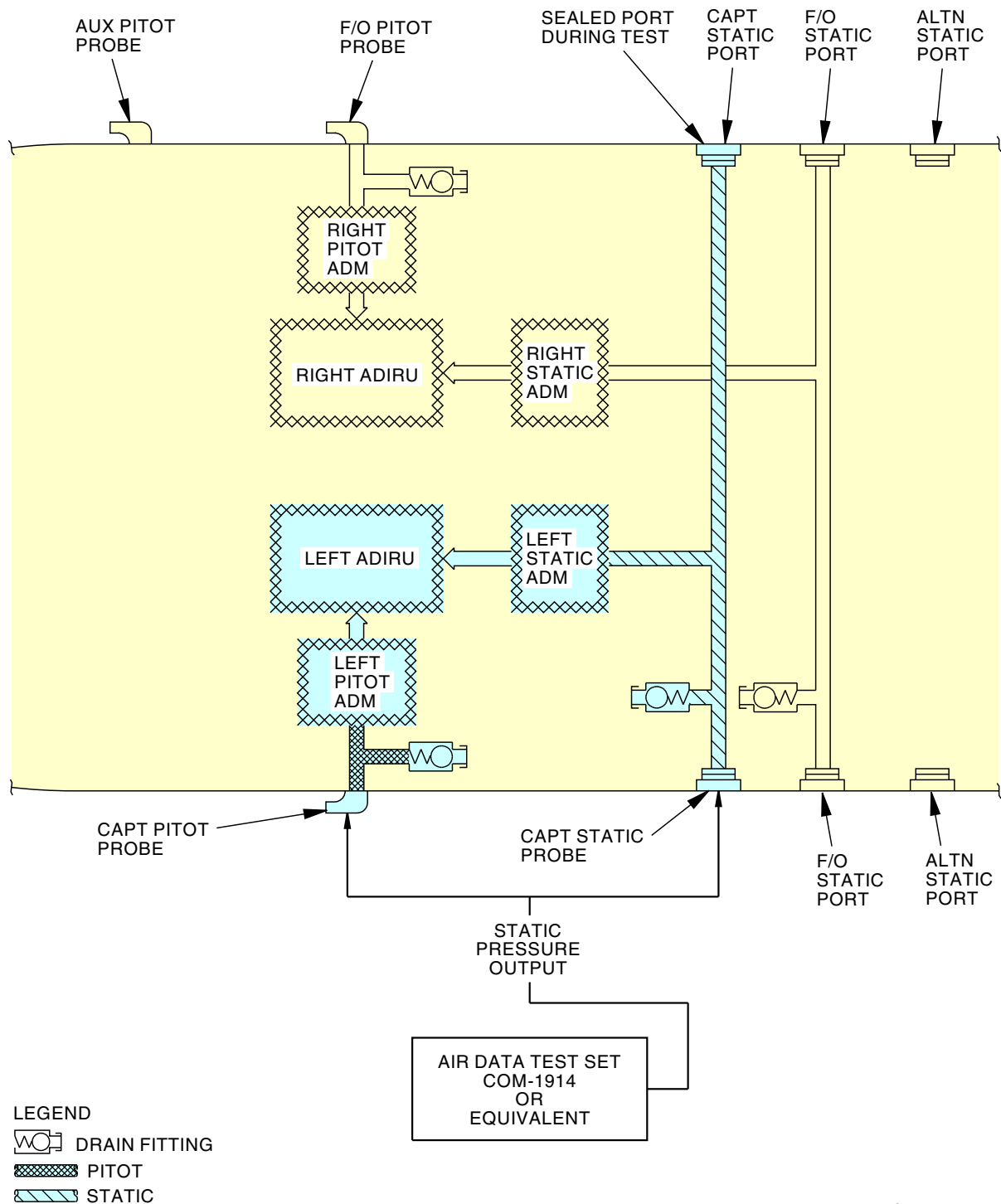
ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 1 of 16)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 560
May 15/2023



2881361 S0000682746_V1

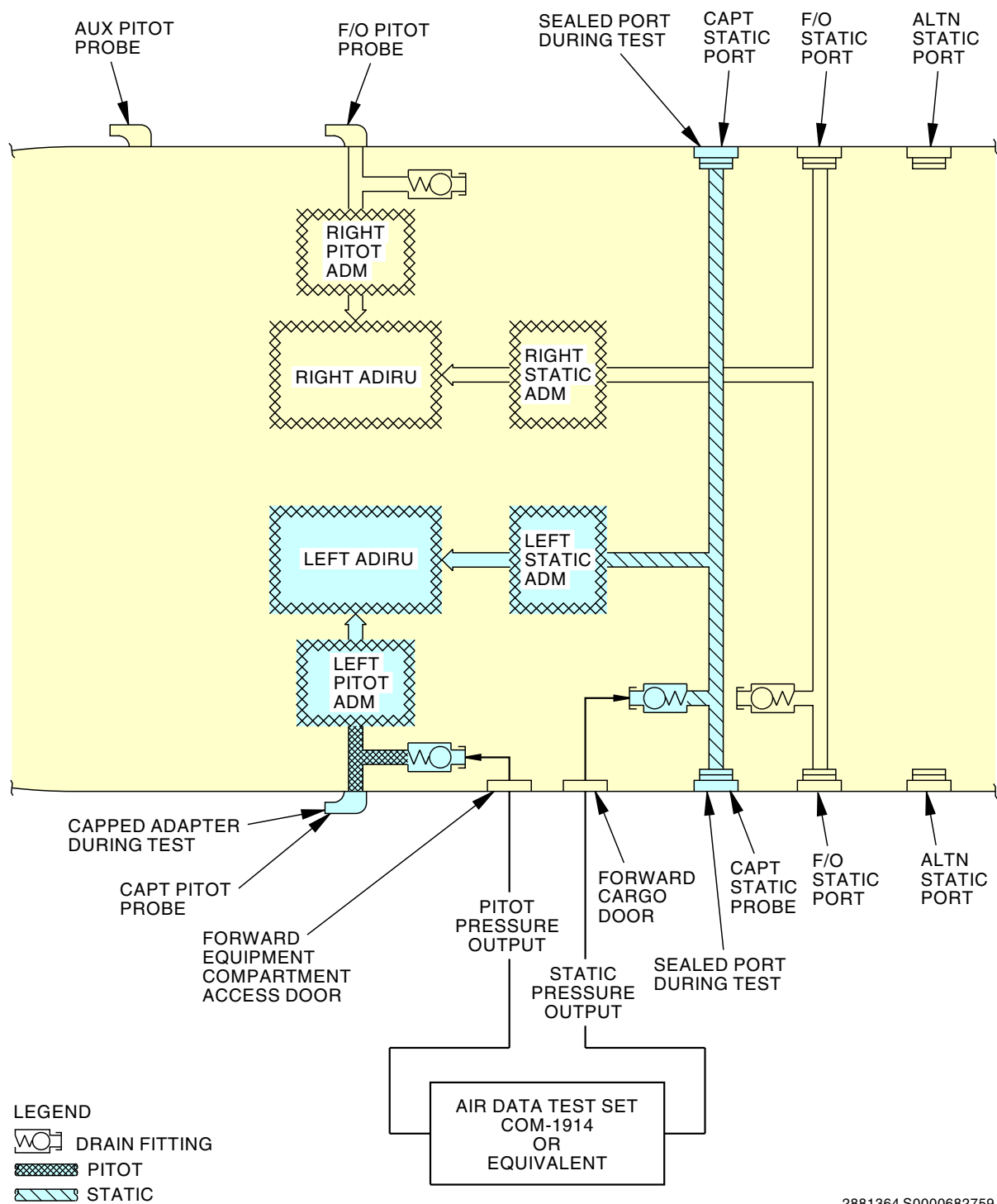
ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 2 of 16)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 561
May 15/2023



2881364 S0000682759_V1

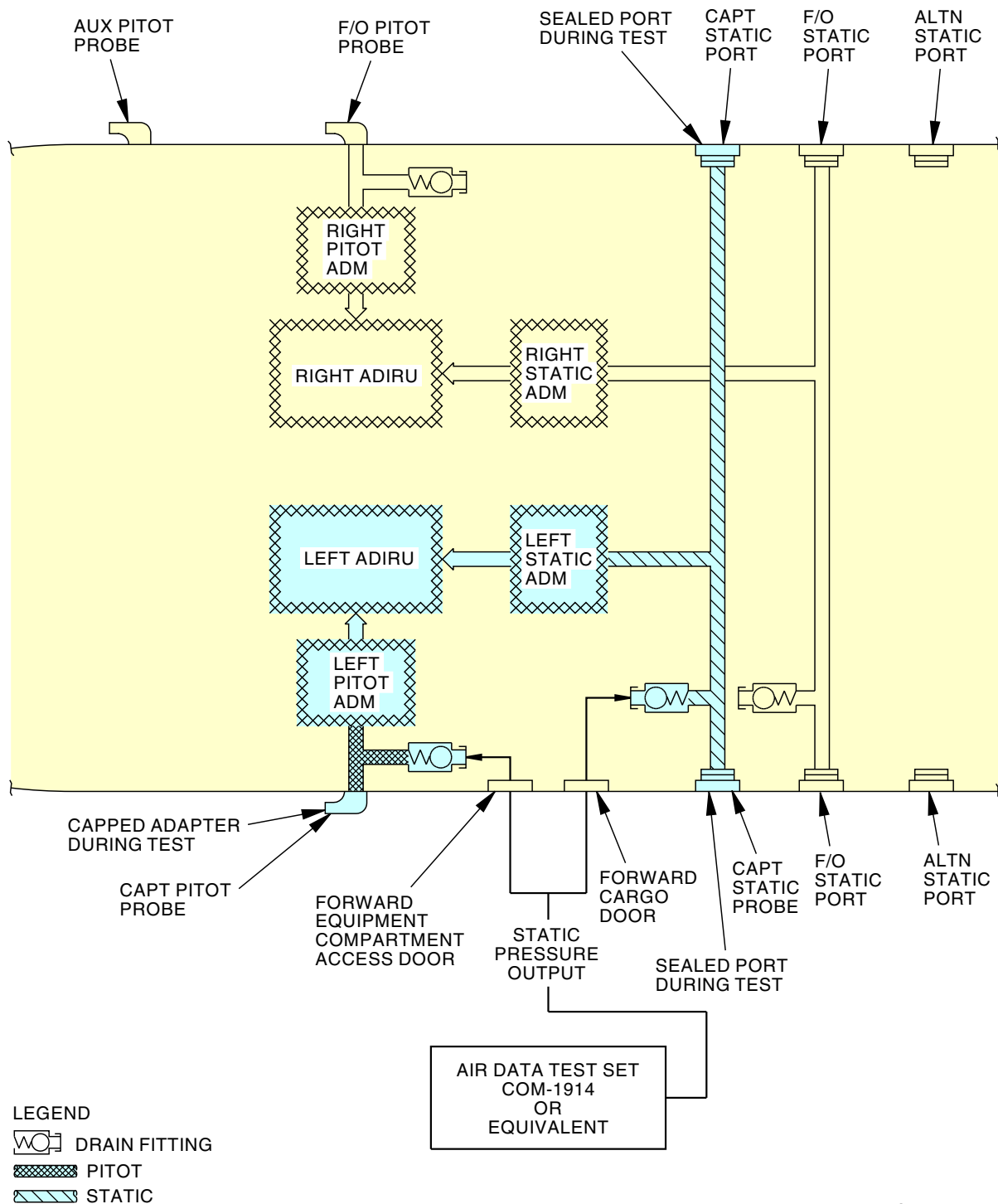
ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 3 of 16)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2881365 S0000682760_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 4 of 16)

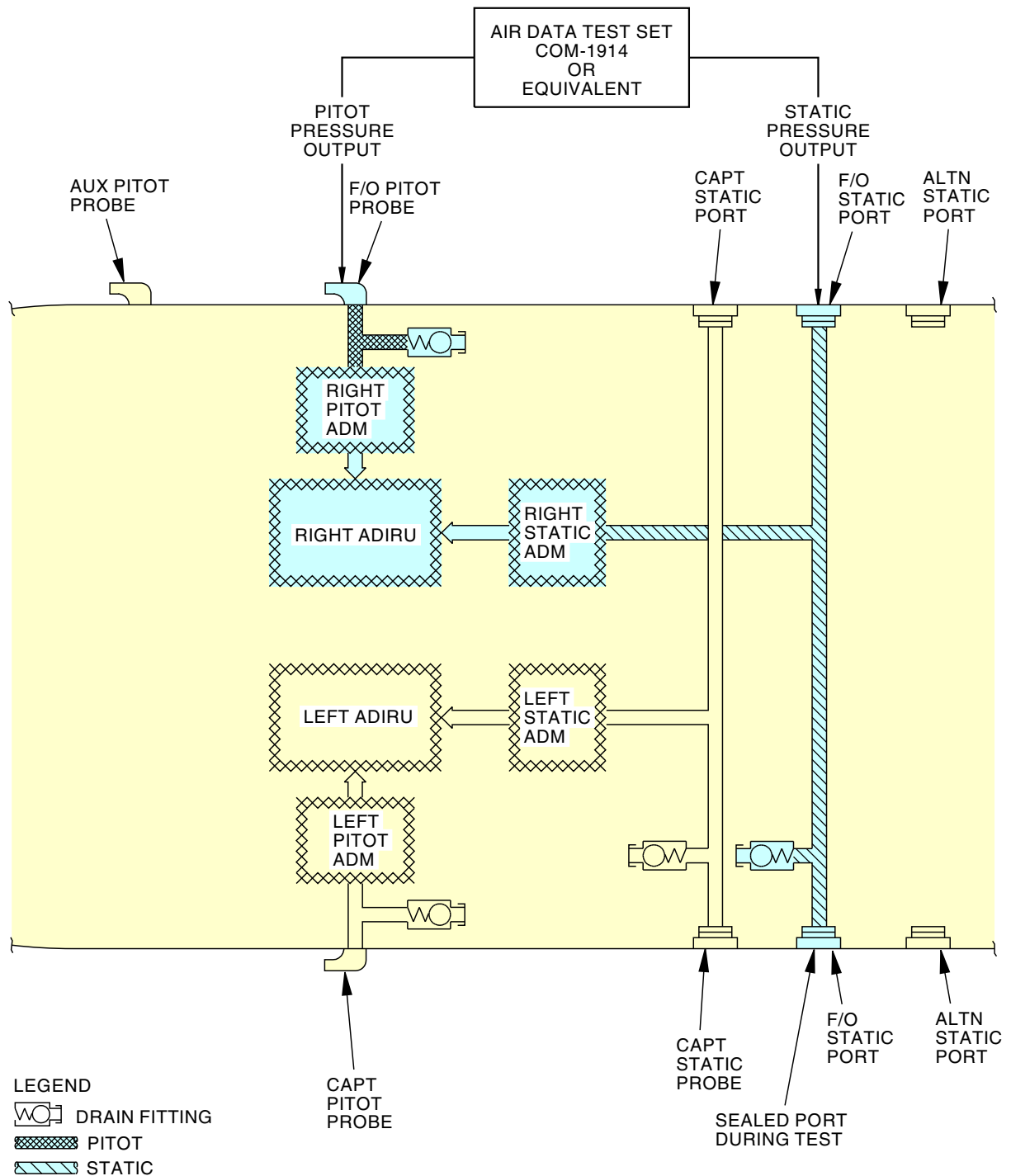
EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 563
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2881368 S0000682763_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 5 of 16)

EFFECTIVITY
SIA ALL

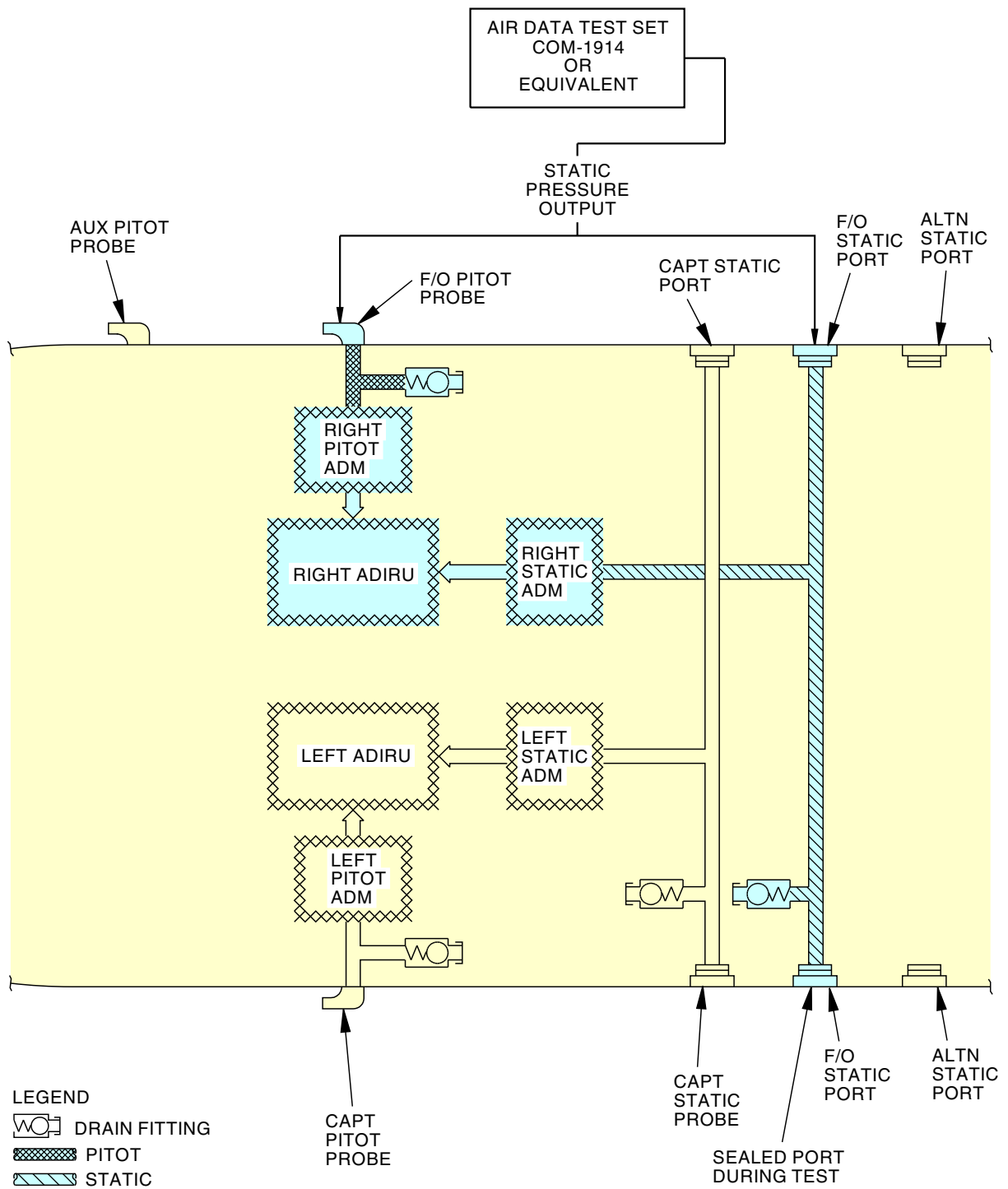
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 564
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2881369 S0000682764_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 6 of 16)

EFFECTIVITY
SIA ALL

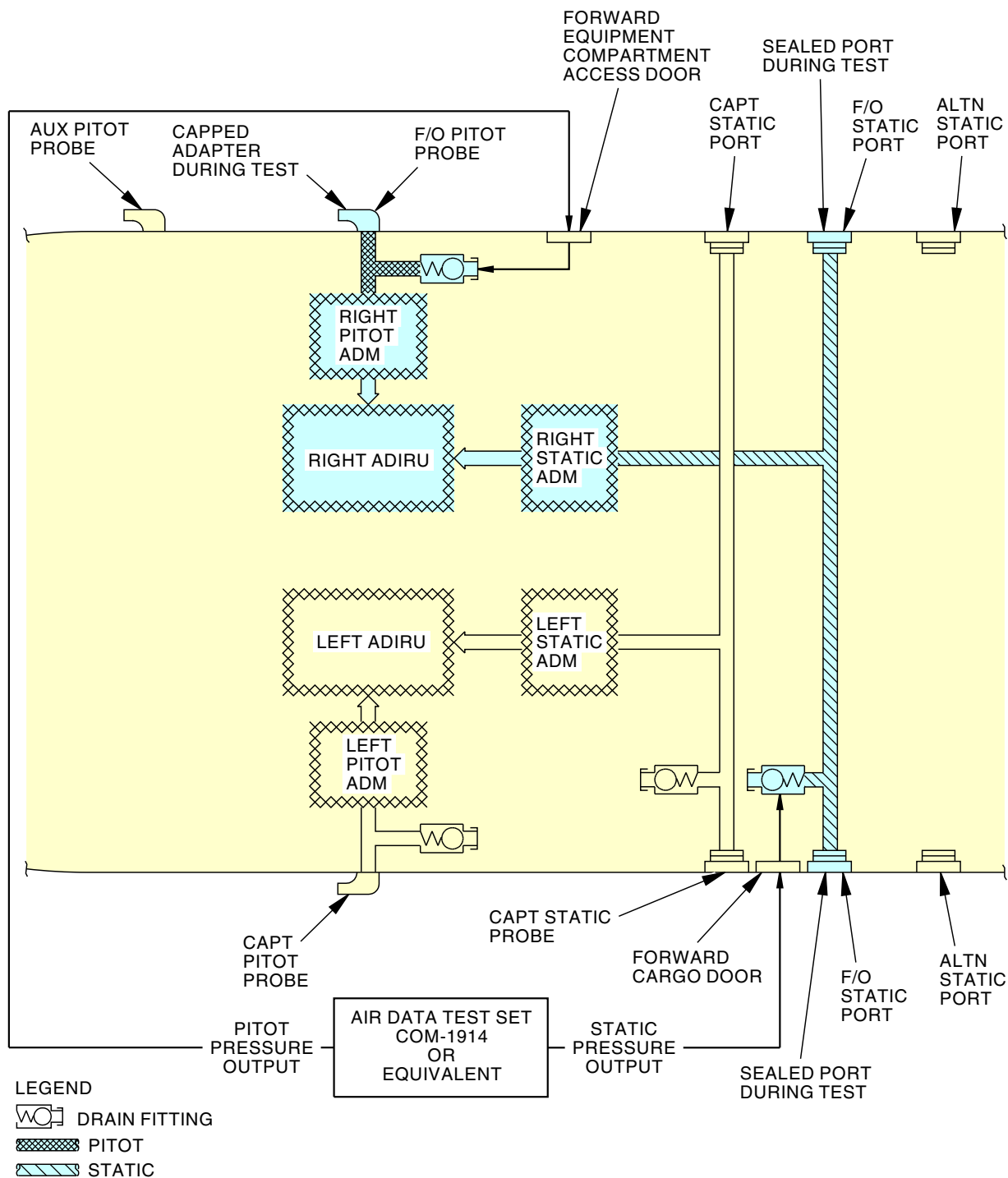
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 565
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2881376 S0000682767_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 7 of 16)

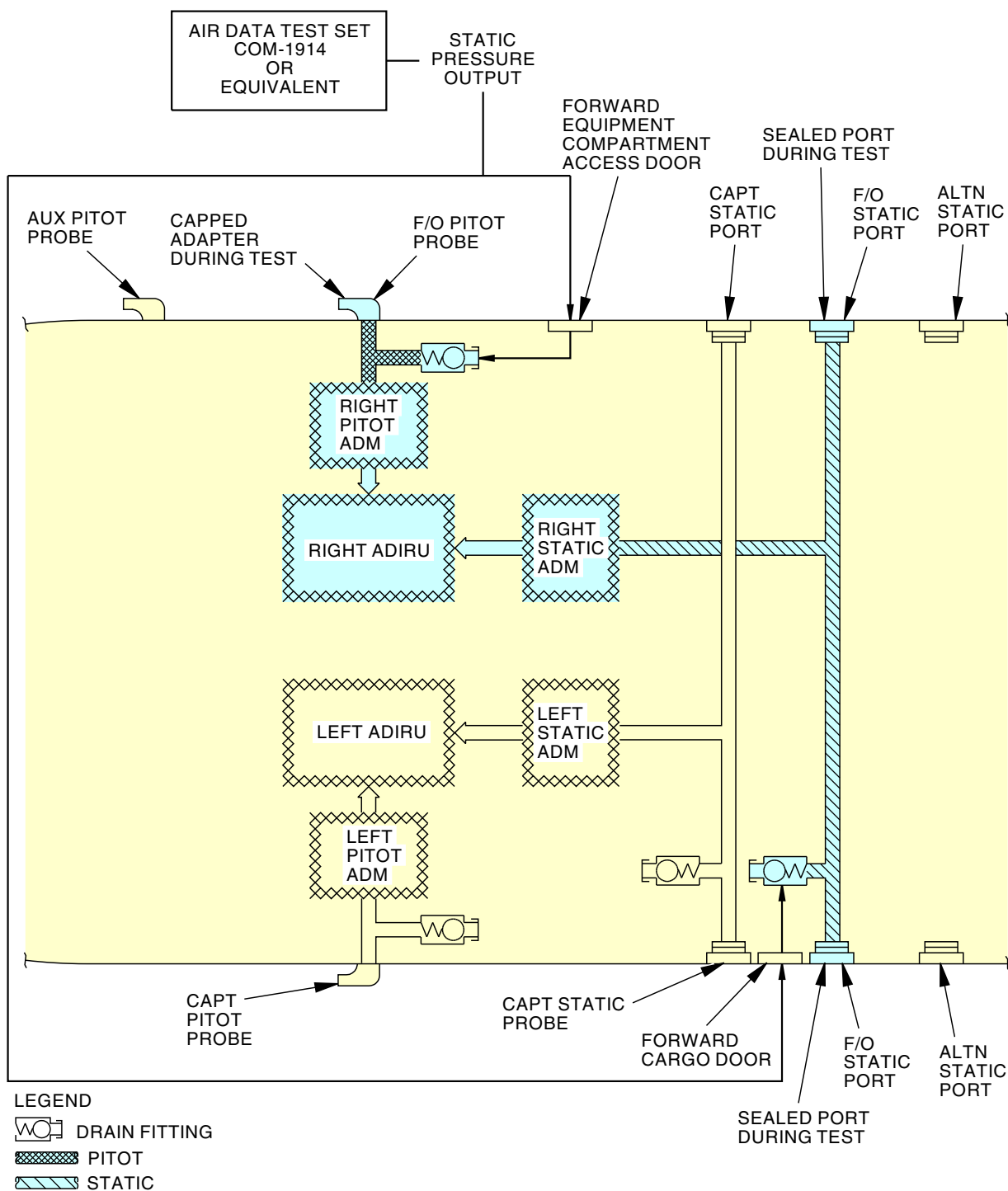
EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 566
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2881372 S0000682768_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 8 of 16)

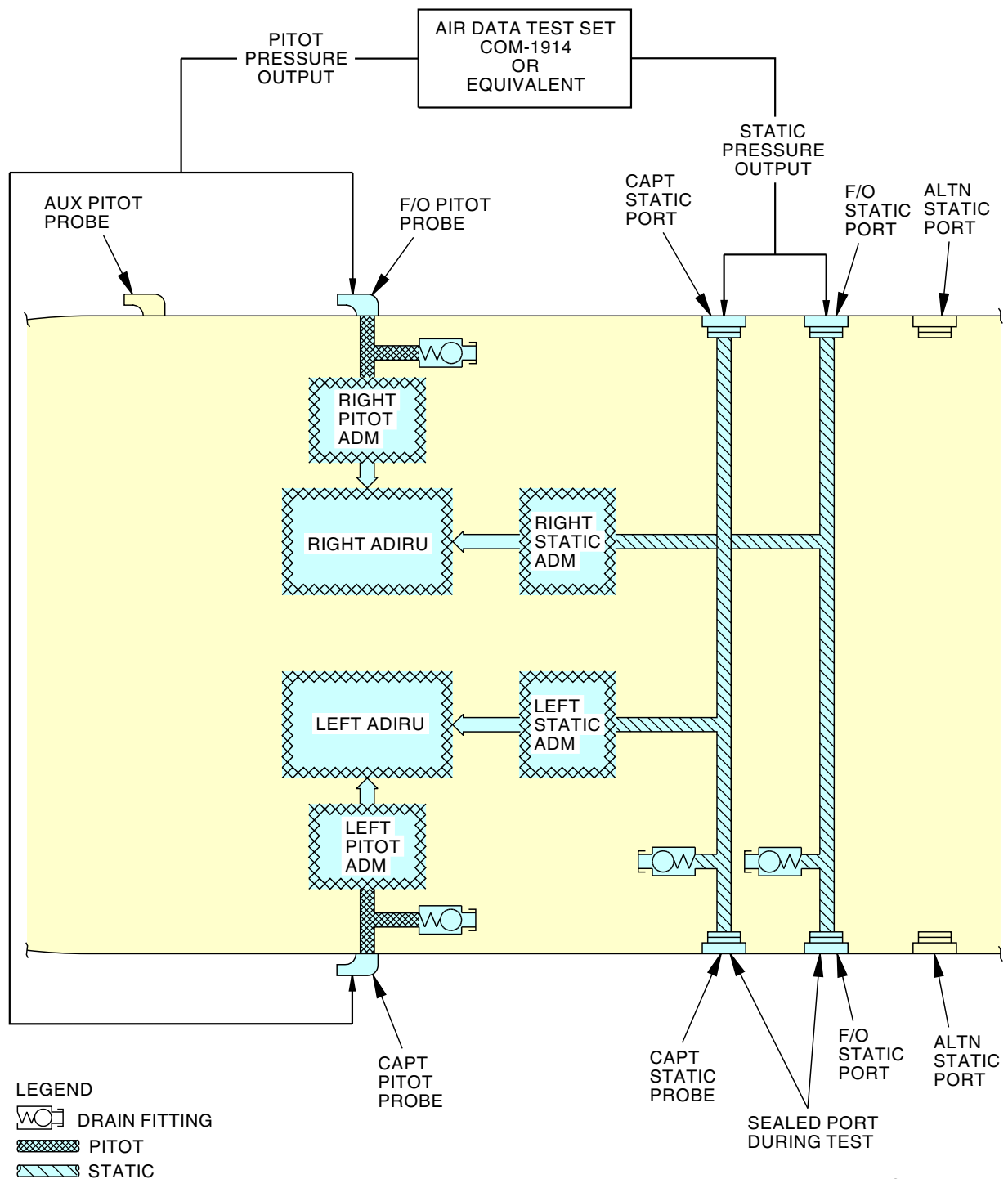
EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 567
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 9 of 16)

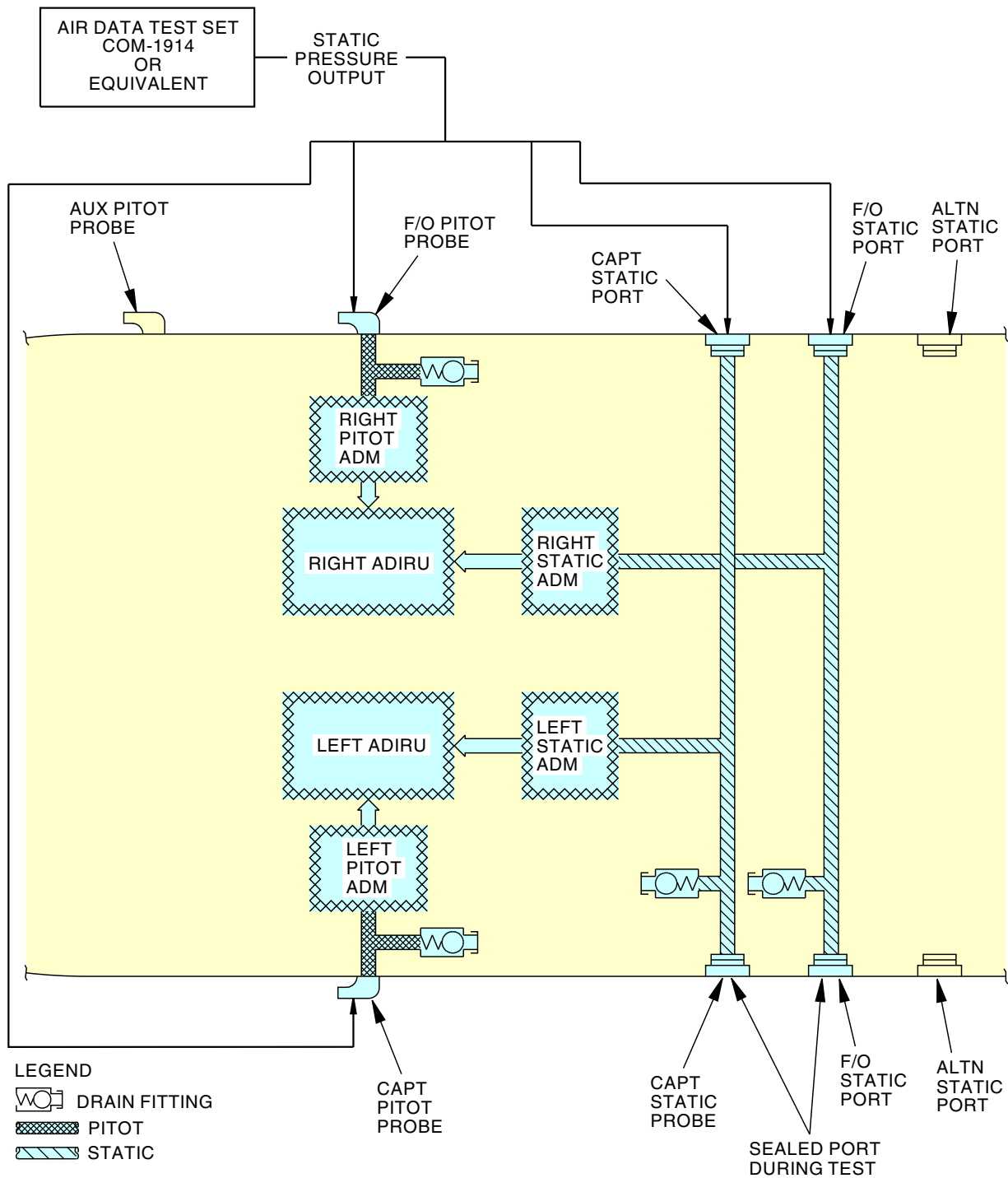
EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 568
May 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



2881371 S0000682766_V1

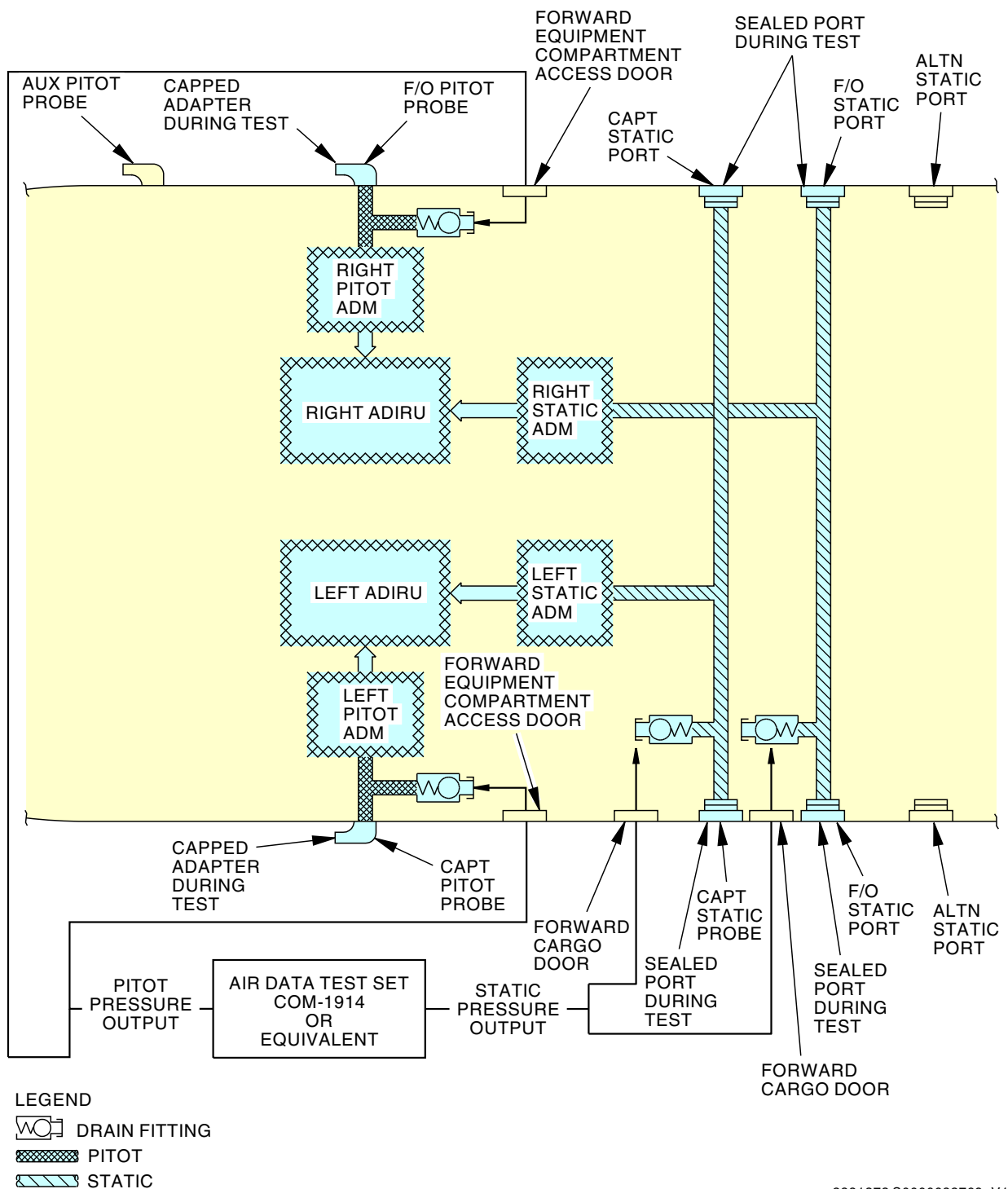
ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 10 of 16)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 569
May 15/2023



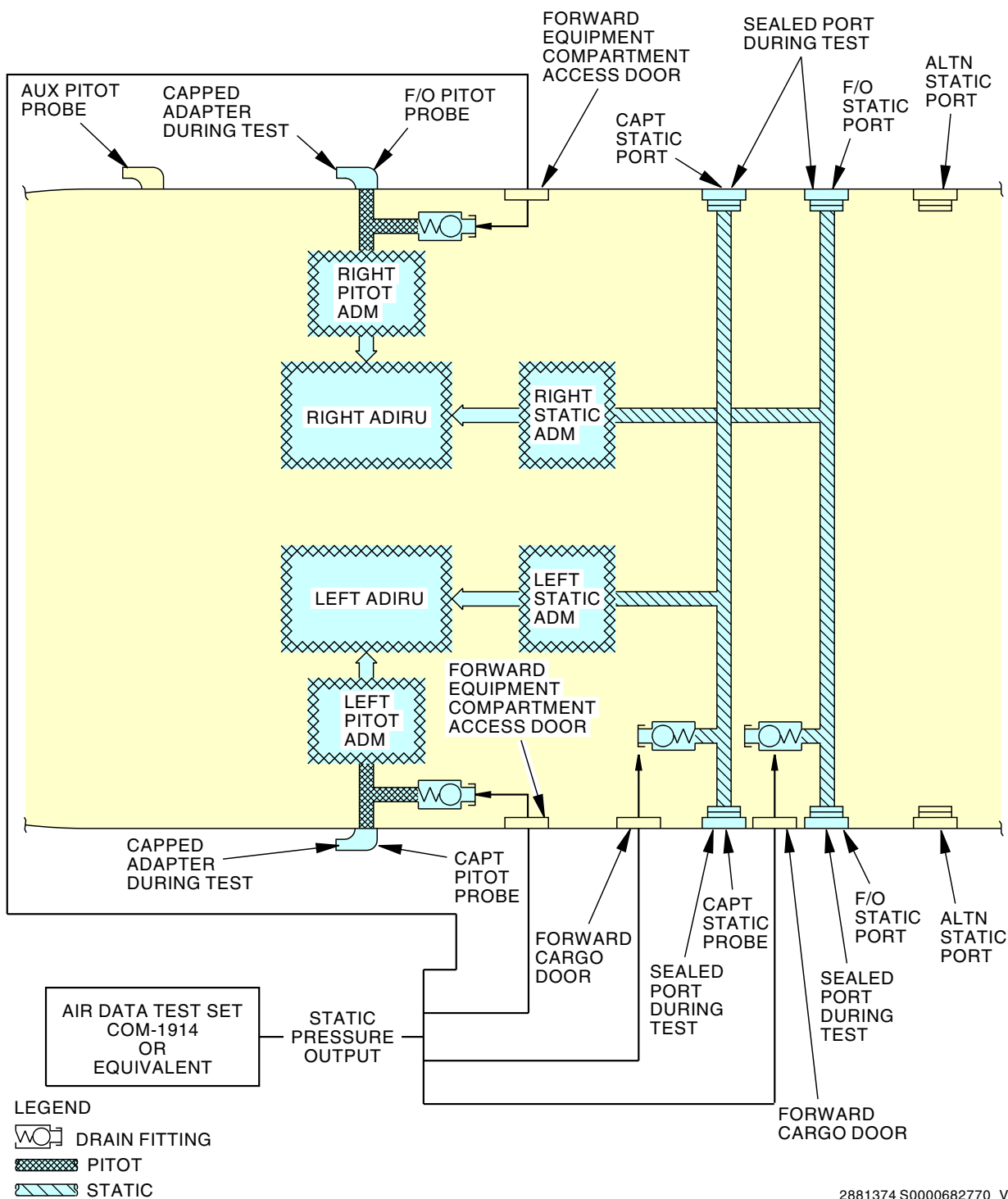
2881373 S0000682769_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 11 of 16)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00



2881374 S0000682770_V1

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 12 of 16)

EFFECTIVITY
SIA ALL

34-11-00



CAPT ALTIMETRY SYSTEM TEST - TEST INPUT, MEASUREMENT UNIT: INCHES OF MERCURY (INHG)

Test Point		Static Pressure , P _s (inHg)	Pitot Pressure , Q _c (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Air Data Test Set, Height Correction (inHg)	Recorded Pitot Pressure, ARINC 429 Label 242 (inHg)	Differential Pressure = Col A - Col B - Col C (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Air Data Test Set, Height Correction (inHg)	Recorded Static Pressure, ARINC 429 Label 245 (inHg)	Differential Pressure = Col D - Col E - Col F (inHg)	Tolerance of the Differential Pressure (inHg)	Data More
		Static Pressure , P _s (inHg)	Pitot Pressure , Q _c (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Air Data Test Set, Height Correction (inHg)	Recorded Pitot Pressure, ARINC 429 Label 242 (inHg)	Differential Pressure = Col A - Col B - Col C (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Air Data Test Set, Height Correction (inHg)	Recorded Static Pressure, ARINC 429 Label 245 (inHg)	Differential Pressure = Col D - Col E - Col F (inHg)	Tolerance of the Differential Pressure (inHg)	Data More
1	29.921 +/- 0.029	No Entry	(b)	(b)	(b)	(b)	+/- 0.014	(b)	(b)	(b)	(b)	+/- 0.014	(a)
2	9.272 +/- 0.029	No Entry	(b)	(b)	(b)	(b)	+/- 0.012	(b)	(b)	(b)	(b)	+/- 0.012	(a)
3	5.611 +/- 0.029	No Entry	(b)	(b)	(b)	(b)	+/- 0.012	(b)	(b)	(b)	(b)	+/- 0.012	(a)
4	9.272 +/- 0.029	No Entry	(b)	(b)	(b)	(b)	+/- 0.012	(b)	(b)	(b)	(b)	+/- 0.012	(a)
5	29.921 +/- 0.029	No Entry	(b)	(b)	(b)	(b)	+/- 0.014	(b)	(b)	(b)	(b)	+/- 0.014	(a)
Entry to the Air Data Test Set		Total (Pitot) Pressure Measurement - Left Pitot ADM					Static Pressure Measurement - Left Static ADM						

(a) Allow one minute after the air data test set reaches the input static pressure value before recording measurements.

(b) Height correction values in Column B and E are determined by the location the test set is placed. Refer to Height Offset (inHg) table.

2932294 S0000709726 V2

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 13 of 16)

— EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 572
May 15/2023

ECCN 9E991 BOEING PROPRIETARY - See title page for details



	Test Point	Pitot Pressure, P _s (mb)	Air Data Test Set, Static Pressure Output (mb)	Air Data Test Set Height Correction (mb)	Recorded Pitot Pressure, ARINC 429 Label 242 (mb)	Differential Pressure = Col A - Col B - Col C (mb)	Tolerance of the Differential Pressure (mb)	C	B	A	Air Data Test Set, Static Pressure Output (mb)	Air Data Test Set Height Correction (mb)	Recorded Pitot Pressure, ARINC 429 Label 242 (mb)	Differential Pressure = Col A - Col B - Col C (mb)	Tolerance of the Differential Pressure (mb)	D	E	F	Air Data Test Set, Static Pressure Output (mb)	Air Data Test Set Height Correction (mb)	Recorded Static Pressure, ARINC 429 Label 245 (mb)	Differential Pressure = Col D - Col E - Col F (mb)	Tolerance of the Differential Pressure (mb)	Data More
	Static Pressure, P _s (mb)	Pitot Pressure, P _t (mb)	Air Data Test Set, Static Pressure Output (mb)	Air Data Test Set Height Correction (mb)	Recorded Pitot Pressure, ARINC 429 Label 242 (mb)	Differential Pressure = Col A - Col B - Col C (mb)	Tolerance of the Differential Pressure (mb)	C	B	A	Air Data Test Set, Static Pressure Output (mb)	Air Data Test Set Height Correction (mb)	Recorded Pitot Pressure, ARINC 429 Label 242 (mb)	Differential Pressure = Col A - Col B - Col C (mb)	Tolerance of the Differential Pressure (mb)	D	E	F	Air Data Test Set, Static Pressure Output (mb)	Air Data Test Set Height Correction (mb)	Recorded Static Pressure, ARINC 429 Label 245 (mb)	Differential Pressure = Col D - Col E - Col F (mb)	Tolerance of the Differential Pressure (mb)	Data More
1	1013 +/- 1.0	No Entry					+/- 0.48		(b)						+/- 0.48		(b)					+/- 0.48	(a)	
2	314 +/- 1.0	No Entry					+/- 0.41		(b)						+/- 0.41		(b)					+/- 0.41	(a)	
3	190 +/- 1.0	No Entry					+/- 0.41		(b)						+/- 0.41		(b)					+/- 0.41	(a)	
4	314 +/- 1.0	No Entry					+/- 0.41		(b)						+/- 0.41		(b)					+/- 0.41	(a)	
5	1013 +/- 1.0	No Entry					+/- 0.48		(b)						+/- 0.48		(b)					+/- 0.48	(a)	
	Entry to the Air Data Test Set		Total (Pitot) Pressure Measurement - Left Pitot ADM	Static Pressure Measurement - Left Static ADM																				

(a) Allow one minute after the air data test set reaches the input static pressure value before recording measurements.

(b) Height correction values in Column B and E are determined by the location the test set is placed. Refer to Height offset (mb) table.

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 14 of 16)

34-11-00

Page 573
May 15/2023

ECCN 9E991 BOEING PROPRIETARY - See title page for details



F/O ALTIMETRY SYSTEM TEST - TEST INPUT, MEASUREMENT UNIT: INCHES OF MERCURY (INHG)

	Test Point	Static Pressure, P (inHg)	Pitot Pressure, P_t (inHg)	Air Data Test Set, Q_c (inHg)	Air Data Test Set Height Correction (inHg)	Recorded Pitot Pressure, ARINC 429 Label 242 (inHg)	Differential Pressure = Col A - Col B - Col C (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Tolerance of the Differential Pressure (inHg)	D	E	F	Recorded Static Pressure, ARINC 429 Label 245 (inHg)	Differential Pressure = Col E - Col F (inHg)	Tolerance of the Differential Pressure (inHg)	More Data
	Entry to the Air Data Test Set	Total (Pitot) Pressure Measurement - Right Pitot ADM			Static Pressure Measurement - Right Static ADM											
1	29.921 +/- 0.029	No Entry							+/- 0.014		(b)			+/- 0.014	(a)	
2	9.272 +/- 0.029	No Entry							+/- 0.012		(b)			+/- 0.012	(a)	
3	5.611 +/- 0.029	No Entry							+/- 0.012		(b)			+/- 0.012	(a)	
4	9.272 +/- 0.029	No Entry							+/- 0.012		(b)			+/- 0.012	(a)	
5	29.921 +/- 0.029	No Entry							+/- 0.014		(b)			+/- 0.014	(a)	

(a) Allow one minute after the air data test set reaches the input static pressure value before recording measurements.

(b) Height correction values in Column B and E are determined by the location the test set is placed. Refer to Height Offset (inHg) table.

2932297 S0000709728 V2

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 15 of 16)

— EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 574
May 15/2023

ECCN 9E991 BOEING PROPRIETARY - See title page for details



	Test Point	Pitot Pressure, P _s (mb)	Air Data Test Set, Static Pressure Output (mb) Air Data Test Set Height Correction (mb) = Col A - Col B - Col C (mb)	C Recorded Pitot Pressure, ARINC 429 Label 242 (mb)	D Tolerance of the Differential Pressure (mb) Air Data Test Set, Static Pressure Output (mb)	E Air Data Test Set, Static Pressure Output (mb)	F Recorded Static Pressure, ARINC 429 Label 245 (mb) Differential Pressure = Col D - Col E - Col F (mb)	Tolerance of the Differential Pressure (mb) More Data
1	1013 +/- 1.0	No Entry	(b)		+/- 0.48	(b)	+/- 0.48	(a)
2	314 +/- 1.0	No Entry	(b)		+/- 0.41	(b)	+/- 0.41	(a)
3	190 +/- 1.0	No Entry	(b)		+/- 0.41	(b)	+/- 0.41	(a)
4	314 +/- 1.0	No Entry	(b)		+/- 0.41	(b)	+/- 0.41	(a)
5	1013 +/- 1.0	No Entry	(b)		+/- 0.48	(b)	+/- 0.48	(a)
	Entry to the Air Data Test Set	Total (Pitot) Pressure Measurement - Right Pitot ADM	Static Pressure Measurement - Right Static ADM					

(a) Allow one minute after the air data test set reaches the input static pressure value before recording measurements.

(b) Height correction values in Column B and E are determined by the location the test set is placed. Refer to Height Offset (mb) table.

ADS - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 503/34-11-00-990-809 (Sheet 16 of 16)

34-11-00

Page 575
May 15/2023

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Engineering Data Conversion Information

To convert binary data from ARINC 429 Bus Analyzer to engineering data, perform the following:

For ADIRU Label 242 or 245:

- Make a record of bits 28 through 13. Bits 28 through 13 are the data bits, where bit 28 is the most significant bit and bit 13 is the least significant bit.
- Convert bits 28 through 13 from binary to decimal then multiply decimal value by 0.03125 to get the static pressure in mb.

For Example:

Label 245 Bit Position	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	Label 245 decimal value	Conversion rate decimal to mb	Results in mb
Example Binary Data	0	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	32416	0.03125	1013
Conversion to Decimal	0	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	0	2^7	0	2^5	0	0	0	0	0			
Decimal Values	0	16384	8192	4096	2048	1024	512	0	128	0	32	0	0	0	0	0	32416	0.03125	1013
Example Binary Data	0	0	1	0	0	1	1	1	0	1	0	0	0	0	0	0	10048	0.03125	314
Conversion to Decimal	0	0	2^{13}	0	0	2^{10}	2^9	2^8	0	2^6	0	0	0	0	0	0			
Decimal Values	0	0	8192	0	0	1024	512	256	0	64	0	0	0	0	0	0	10048	0.03125	314
Example Binary Data	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	6080	0.03125	190
Conversion to Decimal	0	0	0	2^{12}	0	2^{10}	2^9	2^8	2^7	2^6	0	0	0	0	0	0			
Decimal Values	0	0	0	4096	0	1024	512	256	128	64	0	0	0	0	0	0	6080	0.03125	190

2932300 S0000709730_V1

ADS - ENGINEERING DATA CONVERSION INFORMATION Figure 504/34-11-00-990-810

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 576
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-00-780-802

12. Alternative Test: PFD - Static System Only

(Figure 502, Figure 503, Figure 505)

A. General

- (1) This task gives instructions to test the altimetry system for correct operation of the Air Data Systems (ADS).
- (2) You can use the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. References

Reference	Title
34-21-04 P/B 401	AIR DATA MODULE - REMOVAL/INSTALLATION
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 577
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1926	Coupling - Quick Disconnect, Pitot System Drain Line Part #: 1QF2-2-64A Supplier: 24984
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

G. Prepare for the System Test

SUBTASK 34-11-00-860-103

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 578
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-00-010-025

(2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-860-105



MAKE SURE YOU DO NOT SUPPLY ELECTRICAL POWER TO THE PITOT PROBE HEATER. IF YOU DO, YOU CAN DAMAGE THE PITOT PROBE.



MAKE SURE THAT YOU USE EXTERNAL POWER TO DO THE TEST. IF YOU DO NOT OBEY, THE APU WILL NOT SUPPLY SUFFICIENT POWER AND FAULT MESSAGES WILL SHOW.

NOTE: This alternative test only tests the static Air Data Module (ADM) in the airplane.

(3) Do the following maintenance practices for the Captain (CAPT) and First Officer (F/O) Static System Tests:

- (a) Do not connect or disconnect the test equipment while you have pressure in the pitot-static system.
- (b) Make sure that the test equipment, pitot system and static systems are clean and free of contamination.
- (c) Make sure that there are no leaks in the test equipment.
- (d) Make sure that the tape used to seal the static ports does not get inside the static port holes.
- (e) Make sure that the tape and/or test adapters do not damage or change the surfaces of the pitot probes or static ports.
- (f) Make sure that the air data test set is placed on the same level (0 ± 1 ft (0.00 ± 0.30 m)) as the passenger cabin floor, cargo compartment floor, or on the ground.
 - 1) The location of the test set determines the height correction values used to calculate ADM error (Figure 502).
- (g) Keep the static pressure in the range of 3.26 in/Hg (110.40 mBar) to 39.865 in/Hg (1349.98 mBar).



MAKE SURE THAT PRESSURE APPLIED TO THE PITOT -STATIC SYSTEM IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1350 MBAR) WILL CAUSE DAMAGE TO THE ADM.

- (h) Make sure the total pressure applied to the pitot system is static pressure only and does not include pitot pressure.

NOTE: This test requires zero airspeed.

- (i) Keep the absolute pressure applied to the static system less or equal to ambient pressure.
- (j) Install the flow restrictors in the air data test set between the cutoff valve in the test set and the pitot and static systems.
- (k) During adjustment of static pressure, make sure that the rate of change of altitude is less than 5000 ft (1524 m) per minute.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 579
May 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (l) Make sure that the Autopilot Flight Director System (AFDS) is OFF during the test.
- (m) Supply electrical power to the Air Data Inertial Reference System (ADIRS) before you make the Static or Total pressure connection.



WARNING

MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (n) Make sure that the ATC transponders are in standby mode.
 - 1) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

H. Captain (CAPT) Altimetry System Test Set Installation

SUBTASK 34-11-00-480-099



CAUTION

SUPPORT THE TEST HOSES AND THE ADAPTER SO THEY ADD NO WEIGHT ON THE PITOT PROBES. FAILURE TO DO SO COULD CAUSE THE PITOT PROBES TO NOT BE ALIGNED AND TO BE DAMAGED.

- (1) Connect the air data test set to the CAPT pitot and static systems with one test setup from these options:

Option 1: Static Adapter Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 1)	Supply pitot and static pressure from air data test set to Left Pitot and Left Static ADM	
Figure 503 (Sheet 2)	Supply static pressure from air data test set to Left Pitot and Left Static ADM	
Figure 503 (Sheet 9)	Supply Pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
Figure 503 (Sheet 10)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)

(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.

- (a) Install the pitot test adapter, COM-1916, on the CAPT pitot probe.



CAUTION

INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (b) Install the static test adapter, COM-1921, on the CAPT static port.
- (c) Connect the air data model test set, COM-1914, to the pitot test adapter, COM-1916, and static test adapter, COM-1921.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 580
May 15/2023

**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**



WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (d) Seal the remaining CAPT static ports with Scotch Brand No.471 tape, G02219.

Option 2: System Drain Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 3)	Supply pitot and static pressure from air data test set to Left Pitot and Left Static ADM through system drain fittings	
Figure 503 (Sheet 4)	Supply static pressure from air data test set to Left Pitot and Left Static ADM through system drain fittings	
Figure 503 (Sheet 11)	Supply pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
Figure 503 (Sheet 12)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (e) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801).
- (f) Remove the caps on the CAPT pitot and static system drain fittings.
- (g) Install the quick-disconnect coupling, COM-1926, on the CAPT pitot system drain fitting.
- (h) Install the quick-disconnect coupling, COM-1927, on the CAPT static system drain fitting.
- (i) Install the pitot test adapter, COM-1916, on the CAPT pitot probe.
- (j) Install caps on the pitot test adapter, COM-1916.



WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (k) Seal the remaining CAPT static ports with, Scotch Brand No.471 tape, G02219.
- (l) Connect the air data model test set, COM-1914, to the quick-disconnect couplings, coupling, COM-1926, and coupling, COM-1927.

I. First Officer (F/O) Altimetry System Test Set Installation

SUBTASK 34-11-00-480-100



SUPPORT THE TEST HOSES AND THE ADAPTER SO THEY ADD NO WEIGHT ON THE PITOT PROBES. FAILURE TO DO SO COULD CAUSE THE PITOT PROBES TO NOT BE ALIGNED AND TO BE DAMAGED.

- (1) Connect the air data model test set, COM-1914, to the F/O pitot and static systems with one test setup from these options:

Option 3: Static Adapter Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 5)	Supply pitot and static pressure from air data test set to Right Pitot and Right Static ADM	
Figure 503 (Sheet 6)	Supply static pressure from air data test set to Right Pitot and Right Static ADM	
Figure 503 (Sheet 9)	Supply Pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
Figure 503 (Sheet 10)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (a) Install the pitot test adapter, COM-1916, on the F/O pitot probe.



INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (b) Install the static test adapter, COM-1921, on the F/O static port.
- (c) Connect the air data model test set, COM-1914, to the pitot test adapter, COM-1916, and static test adapter, COM-1921.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 582
May 15/2023

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



WARNING

WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.



CAUTION

DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (d) Seal the remaining F/O static ports with, Scotch Brand No.471 tape, G02219.

Option 4: System Drain Test Setup

Test Setup		
Figure	Description	More Data
Figure 503 (Sheet 7)	Supply pitot and static pressure from air data test set to Right Pitot and Right Static ADM through system drain fittings	
Figure 503 (Sheet 8)	Supply static pressure from air data test set to Right Pitot and Right Static ADM through system drain fittings	
Figure 503 (Sheet 11)	Supply pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
Figure 503 (Sheet 12)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

- (e) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Removal, TASK 50-10-02-000-801).
- (f) Remove the caps on the F/O pitot and static system drain fittings.
- (g) Install the quick-disconnect coupling, COM-1926, on the F/O Pitot System Drain Fitting.
- (h) Install the quick-disconnect coupling, COM-1927, on the F/O Static System Drain Fitting.
- (i) Install the pitot test adapter, COM-1916, on the F/O pitot probe.
- (j) Install caps on the pitot test adapter, COM-1916.



WARNING

WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-00

Page 583
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (k) Seal the remaining F/O static ports with, Scotch Brand No.471 tape, G02219.
- (l) Connect the air data model test set, COM-1914, to the quick-disconnect couplings, coupling, COM-1926, and coupling, COM-1927.

J. Captain (CAPT) Alternative Altimetry System Test - PFD Method

SUBTASK 34-11-00-780-006

- (1) Do the CAPT Static System Test as follows:

NOTE: The Primary Flight Display (PFD) testing method only makes sure that the static ADM is accurate. Testing the pitot ADM is not required to make sure of altimetry system accuracy.

NOTE: The PFD method may be used to make sure that the pitot ADM is accurate by moving the pitot ADM into the static ADM location.

- (a) Set the barometric correction to STD on the CAPT and F/O PFD.

SUBTASK 34-11-00-780-007



PITOT PRESSURE MUST ALWAYS BE EQUAL OR LARGER THAN THE STATIC PRESSURE APPLIED TO THE SYSTEM. DIFFERENCE BETWEEN THESE TWO PRESSURES (DIFFERENTIAL PRESSURE) MUST NOT BE MORE THAN 10.00 INCHES OF MERCURY. DIFFERENTIAL PRESSURE MUST NOT FALL BELOW ZERO. IF THESE REQUIREMENTS ARE NOT FOLLOWED, DAMAGE TO EQUIPMENT COULD OCCUR.

- (2) Apply Static pressure with the air data model test set, COM-1914, for each test point and record test results from the CAPT PFD using the following:

Table of Test Input and Tolerance Requirements

Figure	Description
Figure 505	Measurement Unit: Feet
Figure 502 (Sheet 1)	Height Offset Table (ft)

- (a) Allow the indicated vertical speed to reduce to zero before recording CAPT PFD altitude.

SUBTASK 34-11-00-960-003

- (3) If the CAPT alternative altimetry system test fails do the following:
 - (a) Remove and replace the ADM (AIR DATA MODULE - REMOVAL/INSTALLATION, PAGEBLOCK 34-21-04/401).
 - (b) Do the CAPT alternative altimetry system test.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

Page 584
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

K. First Officers (F/O) Alternative Altimetry System Test - PFD Method

SUBTASK 34-11-00-780-008

- (1) Do the F/O Static System Test as follows:

NOTE: The PFD testing method only makes sure that the static ADM is accurate. Testing the pitot ADM is not required to make sure of altimetry system accuracy.

NOTE: The PFD method may be used to make sure that the pitot ADM is accurate by moving the pitot ADM into the static ADM location.

- (a) Set the barometric correction to STD on the CAPT and F/O PFD.

SUBTASK 34-11-00-780-009

 CAUTION	PITOT PRESSURE MUST ALWAYS BE EQUAL OR LARGER THAN THE STATIC PRESSURE APPLIED TO THE SYSTEM. DIFFERENCE BETWEEN THESE TWO PRESSURES (DIFFERENTIAL PRESSURE) MUST NOT BE MORE THAN 10.00 INCHES OF MERCURY. DIFFERENTIAL PRESSURE MUST NOT FALL BELOW ZERO. IF THESE REQUIREMENTS ARE NOT FOLLOWED, DAMAGE TO EQUIPMENT COULD OCCUR.

- (2) Apply static pressure with the air data model test set, COM-1914, for each test point and record test results from the F/O PFD using the following:

Table of Test Input and Tolerance Requirements

Figure	Description
Figure 505	Measurement Unit: Feet
Figure 502 (Sheet 1)	Height Offset Table (ft)

- (a) Allow the indicated vertical speed to reduce to zero before recording F/O PFD altitude.

SUBTASK 34-11-00-960-004

- (3) For the F/O alternative altimetry system test failure do this:

- (a) Remove and replace the ADM (AIR DATA MODULE - REMOVAL/INSTALLATION, PAGEBLOCK 34-21-04/401).

- (b) Do the F/O alternative altimetry system test.

L. Captain (CAPT) Altimetry System Test Set Removal

SUBTASK 34-11-00-080-058

- (1) Return CAPT pitot and static systems to ambient pressure state and remove air data model test set, COM-1914, set as follows:

 CAUTION	RELEASE THE PRESSURE OR THE VACUUM CONTINUOUSLY AND AT THE SAME TIME FOR THE PITOT AND STATIC SYSTEMS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (a) Release the pressure or vacuum on the CAPT pitot and static systems to ambient pressure with the air data model test set, COM-1914.
- (b) Disconnect the air data model test set, COM-1914, from the CAPT pitot and static systems as follows:
- 1) Option 1, static adapter test setup:
 - a) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921, and pitot test adapter, COM-1916.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 585
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- b) Remove pitot test adapter, COM-1916, from the CAPT pitot probe.



CAUTION

REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- c) Remove the static test adapter, COM-1921, from the CAPT static port.



WARNING

ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- d) Remove the Scotch Brand No.471 tape, G02219, from the remaining CAPT static ports.

2) Option 2, system drain test setup:

- a) Disconnect the air data model test set, COM-1914, from the coupling, COM-1926, and coupling, COM-1927.



WARNING

ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- b) Remove Scotch Brand No.471 tape, G02219, from the remaining CAPT static ports.
- c) Remove the pitot test adapter, COM-1916, on the CAPT pitot probe.
- d) Remove the quick-disconnect coupling, COM-1926, and the coupling, COM-1927, from the drain fittings.
- e) Install caps on the CAPT pitot and static system drain fittings.
- f) Do a General Visual Inspection (GVI) of the CAPT pitot and static system drain fittings.
- <1> Make sure that the actuation ring is fully engaged on the lock pins.
- <2> Make sure that the color lock ring indicator shows that the system drain fitting is connected correctly.
- g) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801).

M. First Officer (F/O) Altimetry System Test Set Removal

SUBTASK 34-11-00-080-059

- (1) Return F/O pitot and static systems to ambient pressure state and remove air data model test set, COM-1914, as follows:



CAUTION

RELEASE THE PRESSURE OR THE VACUUM CONTINUOUSLY AND AT THE SAME TIME FOR THE PITOT AND STATIC SYSTEMS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (a) Release the pressure or vacuum on the F/O pitot and static systems to ambient pressure using the air data model test set, COM-1914.

EFFECTIVITY
SIA ALL

34-11-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 586
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Disconnect the air data model test set, COM-1914, from the F/O pitot and static systems as follows:

1) Option 3, static adapter test setup:

- a) Disconnect the air data model test set, COM-1914, from the static test adapter, COM-1921, and pitot test adapter, COM-1916.
- b) Remove pitot test adapters from the F/O pitot probe.



REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- c) Remove static test adapter from the F/O static port.



ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- d) Remove Scotch Brand No.471 tape, G02219, from the remaining F/O static ports.

2) Option 4, system drain test setup:

- a) Disconnect the air data model test set, COM-1914, from the coupling, COM-1926, and coupling, COM-1927.



ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

- b) Remove the Scotch Brand No.471 tape, G02219, from the remaining F/O static ports.
- c) Remove the pitot test adapter, COM-1916, on the F/O pitot probe.
- d) Remove the quick-disconnect coupling, COM-1926, and the coupling, COM-1927, from the drain fittings.
- e) Install caps on the F/O pitot and static system drain fittings.
- f) Do a General Visual Inspection (GVI) of the F/O pitot and static system drain fittings.
 - <1> Make sure that the actuation ring of the drain fitting is fully engaged on the lock pins.
 - <2> Make sure the color lock ring indicator shows that the system drain fitting is connected correctly.
- g) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment (Cargo Compartment Sidewall Liners Installation, TASK 50-10-02-400-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 587
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

N. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-106

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-00

Page 588
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CAPT AND F/O STATIC SYSTEM ONLY TEST - TEST INPUT, MEASUREMENT UNIT: FEET

Test Point	Input Target Altitude (ft)		Air Data Test Set, Altitude Output (ft)		Primary Flight Display, Height Correction (ft)		Differential Altitude = Col A + Col B - Col C (ft)		Air Data Test Set, Altitude Output (ft)		Primary Flight Display, Height Correction (ft)		Tolerance of the Differential Altitude (ft)		Air Data Test Set, Altitude Output (ft)		Primary Flight Display, Height Correction (ft)		Differential Altitude = Col D + Col E + Col F (ft)		Tolerance of the Differential Altitude (ft)		More Data	
	A	B	C	D	E	F	D	E	F	D	E	F	D	E	F	D	E	F	D	E	F	D	E	F
1		0 +/- 27	(b)				+/- 15		(b)						(b)					+/- 15				(a)
2		29,048 +/- 71	(b)				+/- 30		(b)						(b)					+/- 30				(a)
3		39,651 +/- 106	(b)				+/- 45		(b)						(b)					+/- 45				(a)
4		29,048 +/- 71	(b)				+/- 30		(b)						(b)					+/- 30				(a)
5		0 +/- 27	(b)				+/- 15		(b)						(b)					+/- 15				(a)
	Entry to the Air Data Test Set	Static Pressure Measurement - Left Static ADM					Static Pressure Measurement - Right Static ADM																	
(a) Allow one minute after the air data test set reaches the input static pressure value before recording measurements.																								
(b) Height correction values in Column B and E are determined by the location the test set is placed. Refer to Height offset (ft) table.																								

2881359 S0000682048_V1

AIR DATA SYSTEM - CAPT AND F/O STATIC SYSTEM ONLY TEST - TEST INPUT MEASUREMENT UNIT: FEET

Figure 505/34-11-00-990-805

EFFECTIVITY

SIA ALL

34-11-00

D633AM101-SIA



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

PITOT PROBE - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the pitot probe
 - (2) An installation of the pitot probe.

TASK 34-11-01-000-801

2. Pitot Probe - Removal

(Figure 401, Figure 402 or Figure 403, Figure 404)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements)
	Part #: 1-6390-A Supplier: 63318
	Part #: 10810 Supplier: \$0855
	Part #: 10811 Supplier: \$0855
	Part #: 10812 Supplier: \$0855
	Part #: 234350 Supplier: 5HCF1
	Part #: 235072 Supplier: 5HCF1
	Part #: 235073 Supplier: 5HCF1
	Part #: 235074 Supplier: 5HCF1
	Part #: 235075 Supplier: 5HCF1
	Part #: 235076 Supplier: 5HCF1
	Part #: 311/03 Supplier: F6892
	Part #: 311/14 Supplier: F6892
	Part #: 311/25 Supplier: F6892
	Part #: 311/37 Supplier: F6892
	Part #: AS1 Supplier: \$1351
	Part #: AS2 Supplier: \$1351
	Part #: AS3 Supplier: \$1351
	Part #: DAD5013 Supplier: 7RKH2
	Part #: DFD5019 Supplier: 7RKH2
	Part #: JNT411B60 Supplier: 3DN12
	Part #: JNT411B90 Supplier: 3DN12
	Part #: SCD5019 Supplier: 7RKH2
	Part #: ST982LF-9 Supplier: 81205
	Part #: TS1275-4 Supplier: 22975

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 401
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

C. Pitot Probe Removal

SUBTASK 34-11-01-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-11-01-140-001



MAKE SURE THAT THE PITOT PROBE HEAT IS OFF. A HOT PROBE CAN CAUSE INJURIES TO PERSONNEL.



MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.



MAKE SURE THAT THE AREA AROUND THE PITOT PROBE IS CLEAR OF UNWANTED MATERIAL. CONTAMINATION OF THE PITOT SYSTEM CAN OCCUR.

- (2) Use the sealant removal tool, COM-2481, to remove the sealant from around the baseplate [1] of the pitot probe [9].

SUBTASK 34-11-01-020-001

- (3) Remove the bolts [7] from the baseplate [1] of the pitot probe [9].

SUBTASK 34-11-01-020-002



MAKE SURE THAT THE PITOT PROBE HAS NO WEIGHT ON IT. THE PITOT PROBE CAN BEND OR TWIST OUT OF TOLERANCE.

- (4) Do these steps to loosen the pitot probe [9] from the airplane skin:
- (a) Hold the probe strut [8].
 - (b) Pull the pitot probe [9] out from the airplane skin until you can get access to the elbow [12] and electrical connector [6] on the base of the pitot probe [9].

SUBTASK 34-11-01-020-020

- (5) Disconnect the bonding jumper [13] from the baseplate [1].
- (a) Remove the bolt [2], washer [3], and bonding jumper [13].

SUBTASK 34-11-01-020-003



USE TWO WRENCHES TO APPLY COUNTER PRESSURE ON THE FITTING DURING DISASSEMBLE. USE ONE WRENCH ON EACH SIDE OF THE FITTING. IF YOU DO NOT OBEY THIS INSTRUCTION DAMAGE TO THE TUBE OR FITTING CAN OCCUR.

- (6) Disconnect the elbow [12] from the pitot probe [9].

EFFECTIVITY
SIA ALL

34-11-01

D633AM101-SIA

Page 402
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- (a) Use one wrench on each side to apply counter pressure on the fitting.

SUBTASK 34-11-01-020-008

- (7) Put a cap on the elbow [12] to keep out unwanted material.

NOTE: This step is not necessary if you will replace the pitot probe immediately.

SUBTASK 34-11-01-020-004

- (8) Remove the long screw [10] from the pitot probe side of the electrical connector [6].

SUBTASK 34-11-01-020-016

- (9) Disconnect the electrical connector [6].

SUBTASK 34-11-01-420-018

- (10) Install the long screw [10] in the electrical connector [6].

SUBTASK 34-11-01-020-007

- (11) Temporarily attach the electrical connector [6] and elbow [12] to the airplane structure with tape so they do not fall inside the fuselage.

SUBTASK 34-11-01-020-017

- (12) Remove the pitot probe [9] with the baseplate [1] as a whole assembly.

- (a) If the gasket [14] is damaged, discard it.

NOTE: The gasket can be reused if it is not damaged.

SUBTASK 34-11-01-020-009

- (13) If it is necessary, remove the baseplate [1] from the pitot probe [9].

- (a) Remove the lockwire, and discard it.

- (b) Remove the bolts [4] and washers [5] from the baseplate [1].

NOTE: Hardened sealant can be softened with heat for easier removal. The baseplate and pitot probe may be heated in an oven, 150°F (66°C) for 20 minutes to soften the sealant.

- (c) Remove the baseplate [1].

SUBTASK 34-11-01-020-011

- (14) Keep the baseplate [1] for another installation.

NOTE: The baseplates are not interchangeable between positions.

———— **END OF TASK** ————

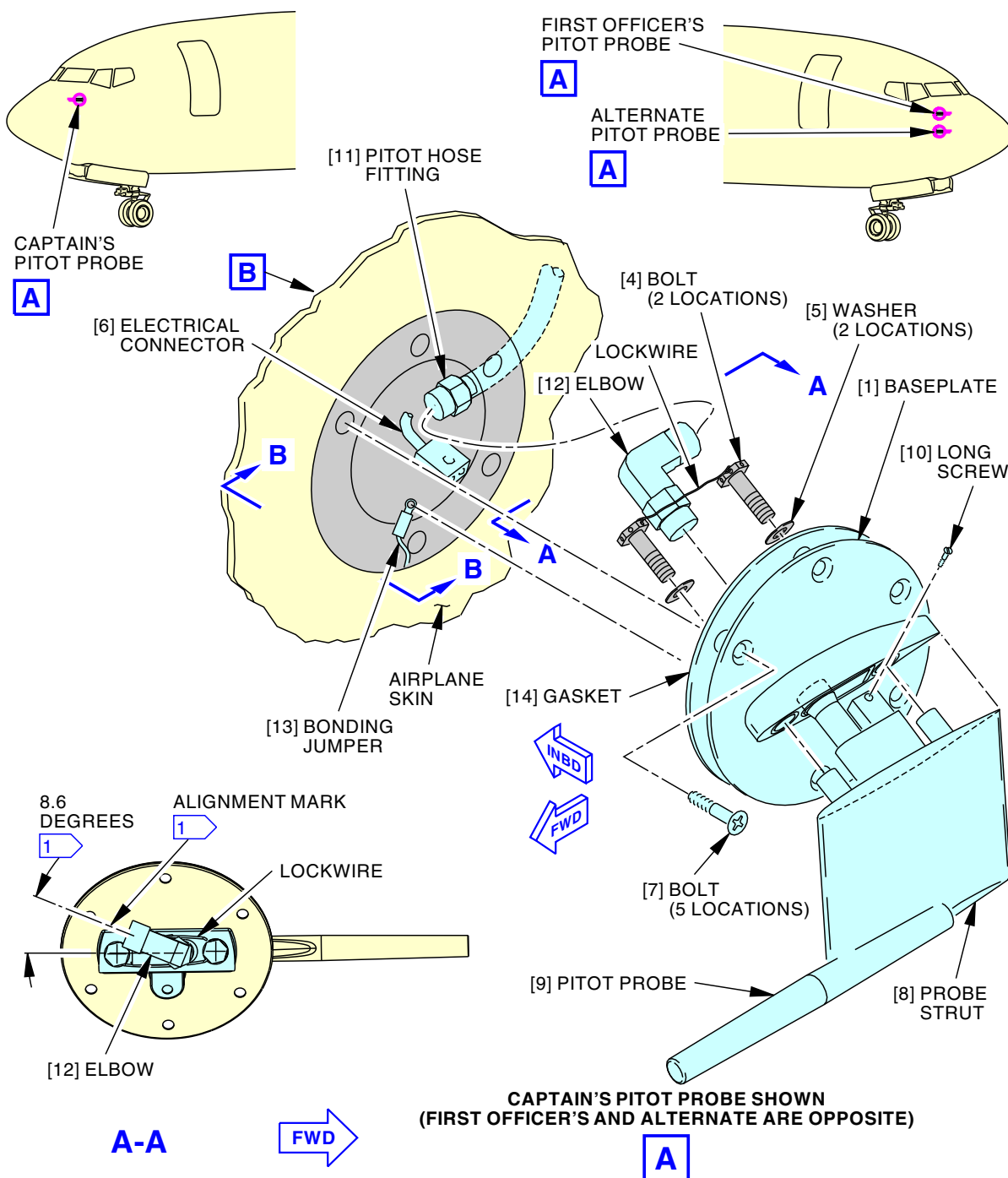
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 403
May 15/2023



CAPTAIN'S PITOT PROBE SHOWN
(FIRST OFFICER'S AND ALTERNATE ARE OPPOSITE)

- 1 THE CENTER OF THE 90-DEGREE ELBOW SHOULD ALIGN WITH THE ALIGNMENT MARK. THE ALIGNMENT MARK IS 8.6 DEGREES ABOVE THE CENTER OF THE PITOT PROBE. THIS WILL PREVENT MOISTURE FROM COLLECTING IN LOW SPOTS OF THE PITOT ASSEMBLY AND PITOT HOSE. 2414801 S00061536033_V5

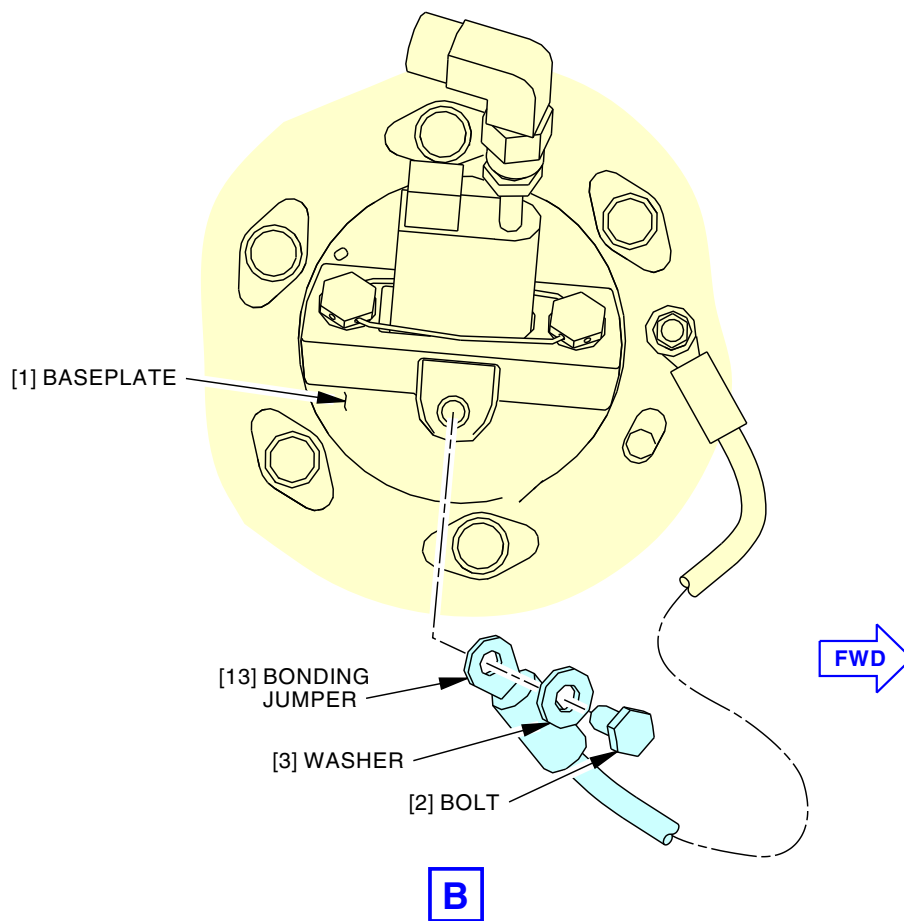
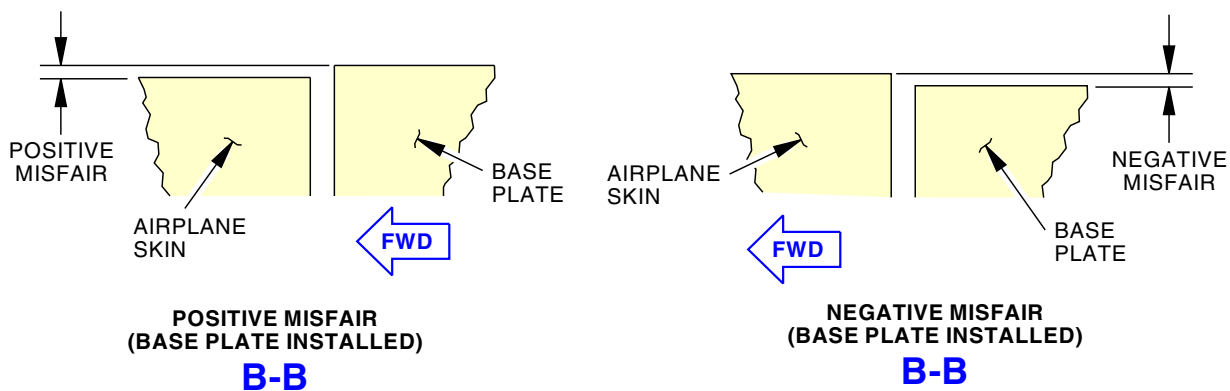
Pitot Probe Installation
Figure 401/34-11-01-990-801 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01



2931011 S0000709007_V2

Pitot Probe Installation
Figure 401/34-11-01-990-801 (Sheet 2 of 2)

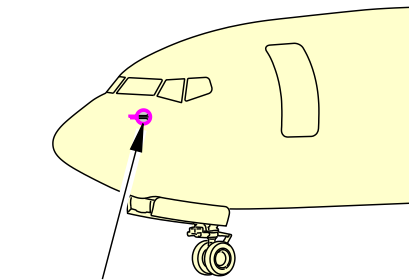
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

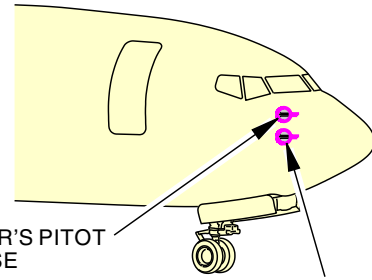
34-11-01

Page 405
Sep 15/2021



CAPTAIN'S PITOT
FLEXIBLE HOSE
(LEFT SIDE)

A

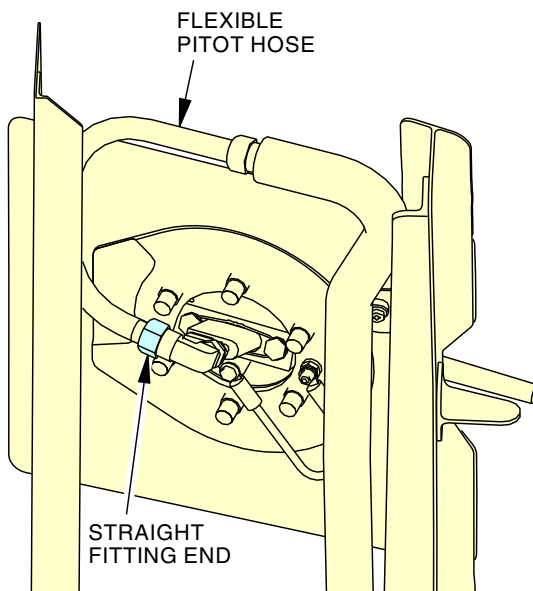


FIRST OFFICER'S PITOT
FLEXIBLE HOSE
(RIGHT SIDE)

B

ALTERNATE PITOT
FLEXIBLE HOSE
(RIGHT LOWER SIDE)

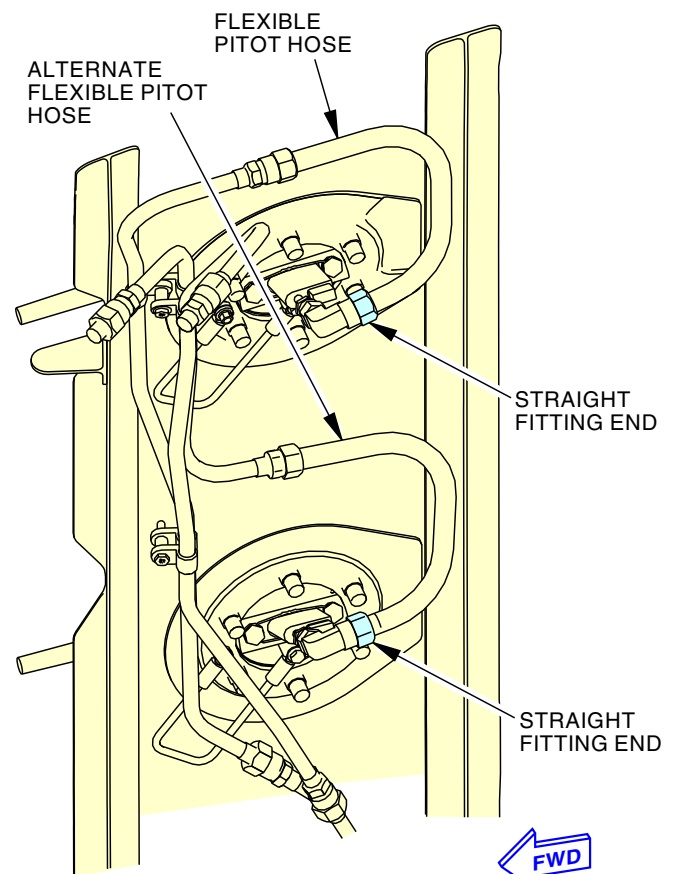
B



CAPTAIN'S PITOT FLEXIBLE
HOSE



A



FIRST OFFICER'S/ALTERNATE PITOT
FLEXIBLE HOSE

B



2414804 S00061536036_V1

Pitot Probe Flex Hose Installation
Figure 402/34-11-01-990-804

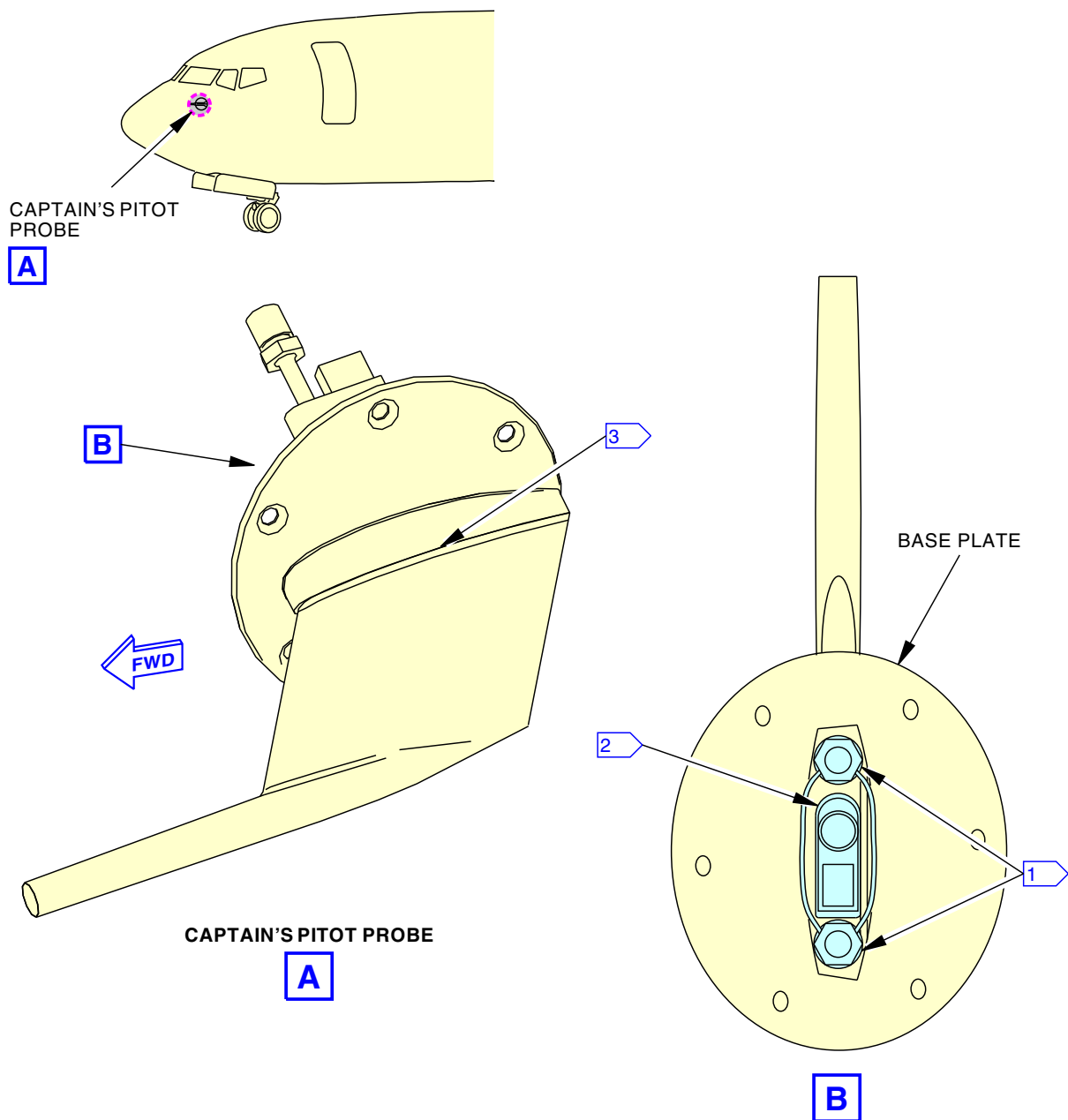
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 406
Sep 15/2021



- 1 APPLY SEALANT AROUND THE HEAD OF TWO BOLTS AFTER THE INSTALLATION OF THE LOCKWIRE.
- 2 APPLY SEALANT TO THE CLEARANCE ONLY BETWEEN THE PROBE STRUT AND THE BASEPLATE.
- 3 APPLY SEALANT ON THE LINE BETWEEN THE BASEPLATE AND PROBE STRUT.

2929240 S0000707948_V3

Pitot Probe - Sealant Application
Figure 403/34-11-01-990-807

EFFECTIVITY
SIA ALL

D633AM101-SIA

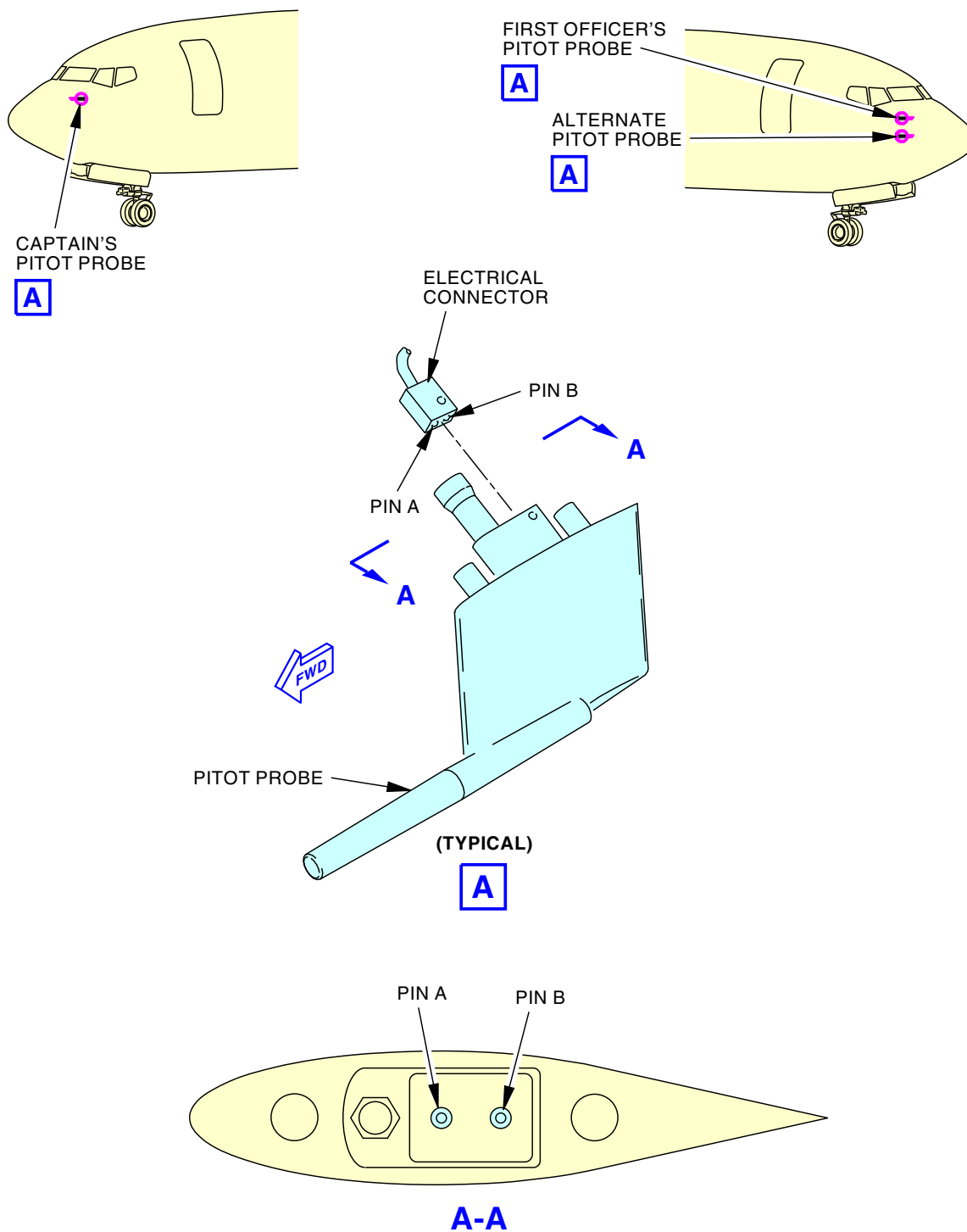
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 407
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



3009288 S0000783008_V1

Pitot Probe - Electrical Connector Polarity
Figure 404/34-11-01-990-808

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 408
Sep 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-01-400-801

3. Pitot Probe - Installation

(Figure 401, Figure 402 or Figure 403, Figure 404)

A. References

Reference	Title
20-10-34-110-802	Clean Bare, Clad, or Plated Metal with Solvent (P/B 701)
34-11-00-790-806	Left Pitot System Leak Test (P/B 501)
34-11-00-790-807	Right Pitot System Leak Test (P/B 501)
34-11-00-790-808	Alternate Pitot System Leak Test (P/B 501)
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)
SRM 51-40-02-0G-0	Fastener Installation and Removal
SWPM 20-20-10	Replacement of Ground Studs and Bonding Jumper Installation

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796 Class III
G01912	Lockwire - MS20995NC32, Monel - 0.032 Inch (0.8128 mm) Diameter	NASM20995

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Pitot probe	34-11-01-03-055	SIA ALL
		34-11-01-03-230	SIA ALL
		34-11-01-03-355	SIA ALL

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

34-11-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 409
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

F. Pitot Probe Installation

SUBTASK 34-11-01-110-001

- (1) For the surface of the baseplate [1], do this task: Clean Bare, Clad, or Plated Metal with Solvent, TASK 20-10-34-110-802.

SUBTASK 34-11-01-420-017

- (2) If removed, do these steps to install the pitot probe [9] on the baseplate [1]:
 - (a) Put the pitot probe [9] on the baseplate [1].
 - (b) Install the bolts [4] and washers [5].
 - (c) Install the MS20995NC32 lockwire, G01912, on the bolts [4].
 - (d) Measure the resistance between the baseplate [1] and the probe strut [8] with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-10).
 - (e) Make sure that the resistance is not more than 0.5 milliohms (0.0005 ohm).
 - (f) Apply sealant, A00247, to the parts that follow:

NOTE: It is not necessary to apply the sealant immediately, if the cure time will cause a flight delay. The sealant should be applied as soon as possible to keep moisture out of the area between the probe and airplane skin. The sealant deferral must not exceed a maximum of eight weeks.

 - 1) Around the head of the two bolts [4].
 - 2) A thin layer to the clearance between the pitot probe [9] and the baseplate [1].
 - 3) A thin layer on the line between the baseplate [1] and the probe strut [8].

SUBTASK 34-11-01-420-023

- (3) Put the gasket [14] into position on the baseplate [1].

SUBTASK 34-11-01-420-025

- (4) Do these steps to connect the elbow [12] to the pitot probe [9]:
 - (a) If installed, remove the cap from the elbow [12].
 - (b) Install the elbow [12] to the pitot probe [9].
 - (c) Make sure that the center of the elbow [12] is aligned with the alignment mark on the inboard side of the baseplate [1] (Figure 401).



CAUTION

MAKE SURE THAT YOU USE TWO WRENCHES TO APPLY COUNTER-PRESSURE ON THE FITTING. USE ONE WRENCH ON EACH SIDE OF THE FITTING. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE TUBE OR FITTING CAN OCCUR.

- (d) Tighten the elbow [12] to 140 $\pm$ 14 in-lb (15.8 $\pm$ 1.6 N·m).
 - 1) Use one wrench on each side to apply counter pressure on the fitting.

SUBTASK 34-11-01-420-019

- (5) Connect the bonding jumper [13] to the baseplate [1].
 - (a) Install the bonding jumper [13], bolt [2] and washer [3].
 - (b) Measure the resistance between the terminal of the bonding jumper [13] and baseplate [1] with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-10).
 - (c) Make sure that the resistance is not more than 1.00 milliohms (0.0010 ohm).

EFFECTIVITY
SIA ALL

34-11-01

D633AM101-SIA

Page 410
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Measure the resistance between the baseplate [1] and the airplane skin with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-10).
- (e) Make sure that the resistance is not more than 2.50 milliohms (0.0025 ohm).

SUBTASK 34-11-01-210-001

- (6) Do these steps to connect the electrical connector [6] to the pitot probe [9]:

- (a) Examine the electrical connector [6] for loose, bent, or broken pins.
- (b) Remove the long screw [10] from the electrical connector [6].
- (c) Connect the electrical connector [6] to the pitot probe [9].
 - 1) Make sure that the pins are connected correctly (Figure 404).

NOTE: Pin B is the pin on the side closest to the offset screw hole.

- (d) Install the long screw [10] in the electrical connector [6].

SUBTASK 34-11-01-420-013



DO NOT LET DUST, DIRT, OR OTHER UNWANTED MATERIAL GET IN THE PORTS. CONTAMINATION CAN CAUSE DAMAGE TO THE SYSTEM.

- (7) Do these steps to install the pitot probe [9]:

- (a) Apply compound, C00528, to the bolts [7] and baseplate [1] holes.
- (b) Hold the probe strut [8] and put the pitot probe [9] into position on the airplane skin.
 - 1) Make sure that there is not a loop or downward oriented dip in the flexible pitot hose when the pitot hose fitting [11] is put in the installation hole.

NOTE: A loop or downward oriented dip in the flexible pitot hose can cause water accumulation. Water accumulation can cause an erratic airspeed indication, resulting in an Indicated Airspeed (IAS) disagree message.

- (c) Install five of the six bolts [7] to the baseplate [1] of the pitot probe [9].
 - 1) Tighten the bolts [7] to 32 in-lb (3.6 N·m) - 39 in-lb (4.4 N·m).
 - 2) Measure the resistance between the head of a bolts [7] and the remaining countersunk hole with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-10).
 - 3) Make sure that the resistance is not more than 1.00 milliohms (0.0010 ohm).
- (d) Install the last bolt [7] to the baseplate [1] of the pitot probe [9].
 - 1) Tighten the bolt [7] to 32 in-lb (3.6 N·m) - 39 in-lb (4.4 N·m).
- (e) Measure the baseplate [1] to skin misfair at the forward and aft edges of the baseplate [1] to be within 0.000 ±0.040 in. (0.000 ±1.016 mm)

SUBTASK 34-11-01-760-001

- (8) Measure the resistance between the probe strut [8] and the airplane skin with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-10).
- (a) If the resistance is more than 0.010 ohms, do these steps:
 - 1) Remove the pitot probe [9].
 - 2) Clean the bonding surfaces, including the countersunk holes in the baseplate [1] (TASK 20-10-34-110-802).
 - 3) Replace the bolts [7] with new bolts [7].

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-01

Page 411
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 4) Re-install the pitot probe [9].
- 5) Measure the resistance between the probe strut [8] and the airplane skin with an intrinsically safe approved bonding meter, COM-1550 (SWPM 20-20-10).
- 6) If the resistance is more than 0.010 ohms, do these steps:
 - a) Remove the pitot probe [9].
 - b) Replace the nutplates and rivets that attach the pitot probe [9] (SRM PROCEDURE 51-40-02-0G-0).
 - c) Reinstall the pitot probe [9] and make sure that the bonding resistance is not more than 0.010 ohm.

G. Pitot Probe Installation Test

SUBTASK 34-11-01-790-001

- (1) Do the leak check for the applicable pitot probe [9]:
 - (a) For the captain's pitot probe, do this task: Left Pitot System Leak Test, TASK 34-11-00-790-806.
 - (b) For the first officer's pitot probe, do this task: Right Pitot System Leak Test, TASK 34-11-00-790-807.
 - (c) For the alternate pitot probe, do this task: Alternate Pitot System Leak Test, TASK 34-11-00-790-808.

SUBTASK 34-11-01-860-005

- (2) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
C	4	C00236	HEATERS ELEV PITOT LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	4	C00237	HEATERS ELEV PITOT RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

- (a) Make sure that the amber OVERHEAT indicator lights on the window and pitot heat module located, on the P5 FWD overhead panel, go OFF.

SUBTASK 34-11-01-860-006

- (3) Put the PROBE HEAT A switch in the ON position.
 - (a) Make sure that the CAPT PITOT, L ELEV PITOT, L ALPHA VANE, and TEMP PROBE lights on the window and pitot heat module go OFF.

SUBTASK 34-11-01-860-007

- (4) Put the PROBE HEAT B switch in the ON position.
 - (a) Make sure that the F/O PITOT, R ELEV PITOT, R ALPHA VANE, and AUX PITOT lights on the window and pitot heat module go OFF.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 412
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



WARNING

DO NOT TOUCH THE AIR DATA SENSORS. THE SENSORS CAN GET VERY HOT. THE SENSORS CAN BURN YOU.

- (b) Make sure that the air data sensor heaters get warm.

NOTE: The air data sensor heaters can be checked with the methods that follow:

- Spray the air data sensors with water to check for heat.
- Measure the temperature of the sensor with an infrared or contact thermometer.
- Look at the sensor with an infrared or thermal imager.

SUBTASK 34-11-01-860-008

- (5) Put the PROBE HEAT switches in the AUTO position.

SUBTASK 34-11-01-390-001



CAUTION

DO NOT USE TOO MUCH SEALANT. TOO MUCH SEALANT CAN CAUSE DAMAGE WHEN YOU REMOVE THE PROBE. IF YOU DO NOT USE SUFFICIENT SEALANT, CORROSION CAN OCCUR.

- (6) Apply an aerodynamic fillet seal to the clearance between the baseplate [1] and the airplane skin with sealant, A00247, (TASK 51-22-00-390-809).

NOTE: It is not necessary to apply the sealant immediately, if the cure time will cause a flight delay. The sealant should be applied as soon as possible to keep moisture out of the area between the probe and airplane skin. The sealant deferral must not exceed a maximum of eight weeks.

- (a) Make sure that the baseplate [1] and sealant are flat with the airplane skin.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 413
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

PITOT PROBE - INSPECTION/CHECK

1. General

- A. This procedure has these tasks:
- (1) A inspection of the pitot probe.
- B. Replace the pitot probe if the damage or wear limits are out of tolerance.

TASK 34-11-01-200-801

2. Pitot Probe Detailed Inspection

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
34-11-01-100-801	Pitot Probe Cleaning (P/B 701)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Pitot Probe Detailed Inspection

SUBTASK 34-11-01-860-009

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-11-01-210-002

- (2) Visually examine the pitot probe for damage or unwanted material in the drain holes, the pitot opening, or the contour of the probe.

NOTE: Using a flashlight, look for debris or blockage within the first few inches of Pitot probe tip, inspect up to the water dam internal feature of the probe.

SUBTASK 34-11-01-100-001

- (3) If unwanted moisture, debris, or other material is found, clean the inner surface of the pitot probe (TASK 34-11-01-100-801).

SUBTASK 34-11-01-220-001

- (4) Make sure that the edge of the pitot opening is sharp.

SUBTASK 34-11-01-220-002

- (5) Make sure that the inner surface of the probe tip is smooth and rounded.

SUBTASK 34-11-01-220-003

- (6) Make sure that the outer surface of the probe tip is smooth and rounded.

SUBTASK 34-11-01-220-004

- (7) Make sure that the leading edge of the pitot probe does not have nicks.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 601
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-01-220-006

- (8) If the detailed inspection of the pitot probe is not satisfactory, do a special detailed inspection of the pitot probe (TASK 34-11-01-200-802).

SUBTASK 34-11-01-860-010

- (9) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

————— END OF TASK —————

TASK 34-11-01-200-802

3. Pitot Probe Special Detailed Inspection

(Figure 601)

A. General

- (1) A micrometer, gages or wires can be used to measure damage to the tip and the leading edge of the pitot probe. To measure most accurately, a micrometer is recommended. To use a micrometer, the pitot probe must be removed from the airplane.

B. References

<u>Reference</u>	<u>Title</u>
34-11-01-000-801	Pitot Probe - Removal (P/B 401)
34-11-01-400-801	Pitot Probe - Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

<u>Reference</u>	<u>Description</u>
COM-2039	Micrometer, Optical (Accuracy +/- .001 Inch) Part #: MODEL 966A1 Supplier: 0ZYB5 Opt Part #: 8400K Supplier: 65956

D. Location Zones

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Pitot Probe Special Detailed Inspection

SUBTASK 34-11-01-860-011

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

EFFECTIVITY
SIA ALL

34-11-01

D633AM101-SIA

Page 602
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-01-210-003

- (2) Visually examine the pitot probe for damage.

SUBTASK 34-11-01-210-004

- (3) Visually examine the pitot probe for unwanted material in the drain holes, pitot opening, and contour of the probe.

SUBTASK 34-11-01-020-014

- (4) If a micrometer, COM-2039, is used for the inspection of the pitot probe, do this task: Pitot Probe - Removal, TASK 34-11-01-000-801.

NOTE: When the pitot probe is on the airplane, the micrometer cannot be held sufficiently stable to measure accurately.

NOTE: If gages or wires are used for the inspection, it is not necessary to remove the pitot probe. Gages or wires, 0.015 in. (0.381 mm) to 0.470 in. (11.938 mm), can be used to measure nicks, dents, or scratches in or around the opening of a pitot probe.

SUBTASK 34-11-01-220-007

- (5) Make sure that the edge of the pitot opening is sharp.

NOTE: New probes are sharpened to 0.008 in. (0.203 mm) maximum flat.

- (a) Make sure that the opening sharpness is no more than 0.025 in. (0.635 mm).
- (b) Replace the pitot probe if the damage is more than the limit, do these tasks:
- Pitot Probe - Removal, TASK 34-11-01-000-801
 - Pitot Probe - Installation, TASK 34-11-01-400-801.

SUBTASK 34-11-01-220-008

 WARNING	IF PITOT PROBE DAMAGE OR WORN AREAS ARE MORE THAN THE LIMITS SHOWN IN FIGURE 601, YOU MUST REPLACE THE PROBE. IF YOU DO NOT REPLACE THE PROBE, ERRORS IN AIR DATA CAN HAVE AN UNWANTED EFFECT ON SAFE FLIGHT.

- (6) Make sure that the inner surface of the probe tip is smooth and rounded.
- (a) Make sure that the pitot probe has no dents more than 0.060 in. (1.524 mm) in depth.
- (b) Make sure that the surface damage does not affect more than 1/5 (20%) of the lip area.
- (c) Replace the pitot probe if the damage is more than the limits, do these tasks:
- Pitot Probe - Removal, TASK 34-11-01-000-801
 - Pitot Probe - Installation, TASK 34-11-01-400-801.

SUBTASK 34-11-01-220-009

- (7) Make sure that the outer surface of the probe tip is smooth and rounded.
- (a) Make sure that the pitot probe tip is not flared out more than 0.470 in. (11.938 mm).
- (b) Replace the pitot probe if the damage is more than the limit, do these tasks:
- Pitot Probe - Removal, TASK 34-11-01-000-801
 - Pitot Probe - Installation, TASK 34-11-01-400-801.

SUBTASK 34-11-01-220-010

- (8) Make sure that the leading edge of the pitot probe does not have nicks.
- (a) Make sure that the pitot probe does not have two or more nicks between 0.050 in. (1.270 mm) in depth.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 603
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Make sure that the pitot probe does not have a nick more than 0.060 in. (1.524 mm) in depth.
- (c) Replace the pitot probe if the damage is more than the limits, do these tasks:
 - Pitot Probe - Removal, TASK 34-11-01-000-801
 - Pitot Probe - Installation, TASK 34-11-01-400-801.

SUBTASK 34-11-01-420-015

- (9) If the pitot probe was removed for the inspection, do this task: Pitot Probe - Installation, TASK 34-11-01-400-801.

SUBTASK 34-11-01-860-012

- (10) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

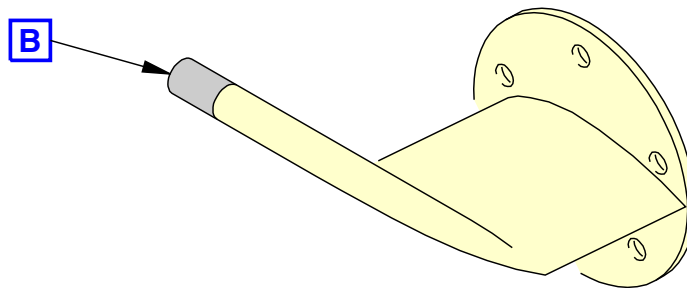
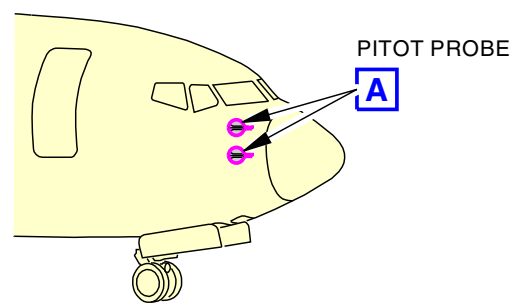
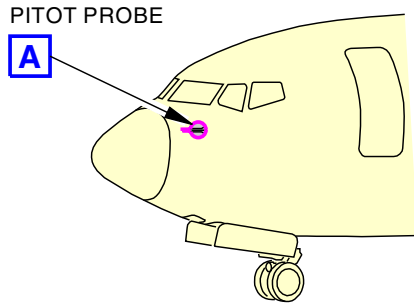
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 604
May 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



PITOT PROBE
(EXAMPLE)



2414805 S00061536041_V2

Pitot Probe Inspection
Figure 601/34-11-01-990-805 (Sheet 1 of 2)

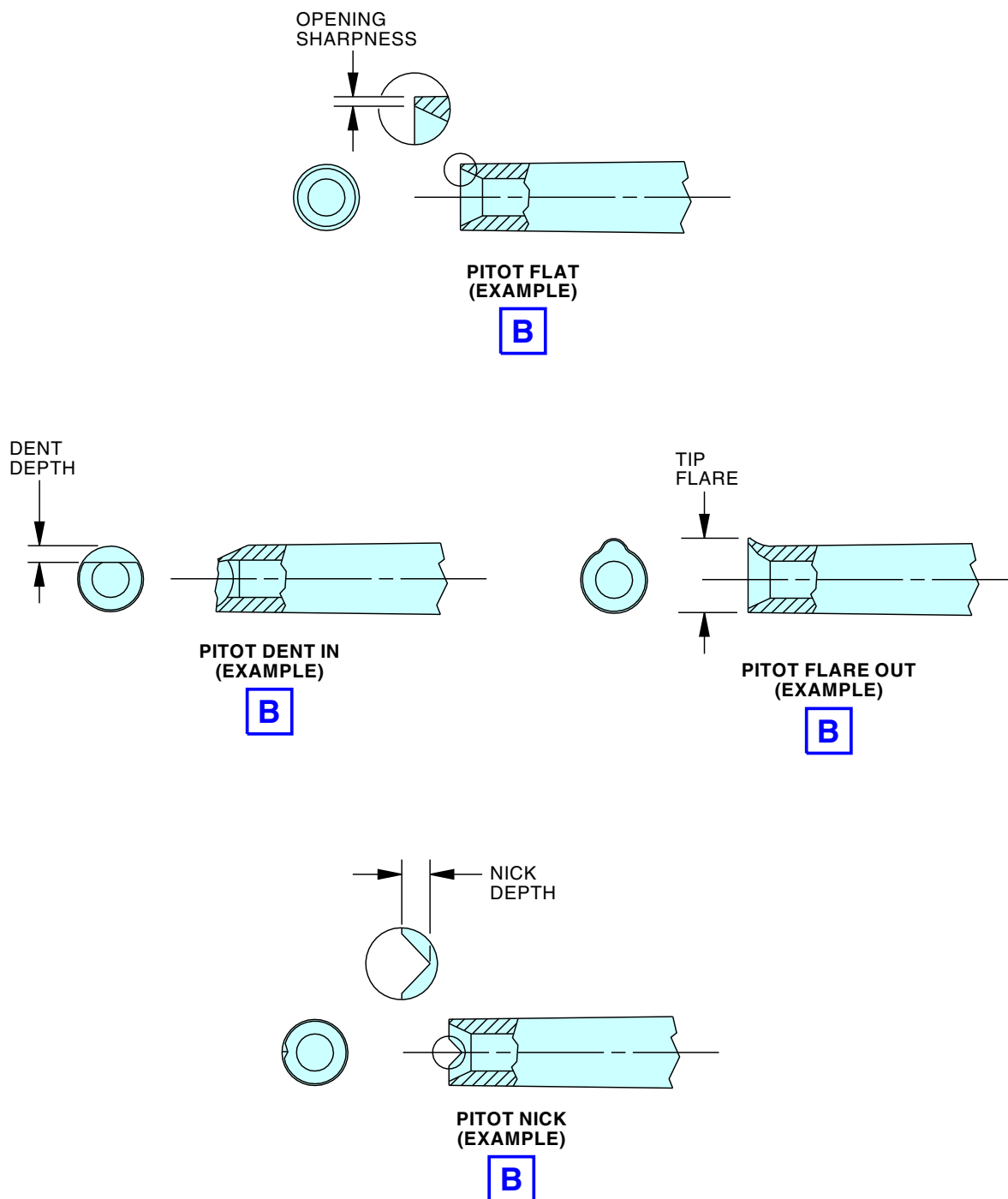
EFFECTIVITY	
SIA ALL	

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 605
Sep 15/2021



2414806 S00061536042_V3

Pitot Probe Inspection
Figure 601/34-11-01-990-805 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 606
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

PITOT PROBE - CLEANING/PAINTING

1. General

- A. This procedure shows how to clean the inner and outer surfaces of the pitot probe.

TASK 34-11-01-100-801

2. Pitot Probe Cleaning

A. General



DO NOT PAINT THE PITOT PROBE. PAINT ON THE PITOT PROBE CAN CAUSE THE PITOT SYSTEM TO MALFUNCTION.

- (1) The pitot probe must not be painted.
- (2) To make sure that the probes do not have any damage, do this task: Pitot Probe Special Detailed Inspection, TASK 34-11-01-200-802.

B. References

Reference	Title
34-11-01-000-801	Pitot Probe - Removal (P/B 401)
34-11-01-200-802	Pitot Probe Special Detailed Inspection (P/B 601)
34-11-01-400-801	Pitot Probe - Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-3940	Air Source - Regulated, Dry Filtered, 0-150 psig
STD-11587	Syringe (Commercial available)
STD-20143	Bit - Drill, 0.028 Inch Diameter

D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CLA)

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Clean the Inner Surface of the Pitot Probe

SUBTASK 34-11-01-020-018

- (1) Do this task: Pitot Probe - Removal, TASK 34-11-01-000-801.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 701
Sep 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-01-160-001



BEFORE YOU USE COMPRESSED AIR, PUT ON GOGGLES FOR EYE PROTECTION. DO NOT POINT THE NOZZLE AT OTHER PERSONNEL. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.



DO NOT USE MORE THAN 60 PSI (414 KPA) OF DRY, COMPRESSED AIR IN THE PITOT PROBE. AIR PRESSURE MORE THAN 60 PSI (414 KPA) CAN CAUSE DAMAGE TO THE PITOT PROBE.

- (2) Use up to 60 psi (414 kPa) from a regulated air source, STD-3940 to force air through the line and out the ports on the pitot probe.

SUBTASK 34-11-01-170-001

- (3) If unwanted material remains, do the steps that follow:
- (a) Soak or flush the unit with water until it is clean.
 - (b) If debris still adheres to the pitot probe interior, use a syringe, STD-11587 to flush the pitot probe with a water and alcohol, B00130 solution.
 - (c) Drain the probe of the cleaning solution.



BEFORE YOU USE COMPRESSED AIR, PUT ON GOGGLES FOR EYE PROTECTION. DO NOT POINT THE NOZZLE AT OTHER PERSONNEL. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.



DO NOT USE MORE THAN 60 PSI (414 KPA) OF DRY, COMPRESSED AIR IN THE PITOT PROBE. AIR PRESSURE MORE THAN 60 PSI (414 KPA) CAN CAUSE DAMAGE TO THE PITOT PROBE.

- (d) Use up to 60 psi (414 kPa) from a regulated air source, STD-3940 to force air through the line and out the ports on the pitot probe.

SUBTASK 34-11-01-140-002



MAKE SURE THE DRILL BIT DOES NOT MAKE THE DRAIN HOLE LARGER WHEN YOU CLEAN IT. DAMAGE TO THE PITOT PROBE CAN OCCUR.

- (4) Do the following steps to clear blockage in the drain holes:
- (a) Put a small 0.028 inch diameter drill bit, STD-20143 at the opening of the drain hole.
 - (b) With minimal pressure, slowly rotate the 0.028 inch diameter drill bit, STD-20143 with thumb and index finger and use the 0.028 inch diameter drill bit, STD-20143 point and spiral to pull debris from the hole.
 - (c) Make sure to avoid cutting into and raising burrs on the outer edge of the drain hole.



BEFORE YOU USE COMPRESSED AIR, PUT ON GOGGLES FOR EYE PROTECTION. DO NOT POINT THE NOZZLE AT OTHER PERSONNEL. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.

EFFECTIVITY
SIA ALL

34-11-01

D633AM101-SIA

Page 702
Jan 15/2022

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



DO NOT USE MORE THAN 60 PSI (414 KPA) OF DRY, COMPRESSED AIR IN THE PITOT PROBE. AIR PRESSURE MORE THAN 60 PSI (414 KPA) CAN CAUSE DAMAGE TO THE PITOT PROBE.

- (d) Use up to 60 psi (414 kPa) from a regulated air source, STD-3940 to force air through the line and out the ports on the pitot probe.

SUBTASK 34-11-01-410-002

- (5) Do this task: Pitot Probe - Installation, TASK 34-11-01-400-801.

G. Clean the Outer Surface of the Pitot Probe

SUBTASK 34-11-01-140-003



DO NOT PERMIT SOLVENTS, OIL, OR GREASE TO GET ON THE PITOT PROBE. SOLVENTS, OIL, OR GREASE CAN CAUSE DAMAGE TO THE PITOT PROBE.

- (1) Use clean water to remove unwanted materials from the outer surface of the pitot probe.

SUBTASK 34-11-01-140-004

- (2) Dry the pitot probe with a cotton wiper, G00034.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-01

Page 703
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
STATIC PORT - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the primary static port
 - (2) An installation of the primary static port
 - (3) A removal of the alternate static port
 - (4) An installation of the alternate static port.

TASK 34-11-02-020-801

2. Primary Static Port Removal

(Figure 401)

A. General

- (1) This task is for the removal of the primary static port.

B. References

Reference	Title
20-10-44-000-801	Lockwire, Cotter Pins, and Lockrings - Removal (P/B 401)
25-21-46-000-801	Sidewall Panel - Removal (P/B 401)
25-22-00-000-801	Passenger Seat Removal (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)

C. Location Zones

Zone	Area
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

D. Prepare for the Removal

SIA 001-014

SUBTASK 34-11-02-010-001

- (1) Remove the applicable passenger seats (TASK 25-22-00-000-801).

SIA ALL

SUBTASK 34-11-02-010-002

- (2) Remove the applicable sidewall panel (TASK 25-21-46-000-801).

SUBTASK 34-11-02-010-003

- (3) Remove the applicable insulation blanket (TASK 25-80-00-000-801).

E. Primary Static Port Removal

SUBTASK 34-11-02-020-001

- (1) Loosen the union [9] that connects the hose [2] to the primary static port [6].

SUBTASK 34-11-02-020-002



WARNING

DO NOT BEND OR TWIST THE HOSE WHEN YOU DISCONNECT IT. IF YOU BEND OR TWIST THE HOSE, INCORRECT DATA TO THE ADIRU CAN OCCUR. THIS CAN CAUSE THE AIRPLANE TO GO OFF CONTROL.

- (2) Disconnect the hose [2].

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 401
Jan 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-11-02-020-003

- (3) Remove the union [9] from the primary static port [6].

SUBTASK 34-11-02-020-004

- (4) Remove the o-ring [8] from the primary static port [6].

SUBTASK 34-11-02-020-005

- (5) Put a cap on the hose [2] to prevent contamination.

SUBTASK 34-11-02-020-006

- (6) Use the sealant removal tool to remove the sealant from around the primary static port [6] and retaining nut [3].

SUBTASK 34-11-02-020-007

- (7) Remove the lockwire [7] from the retaining nut [3] (TASK 20-10-44-000-801).

SUBTASK 34-11-02-020-008



CAUTION

DO NOT CAUSE DAMAGE TO THE OUTER SURFACE OF THE AIRPLANE SKIN. THIS CAN CAUSE THE STATIC SYSTEM TO BE INACCURATE.

- (8) Remove the retaining nut [3], washer [4] and washer [5].

SUBTASK 34-11-02-020-009

- (9) Remove the primary static port [6] from the mounting hole.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

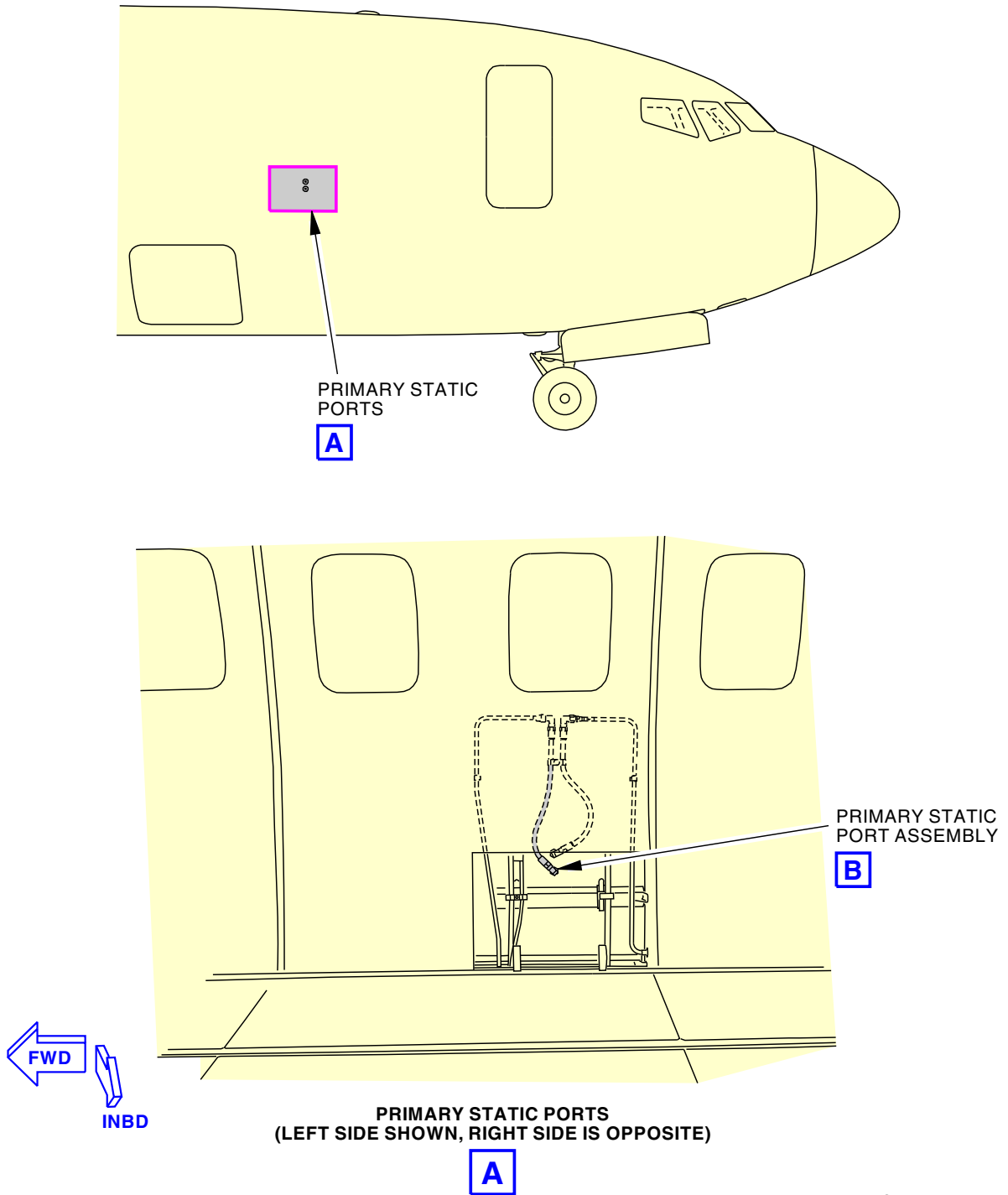
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 402
Sep 15/2021

BOEING
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414807 S00061536048_V2

Primary Static Port Installation
Figure 401/34-11-02-990-801 (Sheet 1 of 2)

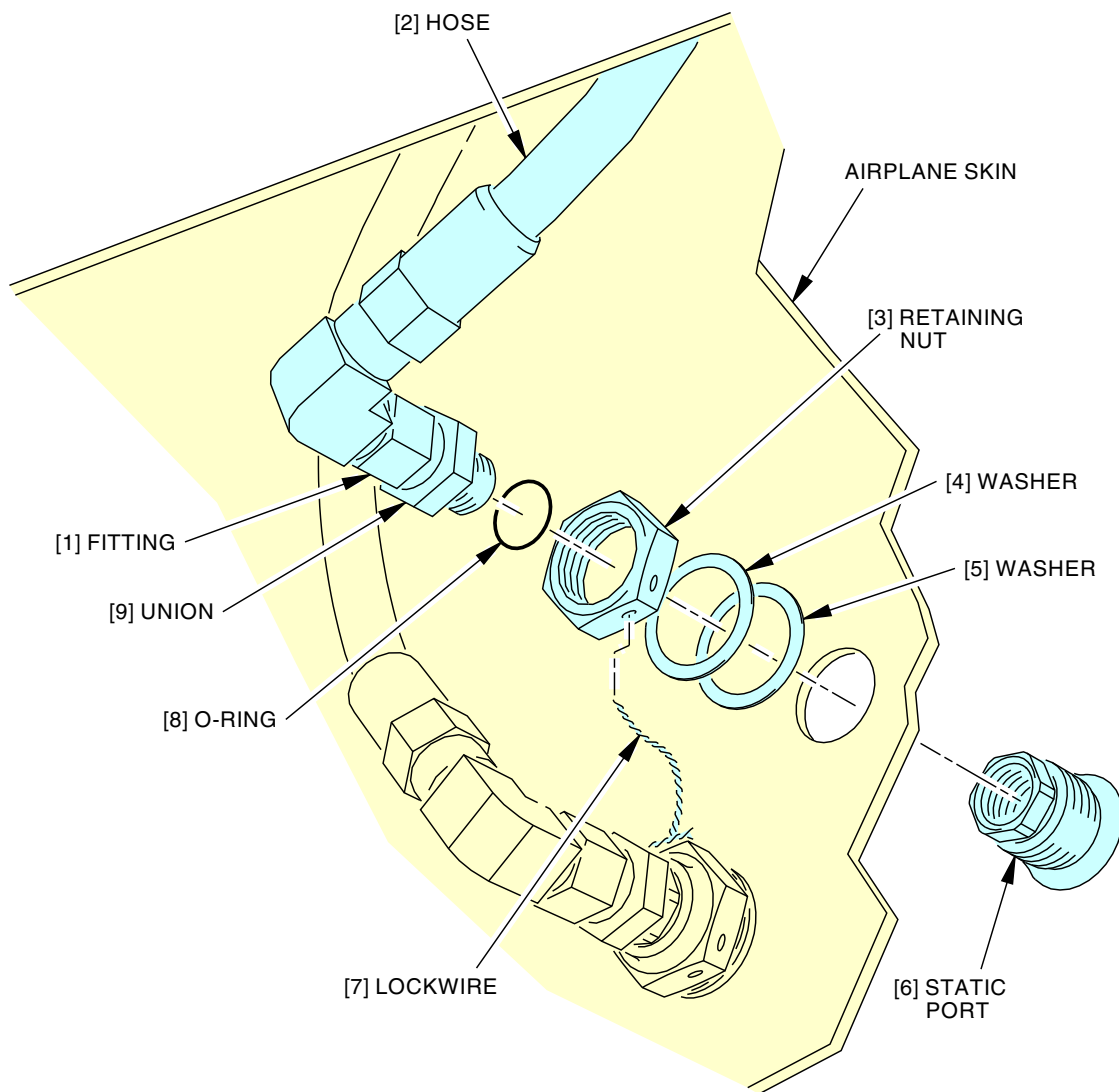
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 403
Sep 15/2021



PRIMARY STATIC PORT ASSEMBLY
(EXAMPLE)

B

2414808 S00061536049_V1

Primary Static Port Installation
Figure 401/34-11-02-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-02-400-801

3. **Primary Static Port Installation**

(Figure 401)

A. General

(1) This task is for the installation of primary static port.

B. References

Reference	Title
20-10-44-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
20-50-11-910-801	Standard Torque Values (P/B 201)
25-21-46-400-801	Sidewall Panel - Installation (P/B 401)
25-22-00-400-801	Passenger Seat Installation (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
34-11-00-790-803	Left Static System Low-range Leak Test (P/B 501)
34-11-00-790-804	Right Static System Low-range Leak Test (P/B 501)
34-11-02-200-802	Static Port - Special Detailed Inspection (P/B 601)
51-21-95-300-801	Alodine Treatment Application (P/B 701)
51-22-00-390-808	Fastener Seal Application (P/B 201)
SRM 51-10-01	AERODYNAMIC SMOOTHNESS

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-20848	Rivet Shaver
	Part #: ZT405AIR Supplier: 67179
	Opt Part #: ZT306 Supplier: 67179

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C50294	Alodine - 1000L, 1001 or 1500. Clear Film.	BAC5719, Type II, Class B. MIL-DTL-5541, Class3. F-17.11.

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
6	Static port	34-11-02-02-010	SIA ALL
8	O-ring	34-11-00-07A-055	SIA ALL
		34-11-00-07A-135	SIA ALL

F. Location Zones

Zone	Area
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

Page 405
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Primary Static Port Installation

SUBTASK 34-11-02-390-001

- (1) Apply sealant, A00247, on the inner surface of the static port installation hole.

SUBTASK 34-11-02-420-001

- (2) Put the primary static port in the mounting hole.

SUBTASK 34-11-02-420-002

- (3) Install the washer [5], washer [4] and retaining nut [3] on the primary static port [6].

SUBTASK 34-11-02-420-003

- (4) Tighten the retaining nut [3] to 100 in-lb (11.3 N·m) - 105 in-lb (11.9 N·m).

SUBTASK 34-11-02-420-004

- (5) Install lockwire on the retaining nut [3] (TASK 20-10-44-400-801).

SUBTASK 34-11-02-420-005

- (6) Make sure that the primary static port flushness is no more than 0.003 in. (0.076 mm) above the airplane skin.

- (a) Use the rivet shaver, COM-20848 to make the static port flush to the airplane skin (SRM SUBJECT 51-10-01).

SUBTASK 34-11-02-220-001

- (7) Make sure that there are no scratches, burrs, or deformations on the static port finish and around the sensing holes in the primary static port.

SUBTASK 34-11-02-210-001

- (8) Make sure that there is no unwanted material in the holes of the primary static port.

SUBTASK 34-11-02-620-001

- (9) Apply Alodine, C50294 treatment to the surface of the primary static port (TASK 51-21-95-300-801).

SUBTASK 34-11-02-420-006

- (10) Install the new o-ring [8] on the union [9].

SUBTASK 34-11-02-420-007

- (11) Install the union [9] on the primary static port [6].

- (a) Make sure that you apply counter pressure to the primary static port while you install the union [9].

NOTE: The counter pressure to the static port prevents its rotation. If the static port rotates during installation, its operation will be incorrect.

SUBTASK 34-11-02-420-008

- (12) Tighten the union [9] (TASK 20-50-11-910-801).

SUBTASK 34-11-02-390-002

- (13) For the retaining nut [3] and the primary static port, do this task: Fastener Seal Application, TASK 51-22-00-390-808.

SUBTASK 34-11-02-420-009

- (14) Remove the cap from the hose [2].

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-02-420-010



CAUTION

DO NOT BEND OR TWIST THE STATIC HOSE WHEN YOU CONNECT IT. A BENT OR TWISTED STATIC HOSE CAN CAUSE THE STATIC SYSTEM TO MALFUNCTION.

- (15) Connect the hose [2] to the primary static port.
- (a) Make sure that you apply counter pressure to the union [9] while you install the fitting [1].
- NOTE: The counter pressure to the union prevents static port rotation. If the static port rotates during installation, its operation will be incorrect.

SUBTASK 34-11-02-420-011

- (16) Tighten the fitting [1] (TASK 20-50-11-910-801).

SUBTASK 34-11-02-700-001

- (17) Do a detailed inspection of the primary static port (TASK 34-11-02-200-802).

SUBTASK 34-11-02-790-001

- (18) For the primary static system, do the applicable leak test below:
- (a) Do this task: Left Static System Low-range Leak Test, TASK 34-11-00-790-803.
- (b) Do this task: Right Static System Low-range Leak Test, TASK 34-11-00-790-804.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-02-410-001

- (1) Do this task: Insulation Blanket Installation, TASK 25-80-00-400-801.

SUBTASK 34-11-02-410-002

- (2) Do this task: Sidewall Panel - Installation, TASK 25-21-46-400-801.

SIA 001-014

SUBTASK 34-11-02-410-003

- (3) Do this task: Passenger Seat Installation, TASK 25-22-00-400-801.

SIA ALL

————— END OF TASK —————

TASK 34-11-02-000-801

4. Alternate Static Port Removal

(Figure 402)

A. General

- (1) This task is for the removal of the alternate static port.

B. References

Reference	Title
20-10-44-000-801	Lockwire, Cotter Pins, and Lockrings - Removal (P/B 401)
50-10-02-000-801	Cargo Compartment Sidewall Liners Removal (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

Page 407
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975
STD-6777	Assembly - Cap, Pressure Seal, Flareless Tube (Standard MS9513-04 or BACC14AD-04)

D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right

E. Prepare for the Removal

SUBTASK 34-11-02-010-004

- (1) Remove the applicable cargo liner (TASK 50-10-02-000-801).

F. Alternate Static Port Removal

SUBTASK 34-11-02-020-010

- (1) Loosen the fitting [1] that connects the hose [2] to the alternate static port [11].

SUBTASK 34-11-02-020-011

 CAUTION	DO NOT BEND OR TWIST THE STATIC HOSE WHEN YOU DISCONNECT IT. A BENT OR TWISTED STATIC HOSE CAN CAUSE THE STATIC SYSTEM TO MALFUNCTION.

- (2) Disconnect the hose [2].

SUBTASK 34-11-02-020-012

- (3) Put a pressure seal cap assembly, STD-6777, on the hose [2] to prevent contamination.

SUBTASK 34-11-02-020-013

- (4) Remove the fitting [1] from the alternate static port [11].

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

Page 408
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-11-02-020-014

- (5) Remove the o-ring [8] from the alternate static port [11].

SUBTASK 34-11-02-140-001

- (6) Use the sealant removal tool, COM-2481, to remove the sealant from around the alternate static port [11] and the retaining nut [3].

SUBTASK 34-11-02-020-015

- (7) Remove the lockwire [7] from the retaining nut [3] (TASK 20-10-44-000-801).

SUBTASK 34-11-02-020-016



DO NOT CAUSE DAMAGE TO THE OUTER SURFACE OF THE AIRPLANE SKIN. THIS CAN CAUSE THE STATIC SYSTEM TO BE INACCURATE.

- (8) Remove the retaining nut [3] and washer [12].

SUBTASK 34-11-02-020-017

- (9) Remove the alternate static port [11] from its mounting hole.

SUBTASK 34-11-02-020-018

- (10) Remove the laminated shim [10] from the assembly.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

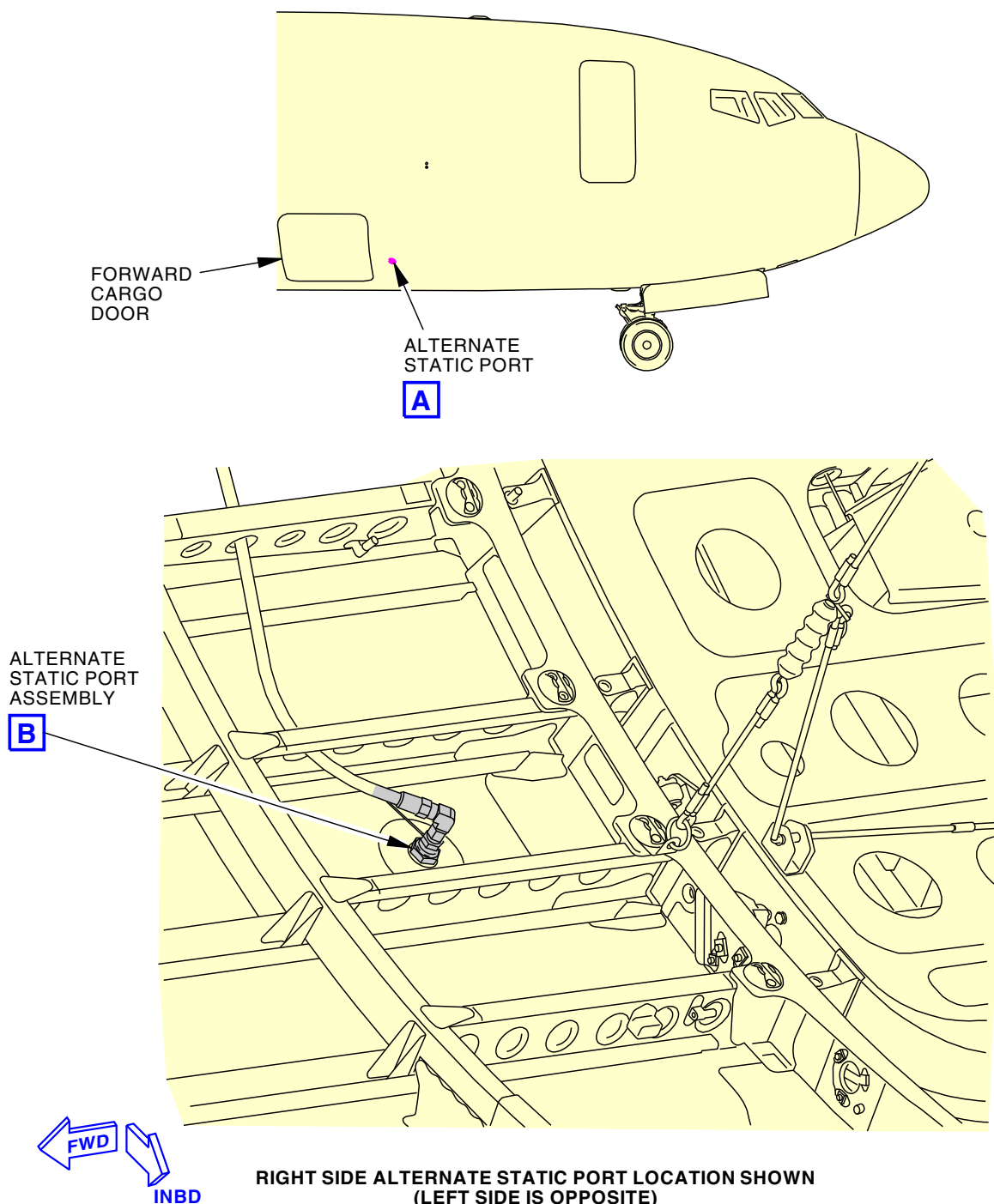
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 409
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414809 S00061536052_V2

Alternate Static Port Installation
Figure 402/34-11-02-990-802 (Sheet 1 of 2)

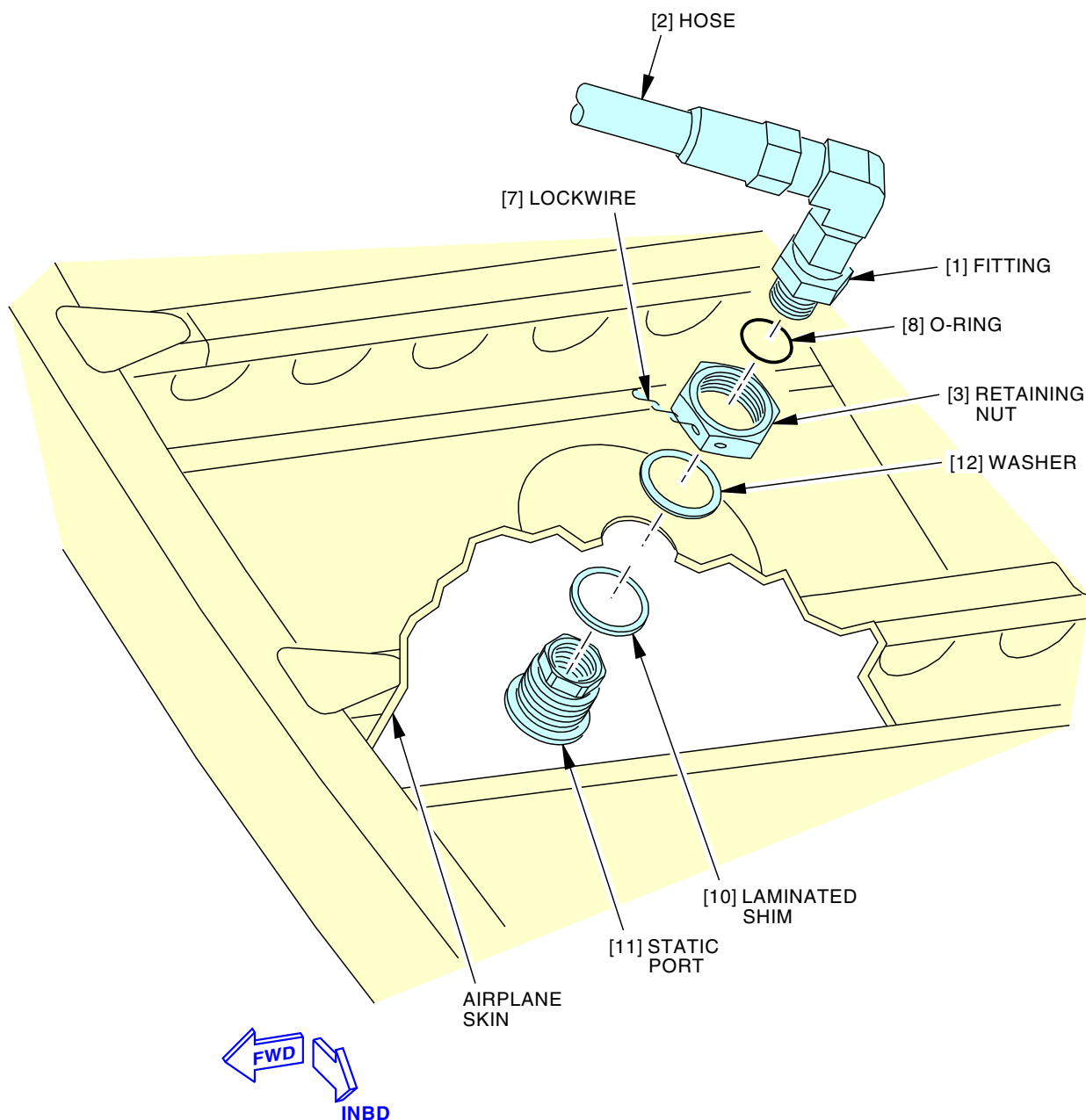
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 410
Sep 15/2021



ALTERNATE STATIC PORT ASSEMBLY

B

2414810 S00061536053_V2

Alternate Static Port Installation
Figure 402/34-11-02-990-802 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 411
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-11-02-400-802

5. Alternate Static Port Installation

(Figure 402)

A. General

(1) This task is for the installation of the alternate static port.

B. References

Reference	Title
20-10-44-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
20-50-11-910-801	Standard Torque Values (P/B 201)
34-11-00-790-805	Alternate Static System Low-range Leak Test (P/B 501)
34-11-02-200-802	Static Port - Special Detailed Inspection (P/B 601)
50-10-02-400-801	Cargo Compartment Sidewall Liners Installation (P/B 401)
51-21-95-300-801	Alodine Treatment Application (P/B 701)
51-22-00-390-808	Fastener Seal Application (P/B 201)
SRM 51-10-01	AERODYNAMIC SMOOTHNESS

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C50294	Alodine - 1000L, 1001 or 1500. Clear Film.	BAC5719, Type II, Class B. MIL-DTL-5541, Class3. F-17.11.

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	O-ring	34-11-00-07A-055 34-11-00-07A-135	SIA ALL SIA ALL
11	Static port	34-11-02-02-065	SIA ALL

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right

F. Alternate Static Port Installation

SUBTASK 34-11-02-390-003

(1) Apply sealant, A00247, on the inner surface of the static port installation hole.

SUBTASK 34-11-02-420-012

(2) Install the laminated shim [10] on the alternate static port [11].

SUBTASK 34-11-02-420-013

(3) Put the alternate static port [11] in the mounting hole.

SUBTASK 34-11-02-420-014

(4) Install the washer [12] and retaining nut [3] on the alternate static port [11].

SUBTASK 34-11-02-420-015

(5) Tighten the retaining nut [3] to 100 in-lb (11.3 N·m) - 105 in-lb (11.9 N·m).

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 412
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-02-420-016

- (6) Install lockwire on the retaining nut [3] (TASK 20-10-44-400-801).

SUBTASK 34-11-02-420-017



DO NOT MICRO-SHAVE THE COUNTER-BORE IN THE ALTERNATE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE PORT WHICH CAN CAUSE AN INCORRECT INDICATION FOR ALTITUDE.

- (7) Make the alternate static port flush with the airplane skin to 0.003 in. (0.076 mm).
- (a) Add a laminated shim [10] if necessary, to make the static port flush (SRM SUBJECT 51-10-01).

SUBTASK 34-11-02-220-002

- (8) Make sure that there are no scratches, burrs, or deformations on the static port finish and around the sensing holes in the alternate static port [11].

SUBTASK 34-11-02-210-002

- (9) Make sure that there is no unwanted material in the holes of the alternate static port [11].

SUBTASK 34-11-02-140-002

- (10) Apply Alodine, C50294, treatment to the surface of the alternate static port [11] (TASK 51-21-95-300-801).

SUBTASK 34-11-02-420-018

- (11) Install the new o-ring [8] on the fitting [1].

SUBTASK 34-11-02-420-019

- (12) Install the fitting [1] on the alternate static port [11].
- (a) Make sure that you apply counter pressure to the alternate static port [11] while you install the fitting [1].

NOTE: The counter pressure to the static port prevents its rotation. If the static port rotates during installation, its operation will be incorrect.

SUBTASK 34-11-02-390-004

- (13) For the retaining nut [3] and the alternate static port [11], do this task: Fastener Seal Application, TASK 51-22-00-390-808.

SUBTASK 34-11-02-420-020

- (14) Remove the cap from the hose [2].

SUBTASK 34-11-02-420-021



DO NOT BEND OR TWIST THE STATIC HOSE WHEN YOU CONNECT IT. A BENT OR TWISTED STATIC HOSE CAN CAUSE THE STATIC SYSTEM TO MALFUNCTION.

- (15) Connect the hose [2] to the alternate static port [11].
- (a) Make sure that you apply counter pressure to the alternate static port [11] while you install the fitting [1].

NOTE: The counter pressure to the static port prevents its rotation. If the static port rotates during installation, its operation will be incorrect.

SUBTASK 34-11-02-420-022

- (16) Tighten the fitting [1] (TASK 20-50-11-910-801).

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

Page 413
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-11-02-700-002

- (17) Do a detailed inspection of the alternate static port (TASK 34-11-02-200-802).

SUBTASK 34-11-02-790-002

- (18) Do this task: Alternate Static System Low-range Leak Test, TASK 34-11-00-790-805.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-02-410-004

- (1) Install the applicable sidewall liner (TASK 50-10-02-400-801).

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 414
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

STATIC PORT - INSPECTION/CHECK

1. General

A. This procedure has these tasks:

- (1) A detailed inspection of the static ports and the skin surface near the port
- (2) A special detailed inspection of the static ports and the skin surface near the port.

TASK 34-11-02-200-801

2. Static Port - Detailed Inspection

(Figure 601 or Figure 602)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
34-11-02-000-801	Alternate Static Port Removal (P/B 401)
34-11-02-020-801	Primary Static Port Removal (P/B 401)
34-11-02-400-801	Primary Static Port Installation (P/B 401)
34-11-02-400-802	Alternate Static Port Installation (P/B 401)
SRM 51-10-01	AERODYNAMIC SMOOTHNESS

B. Location Zones

Zone	Area
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

C. Inspection Procedure

SUBTASK 34-11-02-220-003

- (1) Visually examine the static port for damage.

SUBTASK 34-11-02-210-003

- (2) Visually examine the holes in the port for contamination or the presence of moisture.
 - (a) On the ground in heavy rain, a gradual atmospheric temperature and/or pressure change can cause water streaming over the flush static ports to be 'pulled' into the static port by capillary action. The water may only be at the static port inlet holes and not pulled all the way into the plumbing and show up in the drain tubes.
 - (b) If it is suspected that the moisture is trapped in a static port by capillary action, try swiping one's thumb over the port. This may break the surface tension and release any water that is trapped in the static port opening. Slight movement of the aircraft may also clear any trapped moisture right at the static port opening.

SUBTASK 34-11-02-900-001

- (3) If there is a problem with a primary static port, replace the port.
 - (a) These are the tasks:
Primary Static Port Removal, TASK 34-11-02-020-801,
Primary Static Port Installation, TASK 34-11-02-400-801.

SUBTASK 34-11-02-900-002

- (4) If there is a problem with an alternate static port, replace the port.
 - (a) These are the tasks:
Alternate Static Port Removal, TASK 34-11-02-000-801,

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-02

Page 601
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

Alternate Static Port Installation, TASK 34-11-02-400-802.

SUBTASK 34-11-02-220-004

- (5) Visually examine the surface of the airplane skin in a three inch radius around the port:
- (a) Make sure that the surface of the skin is not rough.
 - (b) If the skin is rough, refer to the Structural Repair Manual (SRM SUBJECT 51-10-01).

SUBTASK 34-11-02-200-001

- (6) If the detailed inspection of the static port is not satisfactory, do the Static Port - Special Detailed Inspection (TASK 34-11-02-200-802).

————— END OF TASK —————

TASK 34-11-02-200-802

3. Static Port - Special Detailed Inspection

(Figure 601 or Figure 602)

A. References

Reference	Title
10-11-07-580-806	Service and Protection on 14 Day (2 Week) Cycle (P/B 201)
34-11-02-020-801	Primary Static Port Removal (P/B 401)
34-11-02-400-801	Primary Static Port Installation (P/B 401)
51-00-58	STANDARD TREATMENT METHODS
SRM 51-10-01	AERODYNAMIC SMOOTHNESS
SRM 51-10-01-0G-0	Aerodynamic Smoothness Requirements
SRM 51-10-02-0G-0	Inspection and Removal of Damage
SRM 51-10-03	SKIN WAVINESS INSPECTION FOR RVSM OPERATION

B. Tools/Equipment

Reference	Description
STD-4055	6 Inch Minimum Length Stainless Steel Pocket Ruler, 1/32" And 1/64" Increments, or Mm And Cm Increments
STD-12704	Gauge - Feeler, 0.060 inch

C. Consumable Materials

Reference	Description	Specification
B50073	Alcohol - Isopropyl	ASTM D 770
C50294	Alodine - 1000L, 1001 or 1500. Clear Film.	BAC5719, Type II, Class B. MIL-DTL-5541, Class3. F-17.11.
G50933	Cloth - Cleaning, Low-Lint Cloth (General Use)	A-A-59323 Type II (Supersedes MIL-C-85043)

D. Location Zones

Zone	Area
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

E. Primary Static Ports Inspection

SUBTASK 34-11-02-220-005

- (1) Visually examine the primary static port for damage.

EFFECTIVITY
SIA ALL

34-11-02

D633AM101-SIA

Page 602
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) For scratches on the port, make sure that the depth of each scratch is less than 0.010 in. (0.254 mm).
- (b) If scratches intersect the port sensing holes, replace the primary static port, do these tasks:
 - Primary Static Port Removal, TASK 34-11-02-020-801
 - Primary Static Port Installation, TASK 34-11-02-400-801.

SUBTASK 34-11-02-210-004

- (2) Visually examine the holes in the port for contamination.

SUBTASK 34-11-02-900-003

- (3) If there is a problem with a primary static port, replace the port, do these tasks:
 - Primary Static Port Removal, TASK 34-11-02-020-801
 - Primary Static Port Installation, TASK 34-11-02-400-801.

SUBTASK 34-11-02-900-004

- (4) Measure the step height of the primary static ports.

NOTE: The step height is the distance between the surface of the skin and primary static ports.

- (a) Make sure that the primary static port step height is 0 in. (0 mm) - 0.003 in. (0.076 mm) above the skin.
- (b) If the step height is too low, replace the port, do these tasks:
 - Primary Static Port Removal, TASK 34-11-02-020-801
 - Primary Static Port Installation, TASK 34-11-02-400-801.
- (c) If the step height is too high, decrease the port step height (SRM SUBJECT 51-10-03).

SUBTASK 34-11-02-210-005

- (5) Visually examine the airplane skin surface in a 3 in. (76 mm) radius around the static port.
 - (a) For scratches on the skin, make sure that the depth of each scratch is less than 0.010 in. (0.254 mm).
 - (b) Make sure that the surface of the skin is not rough.
 - 1) If the skin is rough, refer to the Structural Repair Manual (SRM) (SRM SUBJECT 51-10-01).
 - (c) For skin surface discolorations, do these steps:
 - 1) Clean the static port external surface and surrounding bare aluminum skin with low-lint cleaning cloth, G50933, moist with alcohol, B50073 (TASK 10-11-07-580-806).
 - 2) If it is necessary, polish around the static port (SUBJECT 51-00-58).
 - a) Do not polish the static port.
 - b) Remove or apply a protective cover on the ports before polishing.
 - c) Keep aerodynamic smoothness (SRM PROCEDURE 51-10-01-0G-0).
 - (d) For scratches, blendouts to the bare aluminum skin are allowed if the depth is less than 0.003 in. (0.076 mm) (SRM PROCEDURE 51-10-02-0G-0).
 - 1) Blendouts to the static port are not allowed.
 - 2) Keep aerodynamic smoothness (SRM PROCEDURE 51-10-01-0G-0).
 - 3) For protection against corrosion, apply Alodine, C50294.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-02

Page 603
May 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-11-02-900-005

- (6) Find the surface waviness of the airplane skin in the area of each primary static port:
- (a) Find the primary static ports on each side of the airplane.
 - (b) Measure the skin waviness in an approximate 3.0 in. (76.20 mm) area around each primary static port (Figure 601 or Figure 602).
 - 1) Align the center of a pocket ruler, STD-4055, with the center of the static port.
 - 2) Measure horizontally.
 - (c) Examine the area for a dip or bulge condition (Table 601).

Table 601/34-11-02-993-801 Skin Condition Description

Skin Condition	Description
Dip	The skin touches the two ends of the pocket ruler, STD-4055, but not the middle part of the pocket ruler, STD-4055.
Bulge	The skin touches the middle part of the pocket ruler, STD-4055, but not at the ends of the pocket ruler, STD-4055. There are two types of bulges:
Bulge with Movement	The pocket ruler, STD-4055, can easily move up or down on the bulge.
Bulge with Plateau	The pocket ruler, STD-4055, is on a level area of the bulge and is resistant to up and down movement.

- (d) Measure and record the waviness, do these steps:

NOTE: Use the table in Figure 601 (Sheet 2) as an example. Record the data in the table in Figure 601 (Sheet 3). A dip value is always a negative number. A bulge value is always a positive number.

- 1) For a dip, do these steps:
 - a) Use a feeler gauge, STD-12704, to measure the maximum clearance between the pocket ruler, STD-4055, and skin.
 - b) Record this data as a negative number.
 - 2) For a bulge with movement, do these steps:
 - a) Move the pocket ruler, STD-4055, up or down to make the end touch the skin.
 - b) When one end of the pocket ruler, STD-4055, touches the skin, use a feeler gauge, STD-12704, to measure the clearance between the high end of the pocket ruler, STD-4055, and skin.
 - c) Move the other end of the pocket ruler, STD-4055, against the skin.
 - d) Measure the clearance.
 - e) Use the larger of the two values and record the data as a positive number.
 - 3) For a bulge with plateau, do these steps:
 - a) Put the pocket ruler, STD-4055, on the level area.
 - b) Use a feeler gauge, STD-12704, to measure the clearance between the two ends of the pocket ruler, STD-4055, and skin.
 - c) Use the larger of the two values and record the data as a positive number.
- (e) Calculate the waviness for each of the four static ports.
- 1) Use this formula if the measurements above and below the static ports are dips:
 - a) $\text{Waviness} = (\text{DIP above} + \text{DIP below})/2$.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 604
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 2) Use this formula if the measurements above and below the static ports are bulges with movement:
 - a) $\text{Waviness} = (\text{BULGE above} + \text{BULGE below})/4$.
 - 3) Use this formula if the measurements above and below the static ports are bulges with plateau:
 - a) $\text{Waviness} = (\text{BULGE above} + \text{BULGE below})/2$.
 - 4) Use this formula if one measurement is a dip and other measurement is a bulge with movement:
 - a) $\text{Waviness} = (\text{DIP} + 1/2 \text{ BULGE})/2$.
 - 5) Use this formula if one measurement is a dip and other measurement is a bulge with plateau:
 - a) $\text{Waviness} = (\text{DIP} + \text{BULGE})/2$.
- (f) Make sure that the waviness is not more than 0 in. (0 mm) - 0.02 in. (0.51 mm).

SUBTASK 34-11-02-900-006

- (7) If the skin waviness is not satisfactory, refer to SRM (SRM SUBJECT 51-10-01 and SRM SUBJECT 51-10-03).

SUBTASK 34-11-02-900-007

- (8) Make sure that rivets in a 3 in. (76 mm) radius from the center of a static pressure port are flush with the skin surface to a tolerance of 0.000 +0.003 / -0.000 in. (0.000 +0.076 / -0.000 mm).

SUBTASK 34-11-02-220-008

- (9) If any of the conditions above are not satisfactory, refer to SRM (SRM SUBJECT 51-10-01 and SRM SUBJECT 51-10-03).

F. Alternate Static Ports Inspection

SUBTASK 34-11-02-220-006

- (1) Visually examine the alternate static port for damage.
 - (a) Make sure that the depth of any scratches on the port are less than 0.010 in. (0.254 mm).

SUBTASK 34-11-02-210-006

- (2) Visually examine the airplane skin surface in a 3 in. (76 mm) radius around the static port.
 - (a) For skin surface discolorations, do these steps:
 - 1) Clean the static port external surface and surrounding bare aluminum skin with low-lint cleaning cloth, G50933, moist with alcohol, B50073 (TASK 10-11-07-580-806).
 - 2) If it is necessary, polish around the static port (SUBJECT 51-00-58).
 - a) Do not polish the static port.
 - b) Remove or apply a protective cover on the ports before polishing.
 - c) Keep aerodynamic smoothness (SRM PROCEDURE 51-10-01-0G-0).

SUBTASK 34-11-02-900-008

- (3) Inspect the alternate static ports, do these steps:
 - (a) Put the edge of pocket ruler, STD-4055, horizontally across the center of the static pressure port.
 - (b) Make sure that the space between the skin and pocket ruler, STD-4055, does not exceed 0.010 in. (0.254 mm) within 3 in. (76 mm) forward and aft of the center of the static port.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-02

Page 605
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Make sure that the rivets in a 3 in. (76 mm) radius from the center of a static pressure port are flush with the skin surface to a tolerance of 0 in. (0 mm) - 0.003 in. (0.076 mm).
- (d) Make sure that the alternate static port step height is 0 in. (0 mm) - 0.003 in. (0.076 mm) above the skin.

SUBTASK 34-11-02-220-007

- (4) If any of the conditions above are not satisfactory, refer to SRM (SRM SUBJECT 51-10-01 and SRM SUBJECT 51-10-03).

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

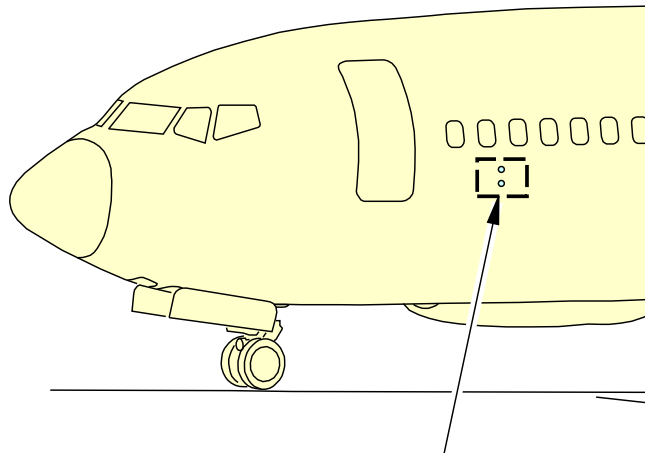
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 606
May 15/2023

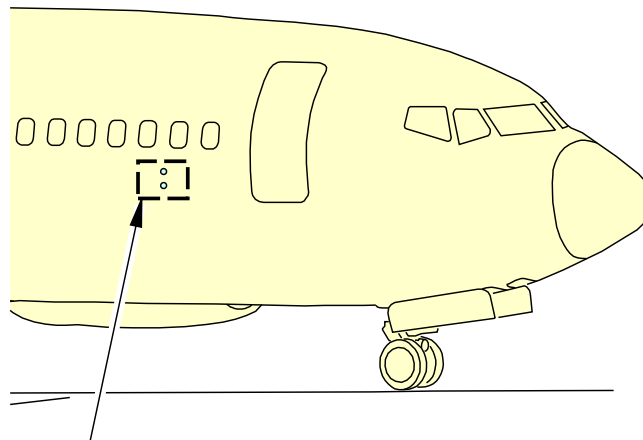


737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



PRIMARY STATIC PORTS

(LEFT SIDE)



PRIMARY STATIC PORTS

(RIGHT SIDE)

2414811 S00061536058_V2

Primary Static Port Inspection
Figure 601/34-11-02-990-803 (Sheet 1 of 3)

EFFECTIVITY
SIA ALL

D633AM101-SIA

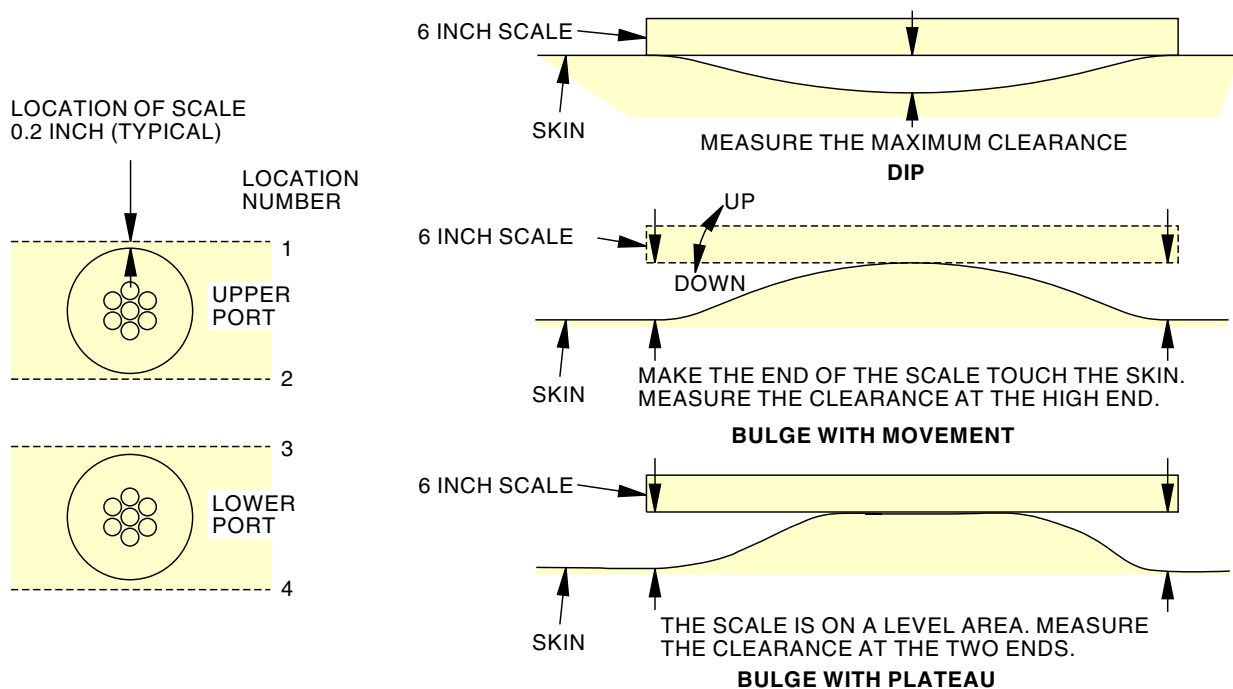
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 607
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



LEFT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1	-0.010						
	2	-0.004						
	WAVINESS	-0.007						
LOWER PORT	3		0.008	0.000	0.008			
	4		0.020	0.010	0.020			
	WAVINESS				0.007			
RIGHT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1	-0.010						
	2	-0.000						
	WAVINESS	-0.005						
LOWER PORT	3					0.008	0.000	0.008
	4					0.020	0.010	0.020
	WAVINESS							0.014

EXAMPLE CALCULATIONS OF SKIN WAVINESS MEASUREMENT
NEAR PRIMARY STATIC PORTS

2414812 S00061536059_V1

Primary Static Port Inspection
Figure 601/34-11-02-990-803 (Sheet 2 of 3)

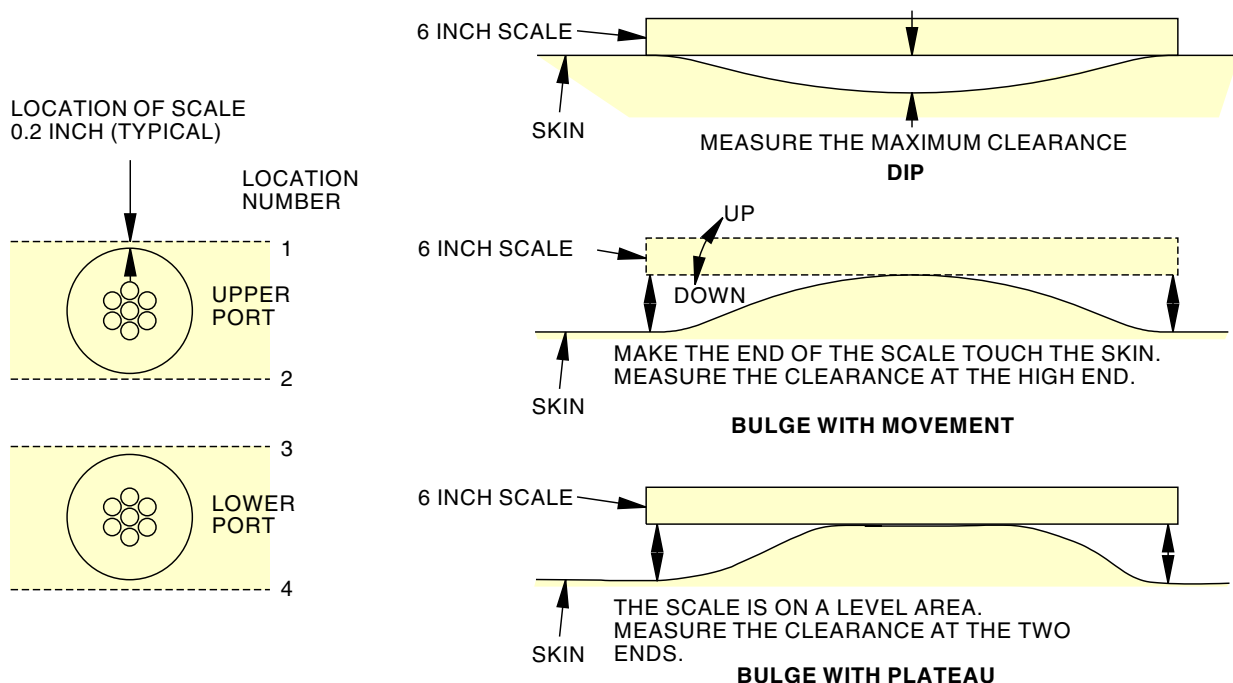
EFFECTIVITY
SIA ALL

D633AM101-SIA

34-11-02

Page 608
Sep 15/2021

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



LEFT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1							
	2							
	WAVINESS							
LOWER PORT	3							
	4							
	WAVINESS							
RIGHT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1							
	2							
	WAVINESS							
LOWER PORT	3							
	4							
	WAVINESS							

EXAMPLE CALCULATIONS OF SKIN WAVINESS MEASUREMENT NEAR PRIMARY STATIC PORTS

2414813 S00061536060_V1

Primary Static Port Inspection Figure 601/34-11-02-990-803 (Sheet 3 of 3)

EFFECTIVITY
SIA ALL

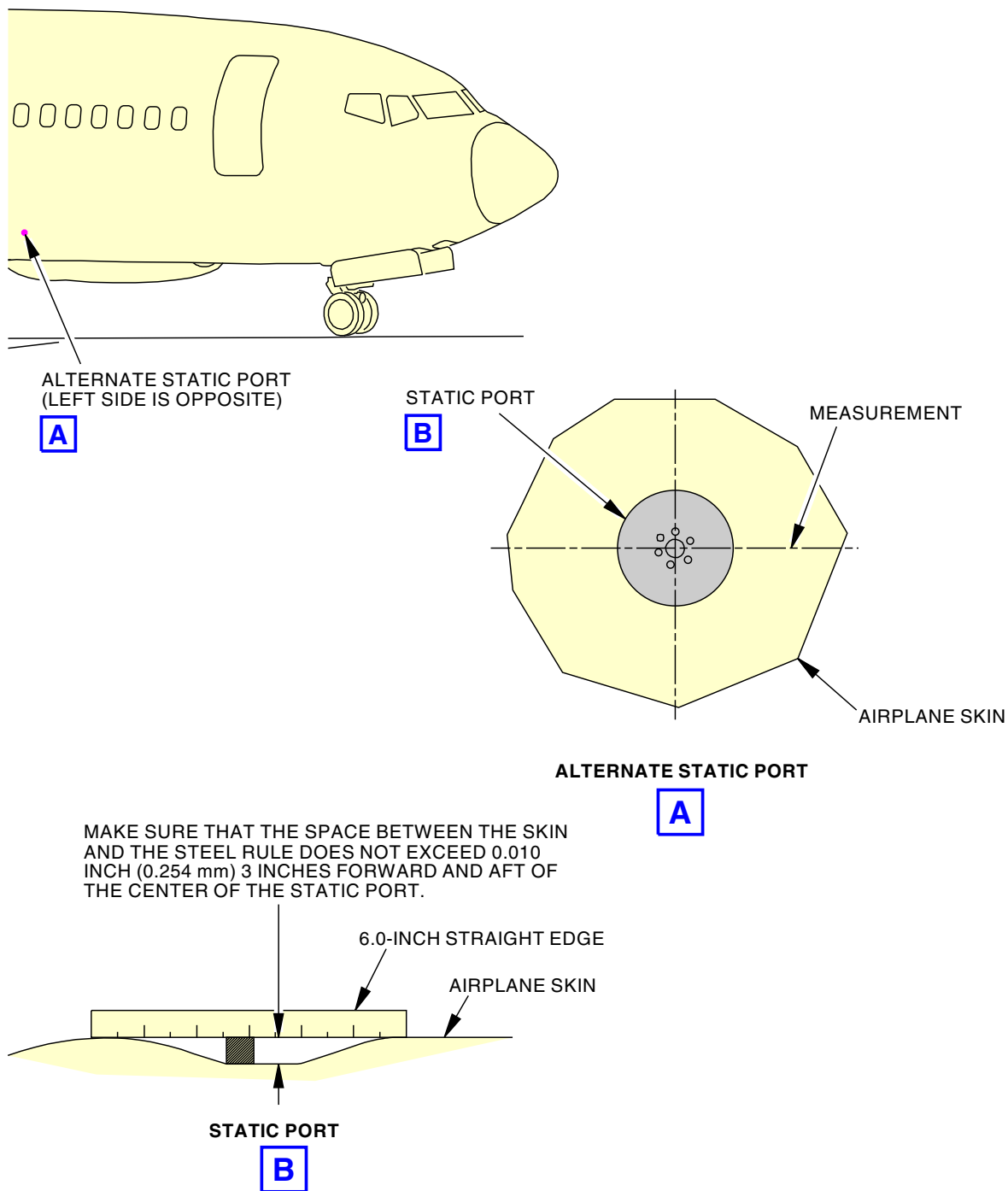
34-11-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414814 S00061536061_V2

Alternate Static Port Inspection
Figure 602/34-11-02-990-804

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-11-02

Page 610
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

MACH AIRSPEED WARNING SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has this task:

- (1) An aural warning discrete output test of the Mach Airspeed Warning System.

NOTE: The aural warning discrete output test will not work if the airplane is facing into 30 knots or greater headwinds.

TASK 34-16-00-730-801

2. Mach Airspeed Warning System - Aural Warning Discrete Output Test

NOTE: This procedure is a scheduled maintenance task.

A. **Location Zones**

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

B. **Aural Warning Discrete Output Test**

SUBTASK 34-16-00-710-001

- (1) Do a test of the No. 1 Mach Airspeed Warning System:

- (a) Push and hold the NO. 1 MACH AIRSPEED WARNING TEST switch on the P5-19 panel.
- 1) Make sure that the warning clacker makes a sound.
- (b) Release the NO. 1 MACH AIRSPEED WARNING TEST switch.
- 1) Make sure that the warning clacker does not make a sound.

SUBTASK 34-16-00-710-002

- (2) Do a test of the No. 2 Mach Airspeed Warning System:

- (a) Push and hold the NO. 2 MACH AIRSPEED WARNING TEST switch on the P5-19 panel.
- 1) Make sure that the warning clacker makes a sound.
- (b) Release the NO. 2 MACH AIRSPEED WARNING TEST switch.
- 1) Make sure that the warning clacker does not make a sound.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-16-00

Page 501
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR DATA INERTIAL REFERENCE SYSTEM - MAINTENANCE PRACTICES

1. **General**

A. This procedure has these tasks:

- (1) Air Data Inertial Reference System (ADIRS) Deactivation
- (2) Air Data Inertial Reference System (ADIRS) Activation
- (3) Air Data Inertial Reference System (ADIRS) alignment from the FMC CDU
- (4) Air Data Inertial Reference System (ADIRS) alignment from the ISDU

SIA 005-999; SIA 001-004 POST SB 737-34-3141

- (5) Air Data Inertial Reference System (ADIRS) automatic alignment from the IRS MSU

SIA ALL

- (6) Inertial Reference (IR) radial position error check
- (7) Inertial Reference (IR) residual groundspeed error check.

TASK 34-21-00-040-801

2. **Air Data Inertial Reference System - Deactivation**

A. **General**

- (1) This procedure removes electrical power to the ADIRS system.

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Procedure**

SUBTASK 34-21-00-860-077

- (1) If the ADIRS is powered on, set the Mode Select Unit (MSU) to the OFF position for at least 30 seconds.

SUBTASK 34-21-00-860-001

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 201
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	17	C01010	ADIRU RIGHT DC

D. ADIRS - Tryout

NOTE: This tryout is to make sure the ADIRS system is in a zero energy state.

SUBTASK 34-21-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-860-003

- (2) Do these steps to access the ADIRS maintenance index on the CDU:
- Push the INIT REF key.
 - Make sure the CDU shows the PERF INIT page.
 - Push the LSK 6L adjacent to the INDEX> prompt on the CDU.
 - Make sure the CDU shows the INIT REF INDEX 1/1 page.
 - Push the LSK 6R adjacent to the MAINT> prompt on the CDU.
 - Make sure the CDU shows the MAINT BITE INDEX 1/1 page.
 - Push the LSK 4L adjacent to the <ADIRS prompt on the CDU.
 - Make sure the CDU does not show the ADIRS BITE INDEX page.

————— **END OF TASK** —————

TASK 34-21-00-440-801

3. Air Data Inertial Reference System - Activation

A. General

- (1) This procedure adds electrical power to the ADIRS system.

NOTE: Moving the MSU from the OFF position to any other position does not apply electrical power to the ADIRS.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 202
May 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-21-00-860-004

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

————— END OF TASK —————

TASK 34-21-00-820-801

4. Air Data Inertial Reference System - Alignment from the FMC CDU

A. General

- (1) This task provides instructions to align the Air Data Inertial Reference System (ADIRS) from the Flight Management Computer (FMC) Control Display Unit (CDU) at regular latitude and high latitude.
- (a) Regular latitude alignment is from latitude 70.2 degrees South to latitude 70.2 degrees North. A regular latitude alignment takes 10 minutes.
- (b) High latitude alignment is from latitude 70.2 degrees to latitude 78.2 degrees North or South. The high latitude alignment takes 17 minutes.
- (c) Above the latitude of 78.2 degrees North and below the latitude of 78.2 degrees South, you cannot accurately align the ADIRS.
- (2) Make sure that there is no airplane movement when the ADIRS alignment is performed. Airplane weight, high winds, servicing work, or the loading and unloading of cargo or passengers can cause airplane movement. The ADIRS will restart the full alignment if too much of movement is sensed during the alignment period.
- (3) The airplane's present position latitude and longitude are necessary to align the ADIRS. This can possibly be different from the latitude and longitude of the local airport. The latitude and longitude entry must be in 1 degree or less of the airplane's position or the Air Data Inertial Reference Unit (ADIRU) will not align. If available, it is recommended to use the GPS calculated airplane position.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 203
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (4) Multiple entries of invalid latitude and longitude will cause the ADIRU to declare an Inertial Reference (IR) failure (Code 02). If this occurs, the ADIRU IR failure can be cleared by performing a complete power down sequence and restarting the alignment process again using a valid latitude and longitude entry. A valid latitude and longitude entry may need to be entered several times before the fault will clear.

B. References

Reference	Title
34-61-00-710-801	Flight Management Computer System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-21-00-860-006

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-860-007

- (2) Make sure the Flight Management Computer System is on (TASK 34-61-00-710-801).

SUBTASK 34-21-00-820-001

- (3) Do these steps to align the ADIRS at regular latitude:
- (a) Set the mode select switches on the Inertial Reference System (IRS) Mode Select Unit (MSU) to the NAV position.
 - 1) A regular latitude alignment takes 10 minutes.
 - 2) Make a note of the present time for later use in this procedure.
 - (b) Make sure the ON DC lights on the IRS MSU come on for a short time.
 - (c) Make sure the ALIGN lights on the IRS MSU come on.
- NOTE:** It is acceptable for the ALIGN lights to come on before or after the ON DC lights.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 204
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Do these steps to enter the latitude and longitude from a CDU:

NOTE: CDU data lines that permit a selection are identified with a caret (< or >). The CDU has 12 line-select-keys (LSK). Six keys are on each side of the display. LSK 1L thru 6L are on the left side, and LSK 1R thru 6R are on the right side.

- 1) Push the INIT REF key on the CDU.
- 2) Push the LSK 6L adjacent to the <INDEX prompt on the CDU.
 - a) Make sure the CDU shows the INIT/REF INDEX 1/1 page.
- 3) Push the LSK 2L adjacent to the <POS prompt on the CDU.
 - a) Make sure the CDU shows the POS INIT 1/3 page.
- 4) Push the LSK 1R adjacent to the LAST POS> prompt on the CDU to put the latitude and longitude data in the scratch pad line. If no LAST POS data exists, then enter the latitude and longitude in the scratch pad line using the format noted below.
 - a) Do not put a space between the latitude and longitude.

NOTE: The format of the latitude and longitude data is as follows:

Latitude and longitude: XDDMM.MYDDMM.M

Where:

X is N or S for latitude

Y is E or W for longitude

D is the number of degrees

M is the number of minutes

- 5) Push the LSK 4R adjacent to the SET IRS POS> prompt on the CDU.
 - a) Make sure the CDU shows the latitude and longitude below the SET IRS POS line.
 - <1> Re-enter the same present position (latitude, longitude) again if the ALIGN lights start to flash.
- 6) After 10 minutes, make sure the ALIGN lights on the IRS MSU go off and the heading is displayed on the MAX Display System (MDS).

NOTE: The ADIRS is now aligned and in the navigation mode.

SUBTASK 34-21-00-820-002

- (4) Do these steps to align the ADIRS at high latitude:

- (a) Set the mode select switches on the IRS MSU to the ALIGN position.
 - 1) A high latitude alignment takes 17 minutes. Make a note of the present time for later use in this procedure.
- (b) Make sure the ON DC lights on the IRS MSU come on for a short time.
- (c) Make sure the ALIGN lights on the IRS MSU come on.

NOTE: It is acceptable for the ALIGN lights to come on before or after the ON DC lights.

- (d) Do these steps to enter the latitude and longitude from a CDU:

NOTE: CDU data lines that permit a selection are identified with a caret (< or >). The CDU has 12 line-select-keys (LSK). Six keys are on each side of the display. LSK 1L thru 6L are on the left side, and LSK 1R thru 6R are on the right side.

- 1) Push the INIT REF key on the CDU.
- 2) Push the LSK 6L adjacent to the <INDEX prompt on the CDU.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-00

Page 205
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- a) Make sure the CDU shows the INIT/REF INDEX 1/1 page.
- 3) Push the LSK 2L adjacent to the <POS prompt on the CDU.
 - a) Make sure the CDU shows the POS INIT 1/3 page.
- 4) Push the LSK 1R adjacent to the LAST POS> prompt on the CDU to put the latitude and longitude data in the scratch pad line. If no LAST POS data exists, then enter the latitude and longitude in the scratch pad line using the format noted below.
 - a) Do not put a space between the latitude and longitude.

NOTE: The format of the latitude and longitude data is as follows:

Latitude and longitude: XDDMM.MYDDMM.M

Where:

X is N or S for latitude

Y is E or W for longitude

D is the number of degrees

M is the number of minutes
- 5) Push the LSK 4R adjacent to the SET IRS POS> prompt on the CDU.
 - a) Make sure the CDU shows the latitude and longitude below the SET IRS POS line.

<1> Re-enter the same present position (latitude, longitude) again if the ALIGN lights start to flash.
- 6) After 17 minutes, set the mode select switches on the IRS MSU to the NAV position.
 - a) Make sure the ALIGN lights on the IRS MSU go off and the heading is displayed on the MDS.

NOTE: The ADIRS is now aligned and in the navigation mode.

————— **END OF TASK** —————

TASK 34-21-00-820-802

5. Air Data Inertial Reference System - Alignment from the ISDU

A. General

- (1) This task provides instructions to align the Air Data Inertial Reference System (ADIRS) from the Inertial System Display Unit (ISDU) at regular latitude and high latitude.
 - (a) Regular latitude alignment is from latitude 70.2 degrees South to latitude 70.2 degrees North. A regular latitude alignment takes 10 minutes.
 - (b) High latitude alignment is from latitude 70.2 degrees to latitude 78.2 degrees North or South. The high latitude alignment takes 17 minutes.
 - (c) Above the latitude of 78.2 degrees North and below the latitude of 78.2 degrees South, you cannot accurately align the ADIRS.
- (2) Make sure that there is no airplane movement when the ADIRS alignment is performed. Airplane weight, high winds, servicing work, or the loading and unloading of cargo or passengers can cause the airplane movement. The ADIRS will restart the full alignment if too much of movement is sensed during the alignment period.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 206
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (3) The airplane's present position latitude and longitude are necessary to align the ADIRS. This can possibly be different from the latitude and longitude of the local airport. The latitude and longitude entry must be in 1 degree or less of the airplane's position or the Air Data Inertial Reference Unit (ADIRU) will not align. If available, it is recommended to use the GPS calculated airplane position.
- (4) Multiple entries of invalid latitude and longitude will cause the ADIRU to declare an Inertial Reference (IR) failure (Code 02). If this occurs, the ADIRU IR failure can be cleared by performing a complete power down sequence and restarting the alignment process again using a valid latitude and longitude entry. A valid latitude and longitude entry may need to be entered several times before the fault will clear.

B. References

Reference	Title
34-21-00-710-801	Air Data Inertial Reference System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-21-00-860-009

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-860-010

- (2) Make sure the Inertial Reference System is on (TASK 34-21-00-710-801).

SUBTASK 34-21-00-820-003

- (3) Do these steps to align the ADIRS at regular latitude:
 - (a) Set the mode select switches on the Inertial Reference System (IRS) Mode Select Unit (MSU) to the NAV position.
 - 1) A regular latitude alignment takes 10 minutes. Make a note of the present time for later use in this procedure.
 - (b) Make sure the ON DC lights on the IRS MSU come on for a short time.
 - (c) Make sure the ALIGN lights on the IRS MSU come on.

NOTE: It is acceptable for the ALIGN lights to come on before or after the ON DC lights.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 207
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Do these steps to enter the latitude and longitude from the ISDU:
- 1) Set the DSPL SEL switch on the ISDU to the PPOS position.
 - 2) Push the applicable N or S key on the ISDU.
 - 3) Put in the degrees and minutes of the local latitude on the ISDU.
 - a) Make sure the latitude shows on the left side of the ISDU.
 - b) Make sure the ENT key light on the ISDU comes on.
 - 4) Push the ENT key on the ISDU to transmit the latitude to the ADIRU.
 - 5) Push the applicable W or E key on the ISDU.
 - 6) Put in the degrees and minutes of the local longitude on the ISDU.
 - a) Make sure the longitude shows on the right side of the ISDU.
 - b) Make sure the ENT key light on the ISDU comes on.
 - 7) Push the ENT key on the ISDU to transmit the longitude to the ADIRU.
 - a) Re-enter the same present position (latitude, longitude) again if the ALIGN lights start to flash.
 - 8) After 10 minutes, make sure the ALIGN lights on the IRS MSU go off and the heading is displayed on the MDS.

NOTE: The ADIRS is now aligned and in the navigation mode.

SUBTASK 34-21-00-820-004

- (4) Do these steps to align the ADIRS at high latitude:
- (a) Set the mode select switches on the IRS MSU to the ALIGN position.
 - 1) A high latitude alignment takes 17 minutes. Make a note of the present time for later use in this procedure.
 - (b) Make sure the ON DC lights on the IRS MSU come on for a short time.
 - (c) Make sure the ALIGN lights on the IRS MSU come on.
- NOTE: It is acceptable for the ALIGN lights to come on before or after the ON DC lights.
- (d) Do these steps to enter the latitude and longitude from the ISDU:
- 1) Set the DSPL SEL switch on the ISDU to the PPOS position.
 - 2) Push the applicable N or S key on the ISDU.
 - 3) Put in the degrees and minutes of the local latitude on the ISDU.
 - a) Make sure the latitude shows on the left side of the ISDU.
 - b) Make sure the ENT key light on the ISDU comes on.
 - 4) Push the ENT key on the ISDU to transmit the latitude to the ADIRU.
 - 5) Push the applicable W or E key on the ISDU.
 - 6) Put in the degrees and minutes of the local longitude on the ISDU.
 - a) Make sure the longitude shows on the right side of the ISDU.
 - b) Make sure the ENT key light on the ISDU comes on.
 - 7) Push the ENT key on the ISDU to transmit the longitude to the ADIRU.
 - a) Re-enter the same present position (latitude, longitude) again if the ALIGN lights start to flash.
 - 8) After 17 minutes, set the mode select switches on the IRS MSU to the NAV position.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 208
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- a) Make sure the ALIGN lights on the IRS MSU go off and the heading is displayed on the MDS.

NOTE: The ADIRS is now aligned and in the navigation mode.

————— END OF TASK —————

SIA 005-999; SIA 001-004 POST SB 737-34-3141

TASK 34-21-00-820-803

6. Air Data Inertial Reference System - Automatic Alignment from the IRS MSU

A. General

- (1) This task provides instructions to start the automatic alignment of the Air Data Inertial Reference System (ADIRS) from the Inertial Reference System (IRS) Mode Select Unit (MSU). The automatic alignment is a feature of the Hybrid Global Positioning System (GPS) function.
- (a) Regular latitude alignment is from latitude 70.2 degrees South to latitude 70.2 degrees North. A regular latitude alignment takes 10 minutes.
- (b) High latitude alignment is from latitude 70.2 degrees to latitude 78.2 degrees North or South. A high latitude alignment takes 17 minutes.
- (c) Above latitude 78.2 degrees North and below latitude 78.2 degrees South, you cannot accurately align the ADIRS.
- (2) Make sure that there is no airplane movement when the ADIRS alignment is performed. Airplane weight, high winds, servicing work, or the loading and unloading of cargo or passengers can cause airplane movement. The ADIRS will restart the full alignment if too much movement is sensed during the alignment period.
- (3) If it is necessary, manual entry of the latitude and longitude can be done with the Flight Management Computer (FMC) Control Display Unit (CDU) or Inertial System Display Unit (ISDU) to override the automatic alignment values.

B. References

Reference	Title
34-58-00-710-801	Global Positioning System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-21-00-860-083

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 209
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SIA 005-999; SIA 001-004 POST SB 737-34-3141 (Continued)

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-710-010

- (2) Make sure that the GPS is operational (TASK 34-58-00-710-801).

SUBTASK 34-21-00-820-005

- (3) On the IRS MSU:

- (a) Set the mode select switches to the ALIGN position.

- 1) Make sure that the ON DC lights come on for a short time.
- 2) Make sure that the ALIGN lights come on.

NOTE: It is satisfactory for the ALIGN lights to come on before or after the ON DC lights.

NOTE: Alignment is done automatically with latitude and longitude GPS data from the Multi-Mode Receiver (MMR).

- (b) Set the mode select switches to the NAV position.

- 1) Make sure that the ALIGN lights go off.

NOTE: The ALIGN lights remain on until alignment is complete. This takes up to 10 minutes at regular latitude and 17 minutes at high latitude.

- 2) Make sure the heading is displayed on the MAX Display System (MDS).

NOTE: The ADIRS is now aligned and in the navigation mode.

SUBTASK 34-21-00-700-004

- (4) Make sure that the GPS data transferred to the IRS:

- (a) On the FMC CDU push the INIT REF key.
- (b) If the INIT/REF INDEX page is not shown, select INDEX.
- (c) Select POS.
- (d) Push the NEXT PAGE key to show the POS REF page 2/3.

- 1) Make sure that the GPS L and GPS R values agree with the IRS DISPLAY on the ISDU.

SIA ALL

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 210
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-00-200-801

7. **IR Radial Position Error Check**

(Figure 201)

A. General

- (1) This task provides the instructions to do a check of the Inertial Reference (IR) radial position error.
- (2) The Global Positioning System (GPS) position of the airplane can make this task easier and can provide more accurate results.
- (3) At the end of a flight, the radial position error of the IR can be calculated by comparing the IR final position to the airport position. The IR position data is available on the Control Display Unit (CDU).

NOTE: The IR radial position error calculation is not the same as the Flight Management System (FMS) calculation of IRS drift displayed on the IRS MONITOR page. The radial position error check compares the Inertial Reference System (IRS) position to the LAT/LON position of the airplane while it is on the ground, not moving, and based on the length of the time that the Air Data Inertial Reference Unit (ADIRU) has been in NAV mode. This calculation is a more accurate representation of the ADIRU IR drift than the FMS calculated value displayed on the IRS MONITOR page.

- (4) The IR radial position error limits are shown in a chart in this procedure.

B. References

Reference	Title
34-21-01 P/B 401	AIR DATA INERTIAL REFERENCE UNIT - REMOVAL/INSTALLATION

C. Procedure

SUBTASK 34-21-00-860-011

- (1) Make sure the mode select switches on the CDU are in the NAV position.
 - (a) You must record the IR position data at the end of the flight while the IR stays in the NAV mode.

SUBTASK 34-21-00-200-001

- (2) Do these steps to enter the airport identification into the CDU.
 - (a) Push the RTE key on the CDU.
 - 1) Make sure the RTE 1/1 shows on the CDU.
 - (b) Put the airport identification into the CDU scratchpad.
 - (c) Push the Line Select Key (LSK) adjacent to the DEST on the CDU.
 - 1) Make sure the airport identification shows below the DEST on the CDU.

SUBTASK 34-21-00-200-002

- (3) Do these steps to enter the airplane present position into the CDU:

NOTE: When the airplane is parked at an airport gate, the present position of the airplane is the gate latitude and longitude.

NOTE: If GPS is available, the GPS latitude and longitude can be used. The latitude and longitude can be obtained from the Flight Management Computer (FMC) CDU on the POS REF page or other GPS enabled device.

 - (a) Put the latitude and longitude into the CDU scratchpad.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 211
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Do not use a space between the latitude and longitude.

NOTE: The format of the latitude and longitude data is as follows:

Latitude and longitude: XDDMM.MYDDMM.M

Where:

X is N or S for latitude

Y is E or W for longitude

D is the number of degrees

M is the number of minutes

- (b) Push the LEGS key on the CDU.
 - 1) Make sure the LEGS 1/3 page shows on the CDU.
- (c) Push the LSK 1L on the CDU.
 - 1) Make sure an identification waypoint of the gate latitude and longitude shows adjacent to the LSK 1L on the CDU.
- (d) Record the number in nautical miles that shows next to the first identification waypoint.

NOTE: The first identification way point is the active waypoint that shows at the top of the LEGS 1/3 page.

SUBTASK 34-21-00-200-003

- (4) Do these steps to transfer the left IRS position from the POS REF page to the LEGS page on the CDU:
 - (a) Push the INIT/REF key on the CDU.
 - 1) Make sure the INIT/REF INDEX page shows on the CDU.
 - (b) Push the LSK adjacent to the <POS prompt on the CDU.
 - 1) Make sure the POS INIT 1/3 page shows on the CDU.
 - (c) Push the NEXT PAGE key on the CDU.
 - 1) Make sure the POS REF 2/3 page shows on the CDU.
 - (d) Push the LSK adjacent to the IRS L on the CDU.
 - 1) Make sure the left IRS latitude and longitude data show on the CDU scratchpad.
 - (e) Push the LEGS key on the CDU.
 - 1) Make sure the LEGS 1/3 page shows on the CDU.
 - (f) Push the LSK 2L on the CDU.
 - 1) Make sure an identification waypoint of the IRS latitude and longitude shows adjacent to the LSK 2L on the CDU.
 - (g) Record the number in nautical miles that shows next to the second identification waypoint.
 - (h) Repeat these steps to record the number in nautical miles for the right IRS.

SUBTASK 34-21-00-200-004

- (5) The difference between the gate and the IRS waypoints in nautical miles is the IR radial position error.

SUBTASK 34-21-00-200-005

- (6) Compare the IR radial position error and the time the IRS was in the NAV mode to the radial position error limits (Figure 201).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 212
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-00-020-001

- (7) If one of these conditions occurs, replace the applicable ADIRU (PAGEBLOCK 34-21-01/401):
- (a) The IR radial position error is in the REPLACE-1 FLIGHT area.
 - (b) The IR radial position error is in the REPLACE-2 CONSECUTIVE FLIGHTS area for the second consecutive flight.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

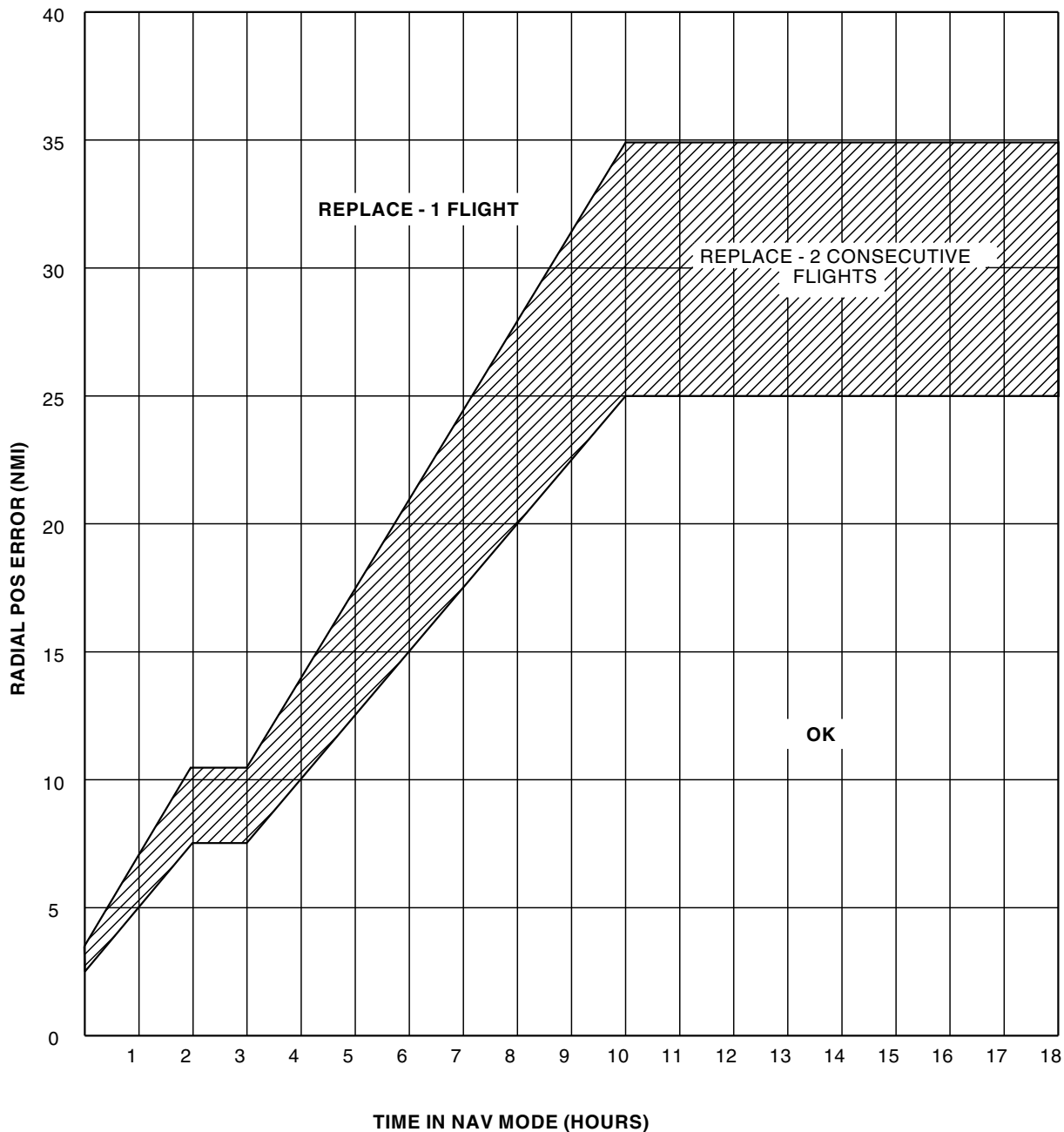
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 213
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414817 S00061536087_V1

IR Radial Position Error
Figure 201/34-21-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 214
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-00-200-802

8. Inertial Reference Residual Groundspeed Error Check

A. General

- (1) This task provides the instructions to do a check of the Inertial Reference (IR) residual groundspeed error.
- (2) Groundspeed readout must be taken before the airplane has been stationary for three minutes. The display of the groundspeed may be blank after three minutes.
- (3) The residual groundspeed error check at the end of a flight is valid if a full alignment or a fast realignment was performed at the beginning of a flight to reset the Air Data Inertial Reference Unit (ADIRU)'s residual groundspeed.
- (4) The residual groundspeed must be taken right after the airplane comes to a full stop. The groundspeed may continue to change, influenced by the inertial system's drift, and not be an accurate depiction of the residual groundspeed after a flight leg.
- (5) This task can be performed with the Inertial System Display Unit (ISDU) or Flight Management Computer (FMC) Control Display Unit (CDU).

B. References

Reference	Title
34-21-01 P/B 401	AIR DATA INERTIAL REFERENCE UNIT - REMOVAL/INSTALLATION

C. Procedure

SUBTASK 34-21-00-860-012

- (1) Do a check of the residual groundspeed error as follows:
 - (a) On the ISDU:
 - 1) Set the SYS switch to the L or R position on the ISDU.
 - 2) Set the DSPL switch to the TRK/GS position on the ISDU.
 - (b) On the CDU:
 - 1) Push the INIT/REF key.
 - 2) If it is shown, select INDEX.
 - 3) Select POS.
 - 4) Push the NEXT PAGE key.
 - 5) Do a check of the IRS L and IRS R GS values.
 - (c) Make sure these conditions do not occur:
 - 1) The residual groundspeed error is 15 knots or larger after each of two consecutive flights, one after the other.
 - 2) The residual groundspeed error is 21 knots or larger at the end of one flight.

SUBTASK 34-21-00-960-001

- (2) If the residual groundspeed is beyond the limits, replace the applicable ADIRU (PAGEBLOCK 34-21-01/401).

SUBTASK 34-21-00-200-010

- (3) If the ISDU was used, do the procedure for the other ADIRU.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 215
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR DATA INERTIAL REFERENCE SYSTEM - ADJUSTMENT/TEST

1. **General**

A. This procedure has these tasks:

- (1) The Air Data Inertial Reference System operational test

NOTE: The Air Data Inertial Reference System operational test is inhibited if the Computed Airspeed (CAS) is more than 30 knots.

- (2) The Inertial Reference System Source Select operational test
(3) The Inertial Reference system test
(4) The Air Data Reference system test.

TASK 34-21-00-710-801

2. **Air Data Inertial Reference System - Operational Test**

A. **General**

- (1) This task contains these tests:

- (a) The check of the current faults of the Air Data Inertial Reference System (ADIRS)
(b) The Built-In-Test Equipment (BITE) ground test of the Inertial Reference (IR)
(c) The BITE ground test of the Air Data Reference (ADR).

B. **References**

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Prepare for the Operational Test**

SUBTASK 34-21-00-860-014

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	3	C00170	MACH WARN SYS-1

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 501
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00549	MACH WARN SYS -2
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-860-015



WARNING

MAKE SURE THAT YOU OPEN THE FLAP LOAD RELIEF CIRCUIT BREAKER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONNEL CAN OCCUR.

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-21-00-860-016



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (3) Make sure that the control panels are set as follows:
- (a) Make sure that the NAVIGATION VHF NAV switch, on the P5-28 panel, is set to the NORMAL position.
 - (b) Make sure that the NAVIGATION IRS switch, on the P5-28 panel, is set to the NORMAL position.
 - (c) Make sure that the NAVIGATION FMC switch, on the P5-28 panel, is set to the NORMAL position.
 - (d) Make sure that the DISPLAYS SOURCE switch, on the P5-28 panel, is set to the AUTO position.
 - (e) Make sure that the DISPLAYS CONTROL PANEL switch, on the P5-28 panel, is set to the NORMAL position.
 - (f) Make sure that the STANDBY POWER switch, on the P5-13 panel, is set to the AUTO position.
 - (g) Make sure that the EQUIP COOLING SUPPLY switch, on the P5 panel, is set to the NORM position.
 - (h) Make sure that the EQUIP COOLING EXHAUST switch, on the P5 panel, is set to the NORM position.
 - (i) Make sure that the mode select switches, on the captain and first officer Electronic Flight Instrument System (EFIS) control panels, are set to the VOR position.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 502
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (j) Make sure that the Air Traffic Control (ATC) transponders are in standby mode.
 - 1) Make sure that the mode reply switch, on the P8 ATC control panel, is set to the STBY position.

SUBTASK 34-21-00-820-006

- (4) Make sure that the Inertial Reference System (IRS) is aligned (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
 - (a) Make sure that the IRS switches, on the Mode Select Unit (MSU), are set to the NAV position.

SUBTASK 34-21-00-860-086

- (5) Set the left altimeter baro correction data to 29.92 in/Hg (101.32 kPa).

E. Air Data Inertial Reference System Current Faults

SUBTASK 34-21-00-700-005

- (1) Do these steps to do a check of the ADIRS current faults:
 - (a) Go to the CURRENT FAULTS page on the Control Display Unit (CDU) as follows:
 - 1) Push the INIT REF key.
 - 2) If it is shown, select INDEX.
 - 3) If it is shown, select MAINT.
 - 4) Select ADIRS.
 - 5) Select ADIRS L or ADIRS R as necessary.
 - 6) Select CURRENT STATUS.
 - (b) Make sure that NO CURRENT FAULTS is shown on the CURRENT FAULTS page.
 - 1) If a maintenance message is shown, go to the IFIM and do the applicable procedure(s).
 - (c) If it is necessary, do a check of the current faults for the other ADIRS.

F. Inertial Reference System BITE Test

SUBTASK 34-21-00-740-002

- (1) Do these steps to do a BITE ground test of the left and right IR system:

NOTE: Separate ground test of the left ADIRS and right ADIRS can be done. The ADIRS L BITE MAIN MENU contains the ground test for the left ADIRS. The ADIRS R BITE MAIN MENU contains the ground test for the right ADIRS.

- (a) Start the test from the CDU as follows:
 - 1) Push the INIT REF key.
 - 2) If it is shown, select INDEX.
 - 3) If it is shown, select MAINT.
 - 4) Select ADIRS.
 - 5) Select ADIRS-IR L+R GND TEST.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-00

Page 503
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 6) Select TEST START.

NOTE: After the test is started, if it is necessary, select TEST STOP to stop the test.

- (b) For seconds 0-2, make sure that:
- 1) All the display segments and indicators on the Inertial System Display Unit (ISDU) come on.
 - 2) The left and right ALIGN, FAULT, ON DC, and DC FAIL annunciators on the MSU come on.
 - 3) The MASTER CAUTION and IRS lights on the glareshield come on.
- (c) For seconds 2-10, make sure that:
- 1) All the display segments and indicators on the ISDU go off.
 - 2) The left and right ALIGN, FAULT, ON DC, and DC FAIL annunciators on the MSU go off.
 - 3) The HDG flag is shown while compass card is not shown on each Primary Flight Display (PFD).
 - 4) The ATT flag is shown on each PFD.
 - 5) The VERT flag is shown on each PFD.
- (d) For seconds 10 and on, make sure that:
- 1) The 5° pitch up angle is shown on each PFD.
 - 2) The 45° roll right angle is shown on each PFD.
 - 3) The 15° heading is shown on each PFD or Navigation Display (ND).
 - 4) The latitude of N22°30.0' is shown on the ISDU display.
 - 5) The longitude of E22°30.0' is shown on the ISDU display.
- (e) Select TEST STOP on the CDU.

G. Air Data Reference BITE Test

SUBTASK 34-21-00-710-006

- (1) Do these steps to do a ground test for the left and right ADR system:

- (a) Start the test from the CDU as follows:
- 1) Push the INIT REF key.
 - 2) If it is shown, select INDEX.
 - 3) If it is shown, select MAINT.
 - 4) Select ADIRS.
 - 5) Select ADIRS-ADR L+R GND TEST.
 - 6) Select TEST START.

NOTE: After the test is started, if it is necessary, select TEST STOP to stop the test.

- (b) For 0-2 seconds, make sure that:
- 1) The overspeed warning clacker comes on.
 - 2) The overspeed warning and flag are shown on each PFD.
- (c) For 0-7 seconds, make sure that:
- 1) The ALT flag is shown on the each PFD.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 504
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) For seconds 7 and on, make sure that:
 - 1) The altitude of 10,000 $\pm$ 40 feet is shown on each PFD.
 - 2) The true airspeed of 170 $\pm$ 4 knots is shown on each ND.
 - 3) The total air temperature of 35 $\pm$ 2°C is shown on each ND
- (e) Select TEST STOP on the CDU.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-00-860-084

- (1) Push the MASTER CAUTION reset switch.
 - (a) Make sure that the MASTER CAUTION and IRS lights on the captain's glareshield, go off.

SUBTASK 34-21-00-860-025

- (2) Set the IRS switches, on the MSU, to OFF.

SUBTASK 34-21-00-860-026

- (3) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— **END OF TASK** —————

TASK 34-21-00-710-802

3. Inertial Reference System Source Select - Operational Test

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task contains these tests:
 - (a) The source select test with the left Inertial Reference (IR) system
 - (b) The source select test with the right IR system.

B. Location Zones

<u>Zone</u>	<u>Area</u>
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Operational Test

SUBTASK 34-21-00-860-055

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 505
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	3	C00170	MACH WARN SYS-1
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00549	MACH WARN SYS -2
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-860-056



WARNING

MAKE SURE THAT YOU OPEN THE FLAP LOAD RELIEF CIRCUIT BREAKER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONNEL CAN OCCUR.

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-21-00-860-085



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (3) Make sure that the control panels are set as follows:
- (a) Make sure that the NAVIGATION VHF NAV switch, on the P5-28 panel, is set to the NORMAL position.
 - (b) Make sure that the NAVIGATION IRS switch, on the P5-28 panel, is set to the NORMAL position.
 - (c) Make sure that the NAVIGATION FMC switch, on the P5-28 panel, is set to the NORMAL position.
 - (d) Make sure that the DISPLAYS SOURCE switch, on the P5-28 panel, is set to the AUTO position.
 - (e) Make sure that the DISPLAYS CONTROL PANEL switch, on the P5-28 panel, is set to the NORMAL position.
 - (f) Make sure that the STANDBY POWER switch, on the P5-13 panel, is set to the AUTO position.
 - (g) Make sure that the EQUIP COOLING SUPPLY switch, on the P5 panel, is set to the NORM position.
 - (h) Make sure that the EQUIP COOLING EXHAUST switch, on the P5 panel, is set to the NORM position.
 - (i) Make sure that the mode select switches, on the captain and first officer Electronic Flight Instrument System (EFIS) control panels, are set to the VOR position.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 506
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



WARNING

MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (j) Make sure that the Air Traffic Control (ATC) transponders are in standby mode.
 - 1) Make sure that the mode reply switch, on the P8 ATC control panel, is set to the STBY position.
- (k) Set the left and right mode select switches, on the Mode Select Unit (MSU), to the ALIGN position.
 - 1) Make sure that the left and right ALIGN lights on the MSU are on.

NOTE: The Air Data Inertial Reference Unit (ADIRU) will output No Computed Data (NCD) for its associated parameters when in the ALIGN mode. As such, the "PITCH" and "ROLL" annunciations will not display since the offside attitude is not valid.

D. Inertial Reference System Self-Test

SUBTASK 34-21-00-740-003

- (1) Do these steps to do a source select test with the left IR system:
 - (a) Start the test from a CDU as follows:
 - 1) Push the INIT REF key.
 - 2) If it is shown, select INDEX.
 - 3) If it is shown, select MAINT.
 - 4) Select ADIRS.
 - 5) Select ADIRS L.
 - 6) Select GROUND TEST.
 - 7) Select IR GROUND TEST.
 - 8) Select TEST START.
 - (b) Wait for 10 seconds.
 - 1) Make sure that 5° pitch up is shown on the captain's Primary Flight Display (PFD).
 - 2) Make sure that 45° roll right is shown on the captain's PFD.
 - 3) Make sure that 15° heading is shown on the captain's PFD and Navigation Display (ND).
 - (c) Set the NAVIGATION IRS switch, on the P5-28 instrument switching module, to the BOTH ON R position.
 - 1) Make sure that the pitch, roll, and heading are not shown.
 - (d) Set the NAVIGATION IRS switch, on the P5-28 instrument switching module, to the BOTH ON L position.
 - 1) Make sure that 5° pitch up is shown on the captain's and first officer's PFD.
 - 2) Make sure that 45° roll right is shown on the captain's and first officer's PFD.
 - 3) Make sure that 15° heading is shown on the captain's and first officer's PFD and ND.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 507
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (e) Set the NAVIGATION IRS switch, on the P5-28 instrument switching module, to the NORMAL position.
- (f) Select TEST STOP on the CDU.

SUBTASK 34-21-00-710-007

- (2) Do these steps to do a source select test with the right IR system:
 - (a) Start the test from a CDU as follows:
 - 1) Push the INIT REF key.
 - 2) If it is shown, select INDEX.
 - 3) If it is shown, select MAINT.
 - 4) Select ADIRS.
 - 5) Select ADIRS R.
 - 6) Select GROUND TEST.
 - 7) Select IR GROUND TEST.
 - 8) Select TEST START.
 - (b) Wait for 10 seconds.
 - 1) Make sure that 5° pitch up is shown on the first officer's PFD.
 - 2) Make sure that 45° roll right is shown on the first officer's PFD.
 - 3) Make sure that 15° heading is shown on the first officer's PFD and ND.
 - (c) Set the NAVIGATION IRS switch, on the P5-28 instrument switching module, to the BOTH ON L position.
 - 1) Make sure that the pitch, roll, and heading are not shown.
 - (d) Set the NAVIGATION IRS switch, on the P5-28 instrument switching module, to the BOTH ON R position.
 - 1) Make sure that 5° pitch up is shown on the captain's and first officer's PFD.
 - 2) Make sure that 45° roll right is shown on the captain's and first officer's PFD.
 - 3) Make sure that 15° heading is shown on the captain's and first officer's PFD and ND.
 - (e) Set the NAVIGATION IRS switch, on the P5-28 instrument switching module, to the NORMAL position.
 - (f) Select TEST STOP on the CDU.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-00-860-065

- (1) Set the mode select switches, on the MSU, to the OFF position.

SUBTASK 34-21-00-860-066

- (2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 508
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-00-730-801

4. Inertial Reference - System Test

A. General

- (1) The system test contains these tests:
 - (a) The ON DC Operation and No Cooling Warning Test
 - (b) The MSU ALIGN and DC FAIL Annunciator and MCU DC FAIL Annunciator Test
 - (c) The Master Dim and Test
 - (d) The Five Minute Time Delay Check
 - (e) The ISDU/FMC digital and MCU fault discrete interface test.

B. References

Reference	Title
21-27-00-700-802	Equipment Cooling Fans - Operational Test (P/B 501)
23-43-00-710-801	Flight and Ground Crew Call System - Operational Test (P/B 501)
31-65-00-710-801	MAX Display System - Operational Test (P/B 501)
32-09-10-710-801	Proximity Switch Electronics Unit - LRU Replacement Test (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
34-61-00-710-801	Flight Management Computer System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the IR System Test

SUBTASK 34-21-00-860-028

- (1) Make sure that the equipment cooling system is operational (TASK 21-27-00-700-802).

SUBTASK 34-21-00-860-029

- (2) Make sure that the MAX Display System (MDS) is operational (TASK 31-65-00-710-801).

SUBTASK 34-21-00-860-030

- (3) Make sure that the Flight Management Computer System (FMCS) is operational (TASK 34-61-00-710-801).

SUBTASK 34-21-00-860-031

- (4) Make sure that the Proximity Switch Electronic Unit (PSEU) is operational (TASK 32-09-10-710-801).

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 509
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-00-860-032

- (5) Make sure that the flight crew call system is operational (TASK 23-43-00-710-801).

SUBTASK 34-21-00-860-033

- (6) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-00-860-034



WARNING

MAKE SURE THAT YOU OPEN THE FLAP LOAD RELIEF CIRCUIT BREAKER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONNEL CAN OCCUR.

- (7) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-21-00-860-035



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (8) Make sure that the mode select switches on the MSU are in the OFF position.

SUBTASK 34-21-00-860-036

- (9) Set the IRS switch on the P5 overhead panel to the NORMAL position.

SUBTASK 34-21-00-860-037

- (10) Set the VHF NAV switch on the P5 overhead panel to the NORMAL position.

SUBTASK 34-21-00-860-038

- (11) Set the MDS switch on the P5 overhead panel to the NORMAL position.

SUBTASK 34-21-00-860-039

- (12) Set the EQUIPMENT COOLING switch on the P5 overhead panel to the NORMAL position.

SUBTASK 34-21-00-860-040

- (13) Set the FMCS switch on the P5 overhead panel to the NORMAL position.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 510
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-00-860-041

- (14) Set the STBY PWR switch on the P5 overhead panel to the AUTO position.

E. ON DC Operation and No Cooling Warning Test

SUBTASK 34-21-00-860-042

- (1) Do these steps to do a check of the ADIRU ON DC Operation.



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (a) Set the mode select switches on the MSU to the ATT position.
(b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

- 1) Make sure that the left ON DC light on the MSU comes on.
 - 2) Make sure that the MASTER CAUTION and the IRS lights on the glareshield come on.
 - 3) After at least 25 seconds, make sure that the crew call horn sounds.
- (c) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

- 1) Make sure that the crew call horn stops.
 - 2) Make sure that the left ON DC light on the MSU goes off.
- (d) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC

- 1) Make sure that the right ON DC light on the MSU comes on.
 - 2) Make sure that the MASTER CAUTION and the IRS lights on the Captain's glareshield come on.
 - 3) After at least 25 seconds, make sure that the crew call horn sounds.
- (e) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC

- 1) Make sure that the crew call horn stops.
- 2) Make sure that the right ON DC light on the MSU goes off.

SUBTASK 34-21-00-860-043

- (2) Do these steps to do a ADIRU No Cooling Warning Test:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 511
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01435	EQPT COOLING EXHAUST FAN CONT NORMAL

- 1) Make sure that the EQUIPMENT COOLING OFF light on the P5 overhead panel is on.
- 2) Within 60 seconds after the EQUIPMENT COOLING OFF light comes on, make sure that the crew call horn sounds.

- (b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01435	EQPT COOLING EXHAUST FAN CONT NORMAL

- 1) Make sure that the EQUIPMENT COOLING OFF light on the P5 overhead panel goes off.
- 2) Make sure that the crew call horn stops.

- (c) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01116	EQPT COOLING SUPPLY FAN CONT-NORMAL

- 1) Make sure that the EQUIPMENT COOLING OFF light on the P5 overhead panel is on.
- 2) Within 60 seconds after the EQUIPMENT COOLING OFF light comes on, make sure that the crew call horn sounds.

- (d) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01116	EQPT COOLING SUPPLY FAN CONT-NORMAL

- 1) Make sure that the EQUIPMENT COOLING OFF light on the P5 overhead panel goes off.
- 2) Make sure that the crew call horn stops.



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (e) Set the mode select switches on the MSU to the OFF position.

F. DC FAIL and ALIGN Annunciators Test

SUBTASK 34-21-00-730-001

- (1) Do these steps to do a DC FAIL and ALIGN Annunciators Test:

- (a) Set the left mode select switch on the MSU to the ATT position.

- 1) Make sure that the left ALIGN light on the MSU comes on for not more than 40 seconds.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 512
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC

- 1) Make sure that the left DC FAIL light on the MSU comes on.
- 2) Make sure that the MASTER CAUTION and IRS light on the pilot's glareshield come on.

- (c) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC

- 1) Make sure that the left DC FAIL light goes off.
- (d) Push the MASTER CAUTION button on the pilot's glareshield to turn off the MASTER CAUTION and the IRS light.
- (e) Set the left mode select switch on the MSU to the OFF position.
- (f) Set the right mode select switch on the MSU to the ATT position.
- 1) Make sure that the right ALIGN light on the MSU comes on for not more than 40 seconds.
- (g) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	17	C01010	ADIRU RIGHT DC

- 1) Make sure that the right DC FAIL light on the MSU comes on.
 - 2) Make sure that the MASTER CAUTION and IRS lights on the Captain's glareshield come on.
- (h) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	17	C01010	ADIRU RIGHT DC

- 1) Make sure that the right DC FAIL light goes off.
- (i) Push the MASTER CAUTION button on the Captain's glareshield to turn off the MASTER CAUTION and the IRS light.
- (j) Set the mode select switch on the MSU to the OFF position.

G. Master Dim and Test

SUBTASK 34-21-00-860-044

- (1) Do these steps to do a Master Dim and Test for the ADIRS:
- (a) Align the left and right ADIRS in the ALIGN mode (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 513
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (b) Make sure that the mode select switches on the MSU are in the ALIGN position.
- (c) Set the DSPL SEL switch on the ISDU to the PPOS position.
- (d) Turn the inner DSPL SEL switch (BRT) on the ISDU clockwise.
- (e) Set and hold the DIM and TEST switch on the pilot's center instrument panel to the TEST position.
 - 1) Make sure that all of the lights on the ISDU come on bright.
 - 2) Make sure that all of the lights on the MSU come on bright.
- (f) Release the DIM and TEST switch.
- (g) Turn the inner DSPL SEL switch (BRT) on the ISDU counterclockwise.
- (h) Set the DIM and TEST switch on the pilot's center instrument panel to the DIM position.
 - 1) Make sure that the ALIGN lights on the MSU are dim.
 - 2) Push the lights on the MSU one at a time.
 - 3) Make sure that the lights come on dim one at a time.
- (i) Set the DIM and TEST switch on the pilot's center instrument panel to the BRT position.
 - 1) Make sure that only the ALIGN lights on the MSU are on.



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (j) Set the mode select switches on the MSU to the OFF position.

H. Five Minute Time Delay Check

SUBTASK 34-21-00-860-045

- (1) Do these steps to do a Five Minute Time Delay Check:



CAUTION

YOU MUST PULL AND TURN SOME SWITCHES. IF YOU TRY TO TURN THESE SWITCHES BEFORE YOU PULL THEM, YOU CAN DAMAGE THE SWITCH.

- (a) Set the mode select switches on the MSU to the ALIGN position.
- (b) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC

- 1) In less than 30 seconds, make sure that the crew call horn sounds.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 514
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

- 1) Make sure that the crew call horn stops.
 - 2) Set the STANDBY POWER switch on the P5 overhead panel to the BAT position.
 - 3) Make sure that the ALIGN lights on the MSU are on.
 - 4) Make sure that the DC lights on the MSU are on.
 - 5) After approximately 5 seconds, make sure that the MASTER CAUTION and IRS lights on the pilot's glareshield come on.
 - 6) After 5 minutes, make sure that:
 - a) The ALIGN and ON DC lights on the right side of the MSU are off.
 - b) The ALIGN and ON DC lights on the left side of the MSU are on.
- (d) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

- (e) Push the MASTER CAUTION switch on the pilot's glareshield to turn off the MASTER CAUTION and the IRS lights.
- (f) Set the left and right mode select switches on the MSU to the OFF position for at least 30 seconds.
- 1) Make sure that the ALIGN lights go off.
- (g) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC

- (h) Wait for approximately 2 seconds, then

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 515
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C01007	ADIRU LEFT AC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC

- (i) Set the STANDBY POWER switch on the P5 overhead panel to the AUTO position.

I. Discrete Interface Test

SUBTASK 34-21-00-860-046

- (1) Do these steps to do a Discrete Interface Test:

- (a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	15	C01050	FMCS CDU 2

- (b) Set the left and right mode select switches on the MSU to the NAV position.
- (c) Set the SYS DSPL switch on the ISDU to the PPOS position.
- 1) Make sure that the left and right ALIGN lights on the MSU are on.
- (d) Set the SYS DSPL switch on the ISDU to the L position.
- (e) Push the INIT REF key on the CDU 1.
- 1) Make sure that the PERF INIT page shows on the CDU 1.
- (f) Push the LSK 6L adjacent to the <INDEX prompt on the CDU.
- 1) Make sure that the INIT/REF INDEX page shows on the CDU 1.
- (g) Push the LSK 2L adjacent to the <POS prompt on the CDU.
- 1) Make sure that the POS INIT 1/3 page shows on the CDU 1.
- (h) Enter the latitude of N0000.0 and the longitude of E00000.0 on the CDU 1.
- 1) Make sure that the latitude and longitude show on the scratch pad of the CDU 1.
- (i) Push the LSK 4R adjacent to the POS> prompt on the CDU.
- 1) Make sure that the latitude and longitude show on the line 9 of the CDU 1.
- 2) Wait until the left and right ALIGN lights on the MSU start flashing.
- NOTE: This may take up to 10 minutes.
- NOTE: The ALIGN light will flash when the alignment time reaches zero on the ISDU.
- 3) Make sure that the ENTER IRS POSITION shows on the CDU 1.
- 4) Make sure that the latitude of N00°00.0' and the longitude of E000°00.0' show on the ISDU.
- (j) Set the SYS DSPL on the ISDU to the R position.
- 1) Make sure that the latitude of N00°00.0' and the longitude of E000°00.0' show on the ISDU.
- (k) Set the SYS DSPL on the ISDU to the L position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 516
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (l) Re-enter the latitude of N0000.0 and the longitude of E00000.0 on the CDU 1.
 - 1) Make sure that the latitude and longitude show on the scratch pad of the CDU 1.
- (m) Push the LSK 4R adjacent to the POS> prompt on the CDU.
 - 1) Make sure that the latitude and longitude show on the line 9 of the CDU 1.
 - 2) Make sure that the left and right ALIGN lights on the MSU come on steadily.
 - 3) Make sure that the left and right ALIGN lights start to flash.

NOTE: This may take up to 10 minutes.

NOTE: The ALIGN light will flash when the alignment time reaches zero on the ISDU.

SUBTASK 34-21-00-730-015

- (2) Do these steps to do a ISDU/FMC Digital and MCU Fault Discrete Interface Test:
 - (a) Enter the incorrect latitude of N00°00.0' on the ISDU.
 - (b) Push the ENT key on the ISDU to send the latitude data.
 - (c) Enter the correct longitude on the ISDU.

NOTE: The correct longitude is dependent on the location of the airplane.
 - (d) Push the ENT key on the ISDU to send the longitude data.
 - 1) Make sure that the left and right ALIGN and FAULT lights come on.
 - 2) Make sure that the MASTER CAUTION and the IRS lights on the glareshield come on.
 - (e) Enter the correct latitude on the ISDU.

NOTE: The correct latitude is dependent on the location of the airplane.
 - (f) Push the ENT key on the ISDU to send the latitude data.
 - (g) Enter the correct longitude on the ISDU.

NOTE: The correct longitude is dependent on the location of the airplane.
 - (h) Push the ENT key on the ISDU to send the longitude data.
 - 1) Make sure that the left and right FAULT lights go off.
 - (i) Push the MASTER CAUTION switch on the glareshield to turn off the MASTER CAUTION and the IRS lights.
 - (j) Set the DSPL SEL switch to the HDG/STS position.
 - 1) Make sure that there is no fault code shown on the ISDU.
 - 2) Make sure that the left ALIGN light on the MSU comes on steadily or goes off.
 - 3) Make sure that the aircraft true heading shows on the ISDU when the ALIGN light on the MSU went off.
 - (k) Set the SYS DSPL switch on the ISDU to the R position.
 - 1) Make sure that there is no fault code shown on the ISDU.
 - 2) Make sure that the right ALIGN light on the MSU comes on steadily or goes off.
 - 3) Make sure that the aircraft true heading shows on the ISDU when the ALIGN light on the MSU went off.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 517
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

J. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-00-860-047

- (1) Set the mode select switches on the MSU to the OFF position.

NOTE: Some switches must be pulled before you turn them. If you try to turn these switches before you pull them, you can damage them.

SUBTASK 34-21-00-860-048

- (2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	15	C01050	FMCS CDU 2

SUBTASK 34-21-00-860-049

- (3) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

————— END OF TASK —————

TASK 34-21-00-730-802

5. Air Data Reference - System Test

(Figure 501)

A. General

- (1) This task contains these tests:
- (a) ADM and Integrated Standby Flight Display test
 - (b) TAT probe and TAT probe heater test
 - (c) AOA interface test
 - (d) ALTERNATE VMO/MMO Switch test
 - (e) Alternate test for ALTERNATE VMO/MMO Switch.

B. References

<u>Reference</u>	<u>Title</u>
30-31-00-730-801	Pitot Probe, AOA Sensor, and TAT Probe Heater - System Test (P/B 501)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 518
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1562	Analyzer - Data Bus, ARINC 429 Part #: 01-1001-05 Supplier: 0Z3C6 Part #: 01-1001-12 Supplier: 0Z3C6 Part #: 403557 Supplier: CG603 Part #: 800-0630 Supplier: 1JSZ6 Part #: DT400H-01 Supplier: 0Z3C6 Part #: TYPE 030/026 Supplier: \$0494 Part #: UA1410 Supplier: 0H231 Opt Part #: 01-1001-10 Supplier: 0Z3C6 Opt Part #: 01-1404-00 Supplier: 41364 Opt Part #: 1116-4000-21 Supplier: A0197 Opt Part #: 429EBP Supplier: 41364 Opt Part #: 429EX Supplier: 41364 Opt Part #: 702125-01 Supplier: CG603 Opt Part #: DT400H Supplier: 0Z3C6 Opt Part #: MODEL 429HBA Supplier: 5J927
COM-1579	Analyzer - Databus, Datatrak Models 600, 650, 650H Part #: DT-600 Supplier: 0Z3C6 Opt Part #: 01-1405-00 Supplier: 41364 Opt Part #: 01-1406-00 Supplier: 41364 Opt Part #: 01-1407-00 Supplier: 41364 Opt Part #: 100-600-001 Supplier: 41364 Opt Part #: 100-650-001 Supplier: 41364 Opt Part #: 100-655-001 Supplier: 41364

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 519
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
SPL-1917	Fixture - Test, Angle of Attack Sensor, ROSEMOUNT AOA's Part #: J34002-19 Supplier: 81205 Opt Part #: A34012-19 Supplier: 81205 Opt Part #: A34012-24 Supplier: 81205 Opt Part #: J34002-18 Supplier: 81205
SPL-3896	Box - Breakout, Multipurpose, 100/124 pin Part #: C22005-22 Supplier: 81205
SPL-3897	Assembly - Cable, Flight Control Computer and/or Digital Flight Control System Testing Part #: C22005-32 Supplier: 81205
STD-1336	Thermometer - Digital, 0-150 +/- 2 Degrees F, with a Probe, Thermocouple or Equivalent

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 520
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Prepare for the System Test

SUBTASK 34-21-00-730-002

- (1) Examine each of the three air data pitot probes before and after this test for damage to the circular leading edge of its barrel and for blockage of drain holes.

SUBTASK 34-21-00-860-050

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-21-00-730-004



OBEY THESE PRECAUTIONS BEFORE YOU APPLY PRESSURE TO THE PITOT - STATIC SYSTEM. IF YOU DO NOT OBEY THESE PRECAUTIONS, DAMAGE TO THE EQUIPMENT AND INSTRUMENTS CAN OCCUR.

- (3) Obey these precautions before you apply pressure to the pitot-static system.
 - (a) Make sure that you supply the electrical power for the ADIRS before you make the static or total pressure hook-ups.
 - (b) Keep power on until all pressure hook-up are opened.
 - (c) Pressure changes must be flow controlled to prevent sudden changes in pressure and possible damage to the air data hardware.
 - (d) Keep the static pressure in the range of 3.26 to 33.31 inches Hg.
 - (e) Make sure that the static pressure is not more than 28 inches Hg. from the ambient pressure.
 - (f) Keep the total pressure in the range of 3.26 to 41.34 inches Hg.
 - (g) When you adjust the pressure, make sure that the rate of change of altitude is less than 5,000 feet per minute.
 - (h) When you adjust the pressure, make sure that the rate of change of airspeed is less than 300 knots per minute.
 - (i) Keep the static line pressure less than the pitot line pressure.
 - (j) Make sure that the difference between the static and pitot line pressure is not larger than 10 inches Hg.
 - (k) Make sure that the autopilot system stays off during the test.



MAKE SURE THAT YOU DO NOT SUPPLY ELECTRICAL POWER TO THE PITOT PROBE HEATER. THIS CAN CAUSE DAMAGE TO THE PITOT PROBE.

- (l) Make sure that the pitot probe heaters stay off during the test.
- (m) Connect the Captain's, F/O's, and alternate static systems together during the test.
- (n) Apply static pressure to all systems at the same time.
- (o) Connect the Captain's, F/O's, and alternate pitot tubes together during the test.
- (p) Apply pitot pressure to all systems at the same time.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 521
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-00-860-082



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (4) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel, P8, to STBY.

F. ADM and Integrated Standby Flight Display Test

SUBTASK 34-21-00-730-005

- (1) Do these steps to do an ADM and Integrated Standby Flight Display Test:
 - (a) Disconnect and plug the static pressure line at the cabin differential pressure indicator.
 - (b) Turn the altimeter BARO knobs on the captain's EFIS control panel, F/O's EFIS control panel, and standby altimeter through the full range.
 - (c) Set the altimeter BARO knobs on the captain's EFIS control panel, F/O's EFIS control panel, and standby altimeter to 29.92 inches of Hg.
 - (d) Make sure that the AOA vanes are set to zero degrees +/-5, with respect to the AOA sensor Alignment Pin.
 - (e) Connect the air data model test set, COM-1914, to the airplane.
 - (f) Apply pressures as shown in the table below for all the test points.

NOTE: At each test value, permit the pressure to become stable for one minute.

All values must be in the limits shown.

Do not hit or shake the indicators before you read the values.

Read the indicators at the same time for each value.

Make sure that the indicators move smoothly during pressure changes.

Table 501/34-21-00-993-801

Test Point	Static Pressure in. Hg	Altitude feet	Pitot Pressure in. Hg	Airspeed Knots
1	29.921	0	30.311	90
2	24.896	5,000	27.996	250
3	16.886	15,000	17.703	130
4	11.104	25,000	17.013	340
5	7.041	35,000	10.963	280
6	5.286	41,000	7.95	233

- 1) Make sure that all the outputs are within the limits specified in the table below.

NOTE: The altitude and airspeed values on primary flight deck indicators do not match the altitude and airspeed pressure from the test set. This is because the test set display does not use static source error correction.

- a) Use this table:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 522
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 502/34-21-00-993-802

Test Point	Primary Altitude feet	Primary Airspeed knots	Standby Altimeter feet	Standby Airspeed Knots
1	-38±15	85±2	0±30	90±3.5
2	4,688±25	238±2	5,000±70	250±5
3	14,880±25	123±2	15,000±110	130±3.5
4	23,887±50	325±2	25,000±160	340±8
5	33,930±60	267±2	35,000±210	279±6
6	40,018±70	222±2	41,000±235	233±6

- 2) Make sure that the differences between the Captain's and First Officer's primary altimeters and airspeed indicators are not larger than the values shown in the table below.

Table 503/34-21-00-993-803

Test Point	Altitude Input feet	Altimeters feet	Airspeed Input knots	Airspeed Indicators knots
1	0	<30	90	<4
2	5,000	<50	250	<4
3	15,000	<50	130	<4
4	25,000	<100	340	<4
5	35,000	<120	280	<4
6	41,000	<140	233	<4

- (g) Remove the pressure from the pitot static lines.
(h) Disconnect the air data model test set, COM-1914.
(i) Connect the cabin altitude differential pressure indicator to its static pressure source.

SUBTASK 34-21-00-210-001

- (2) Do a visual inspection of the quick-disconnect fittings that you connected as follows:
- (a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins.
- (b) Make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

G. TAT Probe and TAT Probe Heater Test

SUBTASK 34-21-00-860-051

- (1) Do these steps to do the TAT probe and TAT probe heater test:
- (a) Make sure that the air data model test set, COM-1914, test fixtures, adapters, and clamps were removed from the airplane external probes.
- (b) Use the 0-150 +/- 2 degrees F digital thermometer, STD-1336, to check the temperature of the TAT probe.
- (c) Wait until the temperature shown on the thermometer is steady, then record the TAT temperature value.
- (d) Record the TAT temperature shown on the engine display.

EFFECTIVITY
SIA ALL

34-21-00

D633AM101-SIA

Page 523
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (e) Make sure that the TAT temperature on the engine display is within 2° of the thermometer temperature.
- (f) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	4	C00236	HEATERS ELEV PITOT LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	4	C00237	HEATERS ELEV PITOT RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

- (g) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

- (h) Set the PROBE HEAT A switch on the forward overhead panel, P5, to the ON position.
- (i) Make sure that the TAT temperature on the engine display increases after you permit time for the heaters to warm up.
- (j) Set the PROBE HEAT A switch on the forward overhead panel, P5, to the OFF/AUTO position.
- (k) Connect the analyzer, COM-1562, or databus analyzer, COM-1579, to the FCC-A test connector J3, pin 51 (HI) and pin 52 (LO) to read the left ADIRU output, ADR label 270.
NOTE: A box, SPL-3896, and cable, SPL-3897, can be used to connect the data bus analyzer and the flight control computer.
- (l) Set the PROBE HEAT A switch on the forward overhead panel, P5, to the ON position.
 - 1) Make sure that the ADR label 270 bits 14, 16, and 17 are set to "1".
- (m) Set the PROBE HEAT A switch on the forward overhead panel, P5, to the OFF/AUTO position.
 - 1) Make sure that the ADR label 270 bits 14, 16, and 17 are set to "0".
- (n) Remove the analyzer, COM-1562, or databus analyzer, COM-1579, from the FCC-A test connector J3.
NOTE: Disconnect the box, SPL-3896, and cable, SPL-3897, if you used them to connect the data bus analyzer and the flight control computer.
- (o) Connect the analyzer, COM-1562, or databus analyzer, COM-1579, to the FCC-B test connector J3, pin 51 (HI) and pin 52 (LO) to read the right ADIRU output, ADR label 270.
NOTE: A box, SPL-3896, and cable, SPL-3897, can be used to connect the data bus analyzer and the flight control computer.



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (p) Close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT

- (q) Set the PROBE HEAT B switch on the forward overhead panel, P5, to the ON position.
1) Make sure that the ADR label 270 bits 14, and 17 are set to "1".
- (r) Set the PROBE HEAT A switch on the forward overhead panel, P5, to the ON position.
1) Make sure that the ADR label 270 bit 16 is set to "1".
- (s) Set the PROBE HEAT B switch on the forward overhead panel, P5, to the OFF/AUTO position.
1) Make sure that the ADR label 270 bits 14, and 17 are set to "0".
- (t) Set the PROBE HEAT A switch on the forward overhead panel, P5, to the OFF/AUTO position.
1) Make sure that the ADR label 270 bit 16 is set to "0".
- (u) Remove the analyzer, COM-1562, or databus analyzer, COM-1579, from the FCC-B test connector J3.
NOTE: Disconnect the box, SPL-3896, and cable, SPL-3897, if you used them to connect the data bus analyzer and the flight control computer.
- (v) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	4	C00236	HEATERS ELEV PITOT LEFT
D	4	C00237	HEATERS ELEV PITOT RIGHT
D	6	C00524	HEATERS AUX PITOT

H. AOA Interface Test

 WARNING	MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

SUBTASK 34-21-00-480-001

- (1) Install an angle of attack probe test fixture, SPL-1917, on the applicable AOA sensor.

SUBTASK 34-21-00-730-010

- (2) Push the INIT REF key on the CDU keyboard.
- (a) Push the Line Select Key (LSK) that is adjacent to each selection:
- 1) INDEX
 - 2) MAINT
 - 3) DFCS
 - 4) EXTENDED MAINTENANCE
 - 5) SENSOR VALUES
 - 6) DIGITAL SIGNALS

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 525
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- 7) ADIRU-LCL (ADC-BUS)
- 8) ALPHA (221)
 - A is the left AOA (values are shown in degrees)
 - B is the right AOA (values are shown in degrees)

SUBTASK 34-21-00-730-011

- (3) For the left AOA sensor (alpha vane) do the steps that follow:
 - (a) Move the applicable AOA sensor vane to 0°.
 - 1) Make sure that the value for the A side displayed on the CDU is within the limits below:
 - a) Limits: -1° to +1°
 - (b) Move the AOA sensor vane, trailing edge up, to 30°.
 - 1) Make sure that the value for the A side displayed on the CDU is within the limits below:
 - a) Limits: +29° to +31°
 - (c) Move the AOA sensor, trailing edge down, to -30°.
 - 1) Make sure that the value for the A side displayed on the CDU is within the limits below:
 - a) Limits: -31° to -29°

SUBTASK 34-21-00-730-012

- (4) For the right AOA sensor (alpha vane) do the steps that follow:
 - (a) Move the applicable AOA sensor vane to 0°.
 - 1) Make sure that the value for the B side displayed on the CDU is within the limits below:
 - a) Limits: -1° to +1°
 - (b) Move the AOA sensor vane, trailing edge up, to 30°.
 - 1) Make sure that the value for the B side displayed on the CDU is within the limits below:
 - a) Limits: +29° to +31°
 - (c) Move the AOA sensor, trailing edge down, to -30°.
 - 1) Make sure that the value for the B side displayed on the CDU is within the limits below:
 - a) Limits: -31° to -29°

SUBTASK 34-21-00-730-013

- (5) Push the LSK adjacent to EXIT until you get out of the BITE test.
NOTE: If there are instructions on the CDU display, do the instructions that show on the CDU display.

SUBTASK 34-21-00-080-001

- (6) Remove the angle of attack probe test fixture, SPL-1917, from the applicable AOA sensor.

SUBTASK 34-21-00-730-014

- (7) Do this task: Pitot Probe, AOA Sensor, and TAT Probe Heater - System Test, TASK 30-31-00-730-801.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-00

Page 526
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

I. ALTERNATE VMO/MMO Switch Test

SUBTASK 34-21-00-860-052

- (1) Do these steps to do the ALTERNATE VMO/MMO switch test:
 - (a) Connect the analyzer, COM-1562, or databus analyzer, COM-1579, to the FCC-A test connector J3, pin 51(HI) and pin 52(LO) to read the left ADIRU output, ADR label 270.
 - (b) Make sure that the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, is set to the NORM position.
 - 1) Make sure that the ADR label 270 bit 23 is set to "0".
 - (c) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the ALTN position.
 - 1) Make sure that the ADR label 270 bit 23 is set to "1".
 - (d) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the NORM position.
 - 1) Make sure that the ADR label 270 bit 23 is set to "0".
 - (e) Remove the analyzer, COM-1562, or databus analyzer, COM-1579, from the FCC-A test connector J3.
 - (f) Connect the analyzer, COM-1562, or databus analyzer, COM-1579, to the FCC-B test connector J3, pin 51(HI) and pin 52(LO) to read the right ADIRU output, ADR label 270.
 - (g) Make sure that the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, is set to the NORM position.
 - 1) Make sure that the ADR label 270 bit 23 is set to "0".
 - (h) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the ALTN position.
 - 1) Make sure that the ADR label 270 bit 23 is set to "1".
 - (i) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the NORM position.
 - 1) Make sure that the ADR label 270 bit 23 is set to "0".
 - (j) Remove the analyzer, COM-1562, or databus analyzer, COM-1579, from the FCC-B test connector J3.

J. Alternate Test for ALTERNATE VMO/MMO Switch (Without ARINC 429 Data Bus analyzer)

SUBTASK 34-21-00-860-078

- (1) Do these steps to do the ALTERNATE VMO/MMO switch test:
 - (a) Navigate to FMC CDU MAINT BITE Index page, then select ADIRS.
 - (b) Push LSK to select ADIRS L for the left ADIRU.

NOTE: This is to perform switch test for left ADIRU. For right ADIRU it is necessary to select ADIRS R.
 - (c) Push LSK 5L to select INPUT MONITORING.
 - (d) Push LSK 2L to select ADR PROGRAM PIN STATUS.
 - (e) Navigate to page 3/6.

NOTE: There are 6 pages of ADR program pin status.
 - (f) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the NORM position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 527
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the VMO/MMO 2 pin F3 discrete is displayed as OP (Open).

NOTE: In normal operating condition the VMO/MMO 1 through 4 are open.

- (g) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the ALTN position.
 - 1) Make sure that the VMO/MMO 2 pin F3 discrete is displayed as GN (Ground).
- (h) Set the ALTERNATE VMO/MMO switch in the EE bay service panel, Maintenance Zone 118, to the NORM position.
 - 1) Make sure that the VMO/MMO 2 pin F3 discrete is displayed as OP (Open).
- (i) Do the same ALTERNATE VMO/MMO switch test for the right ADIRU.
 - 1) Make sure to push LSK to select ADIRS R for the right ADIRU.

K. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-00-860-053

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

Close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	15	C00426	ADIRU RIGHT EXC

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

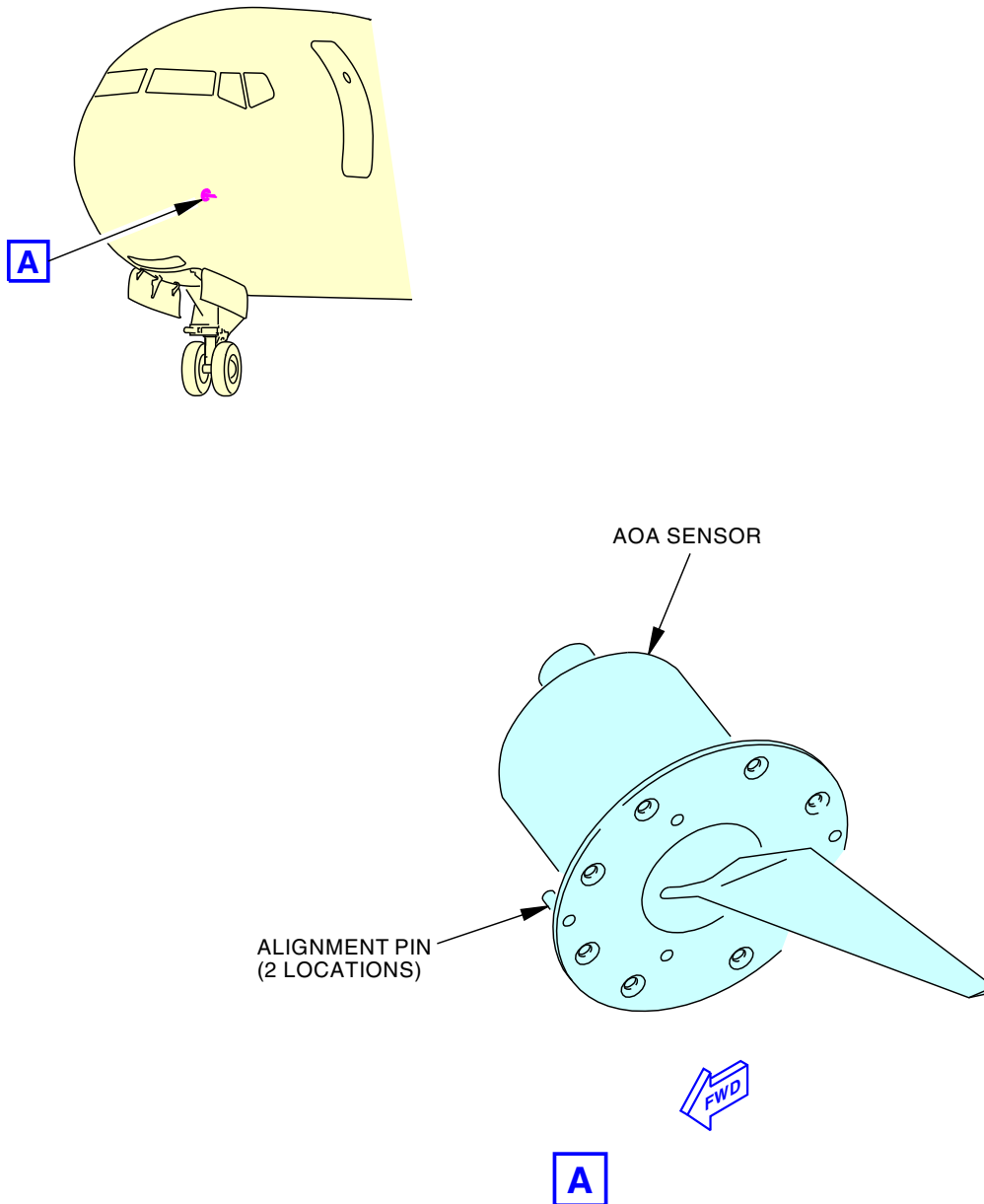
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 528
May 15/2023

BOEING
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



NOTE:
LEFT AOA SENSOR IS SHOWN, RIGHT AOA SENSOR IS OPPOSITE.

2414818 S00061536093_V1

Angle of Attack (AOA) Alignment
Figure 501/34-21-00-990-802

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-00

Page 529
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR DATA INERTIAL REFERENCE UNIT - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:


CAUTION

DUE TO THE CRITICAL ALIGNMENT OF THE AIR-DATA INERTIAL-REFERENCE UNITS, DISTURBANCE OR REMOVAL OF THE E5-2 SHELF REQUIRES RE-ALIGNMENT. THIS CAN ONLY BE ACCOMPLISHED BY BOEING AOG PERSONNEL USING SPECIALIZED ALIGNMENT TOOLING. CONTACT BOEING BEFORE DISTURBING THE MOUNTING SHELVES.

- (1) A removal of the air data inertial reference unit (ADIRU)
- (2) An installation of the ADIRU.

B. Two ADIRUs are installed in the main equipment center. The left and right ADIRUs are installed on shelf No. 2 in the E5 electronic equipment rack.

TASK 34-21-01-000-801

2. **Air Data Inertial Reference Unit Removal**

(Figure 401)


CAUTION

DUE TO THE CRITICAL ALIGNMENT OF THE AIR-DATA INERTIAL-REFERENCE UNITS, DISTURBANCE OR REMOVAL OF THE E5-2 SHELF REQUIRES RE-ALIGNMENT. THIS CAN ONLY BE ACCOMPLISHED BY BOEING AOG PERSONNEL USING SPECIALIZED ALIGNMENT TOOLING. CONTACT BOEING BEFORE DISTURBING THE MOUNTING SHELVES.

A. General

- (1) This procedure gives instructions to remove the air data inertial reference unit (ADIRU [1]).
- (2) The removal instructions are the same for the two ADIRUs [1].

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
20-10-07-000-801	E/E Box Removal (P/B 401)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Removal Procedure

SUBTASK 34-21-01-860-001

- (1) Set the applicable mode select switch on the IRS mode select unit (MSU) to the OFF position for at least 30 seconds.

EFFECTIVITY
SIA ALL

34-21-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-01-860-002

- (2) For the left ADIRU, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

- (3) For the right ADIRU, open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-01-010-001

- (4) To get access to the main equipment center, open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

(TASK 06-41-00-800-801).

SUBTASK 34-21-01-020-001



DO NOT REMOVE THE SHIMS FROM THE SHELF. SPECIAL EQUIPMENT AND BOEING AID IS NECESSARY TO ALIGN THE SHELF, IF YOU REMOVE THE SHIMS. YOU CANNOT ALIGN THE SHELF IF YOU REMOVE THE SHIMS. IF YOU REMOVE THE SHIMS, THE AIR DATA WILL NOT BE ACCURATE, WHICH CAN CAUSE PROBLEMS WITH SAFETY OF FLIGHT.



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ADIRU. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ADIRU.



REMOVAL OF THE ADIRU WILL DISABLE THE GROUND CREW CALL FUNCTION OF THE EQUIPMENT COOLING LOW FLOW DETECTION. THIS COOLING LOW FLOW CONDITION COULD CAUSE DAMAGE TO THE EQUIPMENT.

- (5) Remove the ADIRU [1] from the shelf (TASK 20-10-07-000-801).

————— **END OF TASK** —————

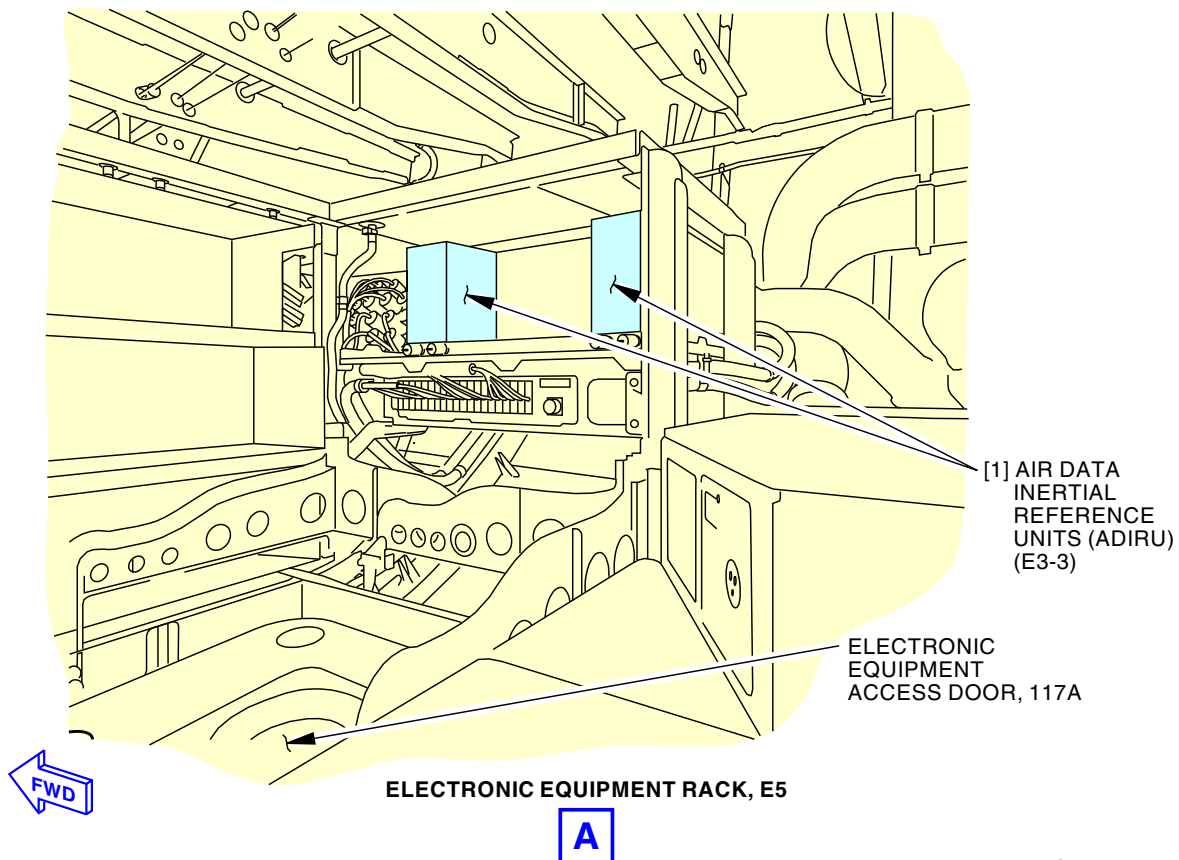
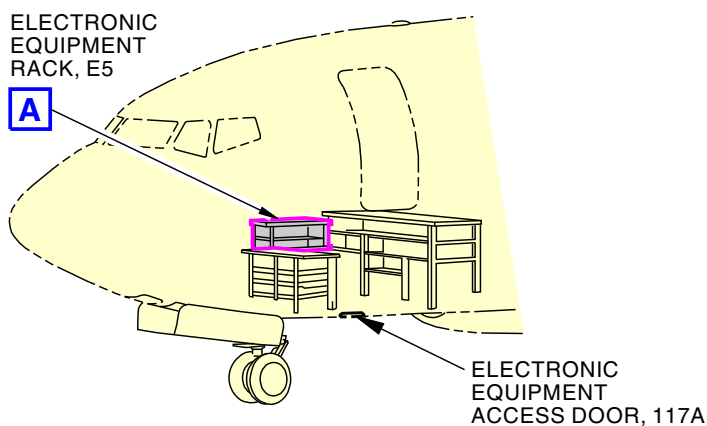
EFFECTIVITY
SIA ALL

34-21-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2021



2414819 S00061536097_V2

Air Data Inertial Reference Unit (ADIRU) Installation
Figure 401/34-21-01-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-01

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-01-400-801

3. Air Data Inertial Reference Unit Installation

(Figure 401)

A. General

- (1) This procedure gives instructions to install the ADIRU [1].

NOTE: The air data inertial reference unit is referred as the ADIRU [1] in this task.

- (2) The installation instructions are the same for the two ADIRUs [1].
(3) The installation test makes sure that the ADIRU [1] is installed correctly.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
20-10-07-400-801	E/E Box Installation (P/B 401)
34-21-00-710-801	Air Data Inertial Reference System - Operational Test (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	ADIRU	34-21-01-01-005	SIA ALL

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Installation Procedure

SUBTASK 34-21-01-860-003

- (1) Make sure the applicable mode select switch on the IRS MSU is in the OFF position.

SUBTASK 34-21-01-860-004

- (2) For the left ADIRU, make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

EFFECTIVITY
SIA ALL

34-21-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (3) For the right ADIRU, make sure that these circuit breakers are open:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-01-420-001



DO NOT REMOVE THE SHIMS FROM THE SHELF. SPECIAL EQUIPMENT AND BOEING AID IS NECESSARY TO ALIGN THE SHELF, IF YOU REMOVE THE SHIMS. YOU CANNOT ALIGN THE SHELF IF YOU REMOVE THE SHIMS. IF YOU REMOVE THE SHIMS, THE AIR DATA WILL NOT BE ACCURATE, WHICH CAN CAUSE PROBLEMS WITH SAFETY OF FLIGHT.



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ADIRU. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ADIRU.

- (4) Install the ADIRU [1] on the shelf (TASK 20-10-07-400-801).

SUBTASK 34-21-01-860-005

- (5) For the left ADIRU, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

- (6) For the right ADIRU, remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-01-410-001

- (7) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

(TASK 06-41-00-800-801).

G. Installation Test

SUBTASK 34-21-01-741-001

- (1) Do this task: Air Data Inertial Reference System - Operational Test, TASK 34-21-00-710-801

EFFECTIVITY
SIA ALL

34-21-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-01-860-007

- (2) For the applicable ADIRU [1], do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-21-01-860-008

- (3) Set the applicable mode select switch on the IRS MSU to the OFF position for at least 30 seconds.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-01

Page 406
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

INERTIAL SYSTEM DISPLAY UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
- (1) A removal of the inertial system display unit (ISDU)
 - (2) An installation of the ISDU.
- B. The ISDU is installed on the P5-70 overhead panel in the flight compartment.

TASK 34-21-02-000-801

2. Inertial System Display Unit Removal

(Figure 401)

A. General

- (1) This procedure gives instructions to remove the inertial system display unit [1].

B. Location Zones

Zone	Area

211	Flight Compartment - Left

C. Inertial System Display Unit Removal

SUBTASK 34-21-02-860-001

- (1) Set the two mode select switches on the IRS mode select unit (MSU) to the OFF position for at least 30 seconds.

SUBTASK 34-21-02-860-002

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-02-020-001

- (3) Do these steps to remove the inertial system display unit [1]:
 - (a) Release the quarter-turn fasteners [2] on the front of the inertial system display unit [1].

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-02

Page 401
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**



CAUTION

CAREFULLY REMOVE THE ISDU FROM THE INSTRUMENT PANEL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE ELECTRICAL CABLES ON THE REAR OF THE ISDU.

- (b) Carefully lower the inertial system display unit [1] until you can get access to the electrical connectors [3].
- (c) Disconnect the electrical connectors [3] from the rear of the inertial system display unit [1].

———— **END OF TASK** ————

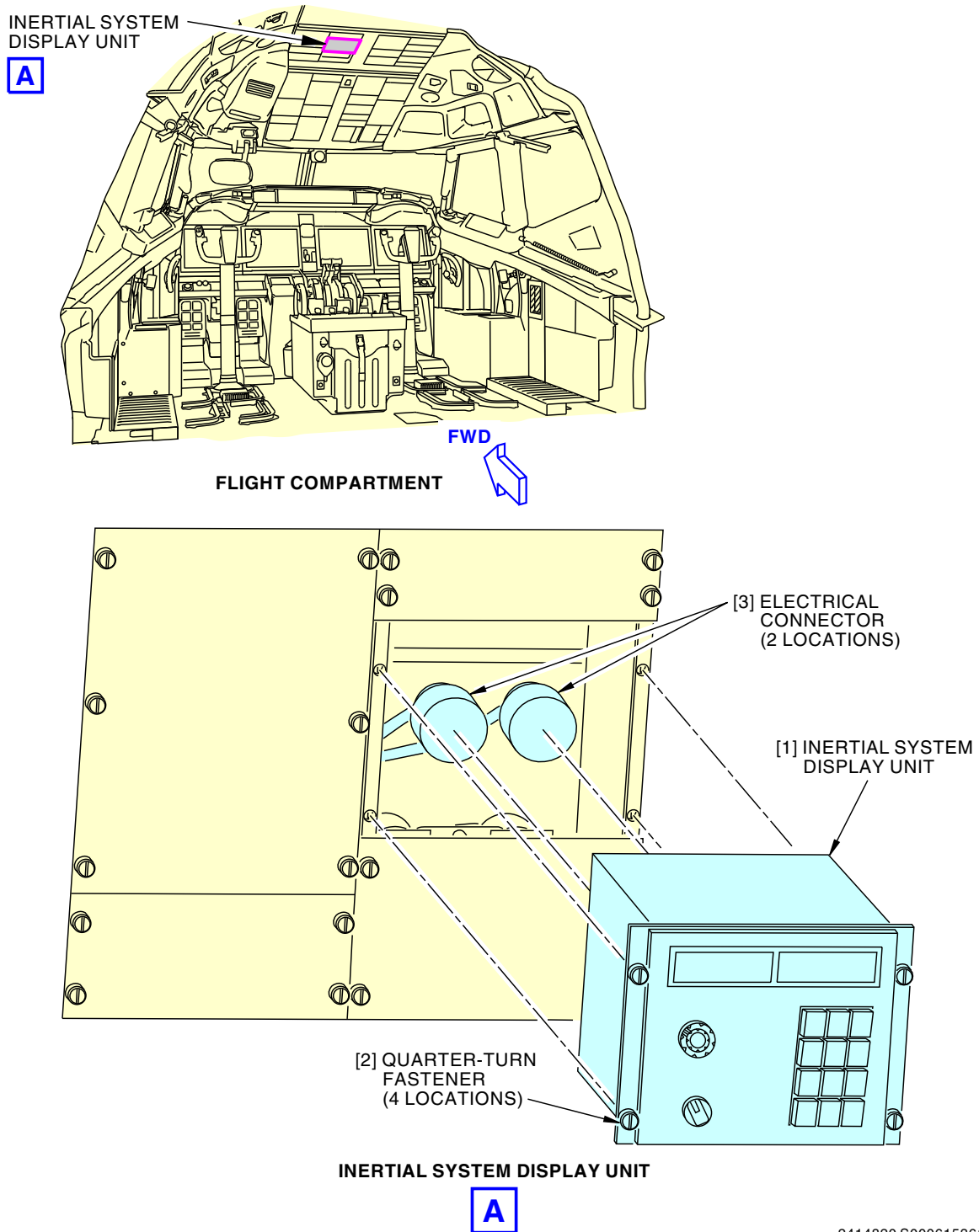
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-02

Page 402
Sep 15/2021



2414820 S00061536102_V1

Inertial System Display Unit Installation
Figure 401/34-21-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-02

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-02-400-801

3. Inertial System Display Unit Installation

(Figure 401)

A. General

- (1) This procedure gives instructions to install the inertial system display unit [1].

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Inertial system display unit	34-21-02-01-050	SIA ALL

C. Location Zones

Zone	Area
211	Flight Compartment - Left

D. Inertial System Display Unit Installation

SUBTASK 34-21-02-860-003

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-02-420-001

- (2) Do these steps to install the inertial system display unit [1]:
- (a) Connect the electrical connectors [3] to the inertial system display unit [1].
 - (b) Carefully install the inertial system display unit [1] into the P5–70, aft overhead panel.
 - (c) Lock the quarter-turn fasteners [2] on the front of the inertial system display unit [1].

SUBTASK 34-21-02-860-004

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

EFFECTIVITY
SIA ALL

34-21-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

E. Installation test

SUBTASK 34-21-02-860-006

- (1) Set the two mode select switches on the IRS MSU to the NAV position.

SUBTASK 34-21-02-710-001

- (2) Do a test of the inertial system display unit [1] as follows:
- (a) Set the SYS DSPL switch on the inertial system display unit [1] to the L position.
 - (b) Hold the DSPL SEL switch on the inertial system display unit [1] in the TEST position.
 - (c) Make sure all the annunciators on the left side of the IRS MSU come on for approximately two seconds.
 - (d) Release the DSPL SEL switch.
 - (e) Set the SYS DSPL switch on the inertial system display unit [1] to the R position.
 - (f) Hold the DSPL SEL switch on the inertial system display unit [1] in the TEST position.
 - (g) Make sure all the annunciators on the right side of the IRS MSU come on for approximately two seconds.
 - (h) Release the DSPL SEL switch.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-02-860-007

- (1) Set the two mode select switches on the IRS MSU to the OFF position for at least 30 seconds.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-02

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

IRS MODE SELECT UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) IRS Mode Select Unit Removal
 - (2) IRS Mode Select Unit Installation.
- B. The IRS mode select unit (MSU) is installed on the P5-69 aft overhead panel in the flight compartment.
- C. Each mode select switch has a mechanically locked position. The mechanically locked positions prevent accidental movement of the switch. When you change the switch position, you need to pull the switch away from the unit and set the switch to the different position. This will prevent damage to the switch.

TASK 34-21-03-000-801

2. IRS Mode Select Unit Removal

(Figure 401)

A. **General**

- (1) This procedure gives instructions to remove the IRS mode select unit [2].

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left

C. **IRS Mode Select Unit Removal**

SUBTASK 34-21-03-860-001

- (1) Set the two mode select switches on the IRS mode select unit [2] to the OFF position.

SUBTASK 34-21-03-860-002

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

SUBTASK 34-21-03-020-001

- (3) Do these steps to remove the IRS mode select unit [2]:
 - (a) Release the quarter-turn fasteners [3] on the front of the IRS mode select unit [2].



CAUTION

CAREFULLY REMOVE THE IRS MSU FROM THE INSTRUMENT PANEL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE ELECTRICAL CABLE AT THE REAR OF THE IRS MSU.

- (b) Carefully lower the IRS mode select unit [2] until you can get access to the electrical connectors [1].
- (c) Disconnect the electrical connectors [1] from the rear of the IRS mode select unit [2].

———— **END OF TASK** ————

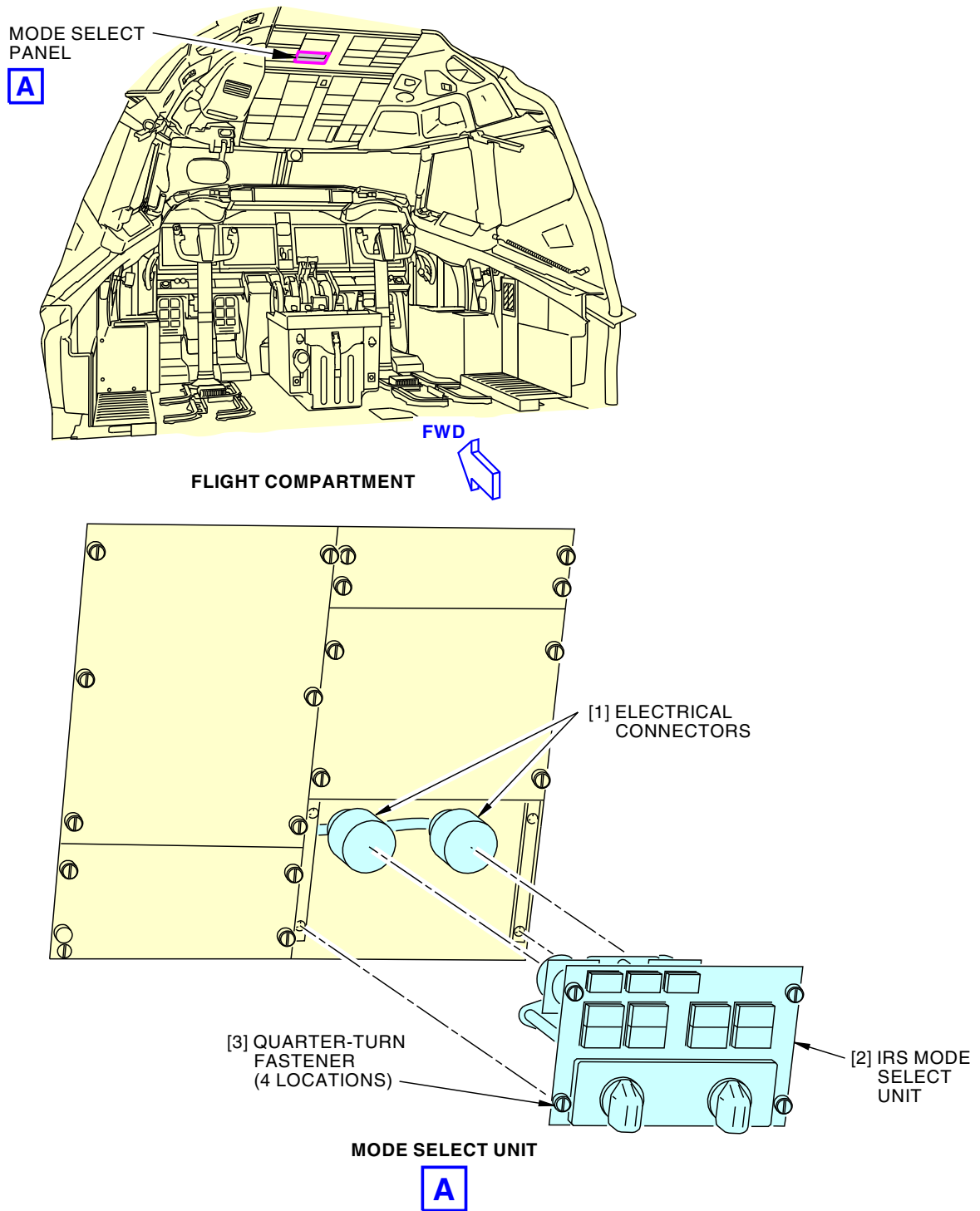
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-03

Page 401
Sep 15/2021



2414821 S00061536107_V1

Mode Select Unit (MSU) Installation
Figure 401/34-21-03-990-801

EFFECTIVITY
SIA ALL

34-21-03

Page 402
Sep 15/2021

D633AM101-SIA



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-03-400-801

3. **IRS Mode Select Unit Installation**

(Figure 401)

A. General

- (1) This procedure gives instructions to install the IRS mode select unit [2].
- (2) The installation test makes sure the IRS mode select unit [2] is installed correctly.

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	IRS mode select unit	34-21-03-01-050	SIA ALL

C. Location Zones

Zone	Area
211	Flight Compartment - Left

D. IRS Mode Select Unit Installation

SUBTASK 34-21-03-860-003

- (1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

SUBTASK 34-21-03-420-001

- (2) Do these steps to install the IRS mode select unit [2]:
 - (a) Connect the electrical connectors [1] to the IRS mode select unit [2].
 - (b) Carefully install the IRS mode select unit [2] into the P5-69, aft overhead panel.
 - (c) Lock the quarter-turn fasteners [3] on the front of the IRS mode select unit [2].

SUBTASK 34-21-03-860-004

- (3) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

E. Installation Test

SUBTASK 34-21-03-860-006

- (1) Set the two mode select switches on the IRS mode select unit [2] to the NAV position.

SUBTASK 34-21-03-750-001

- (2) Make sure the two ON DC annunciators on the IRS mode select unit [2] come on for approximately 5 seconds.

SUBTASK 34-21-03-750-002

- (3) Make sure the two ALIGN annunciators on the IRS mode select unit [2] come on after the two ON DC annunciators go off.

NOTE: It is acceptable for the ALIGN annunciators to come on before or after the ON DC lights go off.

SUBTASK 34-21-03-750-003

- (4) Adjust the Overhead Panel Light Bright/Dim Control Switch from the off position to the fully bright position.

EFFECTIVITY
SIA ALL

34-21-03

D633AM101-SIA

Page 403
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the panel lights on the IRS mode select unit [2] become brighter.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-03-860-007

- (1) Set the two mode select switches on the IRS mode select unit [2] to the OFF position for at least 30 seconds.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-03

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR DATA MODULE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the pitot air data module (ADM)
- (2) An installation of the pitot ADM
- (3) A removal of the static ADM
- (4) An installation of the static ADM.

TASK 34-21-04-000-801

2. Pitot Air Data Module Removal

(Figure 401)

A. General

- (1) This procedure gives instructions to remove the pitot ADM [4]. The two pitot ADMs [4] are located in the forward equipment compartment at approximately STA 200, WL 175. They are accessed thru the forward equipment access door.
- (2) The removal instructions are the same for the two pitot ADMs [4].

B. Tools/Equipment

Reference	Description
STD-7394	Cap - Dust, Electrical Connector

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

D. Pitot Air Data Module Removal

SUBTASK 34-21-04-860-001

- (1) For the left ADM [4], open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

- (2) For the right ADM [4], open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-04-020-001

- (3) Do these steps to remove the pitot ADM [4]:

- (a) Disconnect the pneumatic connector [3] from the ADM [4].

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Put a protective cover on the pneumatic connector [3] of the ADM [4].
- (c) Disconnect the electrical connector [2] from the ADM [4].
- (d) Put a dust cap, STD-7394, on the electrical connector [2] of the ADM [4].
- (e) While you hold the ADM [4], loosen the captive screws [1] at each corner of the ADM [4].
- (f) Remove the ADM [4].

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

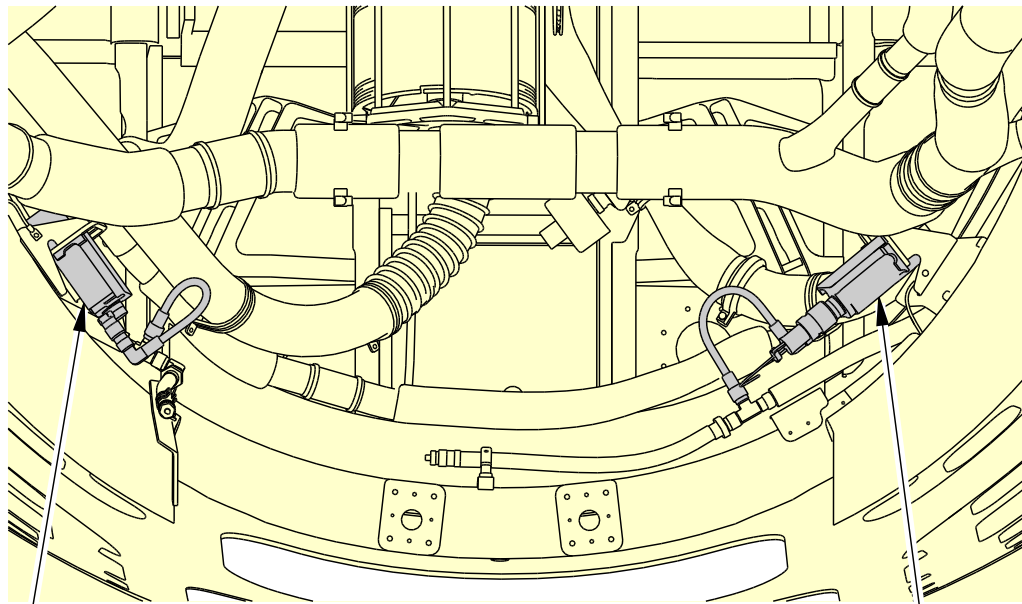
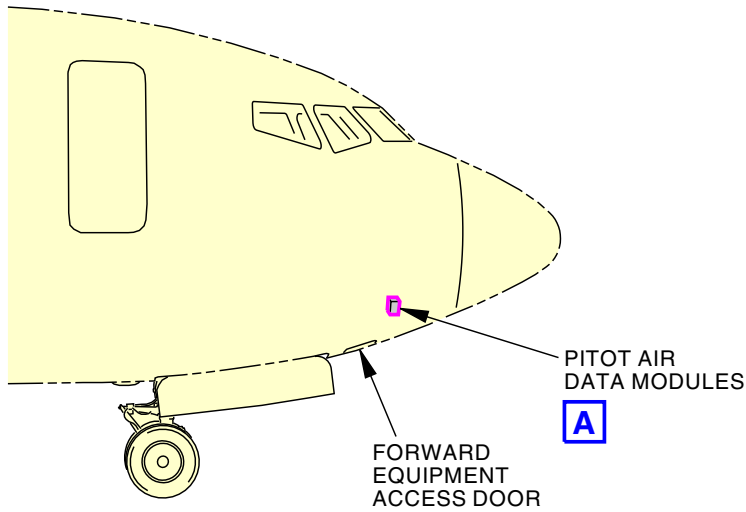
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 402
Sep 15/2021

BOEING
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



LEFT
PITOT ADM

B

FORWARD EQUIPMENT COMPARTMENT

A

FWD

RIGHT
PITOT ADM

B

2414822 S00061536112_V1

Pitot Air Data Module (ADM) Installation
Figure 401/34-21-04-990-801 (Sheet 1 of 2)

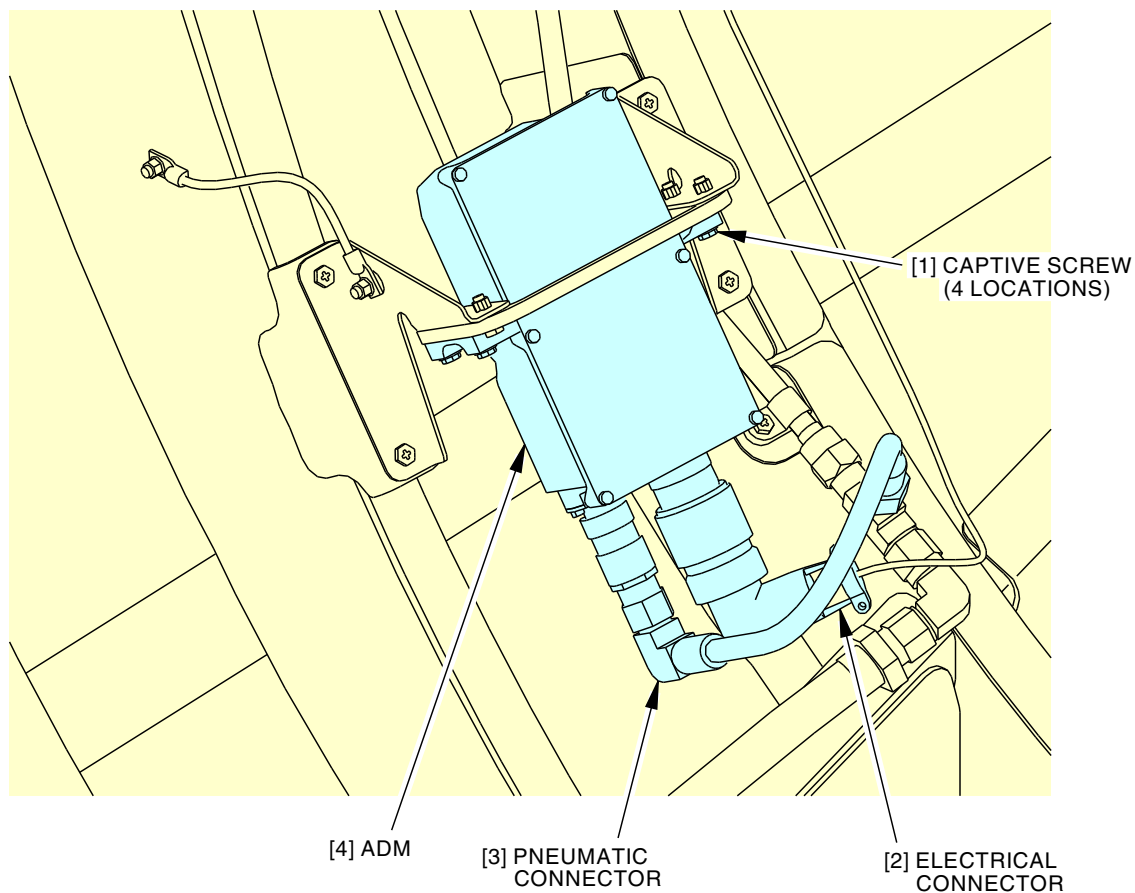
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 403
Sep 15/2021



PITOT AIR DATA MODULE (ADM)
(EXAMPLE)

B



2414823 S00061536113_V1

Pitot Air Data Module (ADM) Installation
Figure 401/34-21-04-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 404
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-04-400-801

3. Pitot Air Data Module Installation

(Figure 401)

A. General

- (1) This procedure gives instructions to install the pitot ADM [4]. The two pitot ADMs [4] are located in the forward equipment compartment at STA 200, WL 180. They are accessed thru the forward equipment access door.
- (2) The installation instructions are the same for the two pitot ADMs [4].

B. References

Reference	Title
34-21-00-710-801	Air Data Inertial Reference System - Operational Test (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. Tools/Equipment

Reference	Description
STD-7394	Cap - Dust, Electrical Connector

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	ADM	34-21-04-04-010	SIA ALL
		34-21-04-05-005	SIA ALL

E. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well

F. Pitot Air Data Module Installation

SUBTASK 34-21-04-860-002

- (1) For the left ADM [4], make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

- (2) For the right ADM [4], make sure that these circuit breakers are open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC

EFFECTIVITY
SIA ALL

34-21-04

D633AM101-SIA

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-04-420-001

- (3) Do these steps to install the pitot ADM [4]:
- Put the ADM [4] into position on the airplane.
 - Tighten the captive screws [1] at each corner of the ADM [4] to 15 in-lb (1.7 N·m) to 25 in-lb (2.8 N·m).
 - Remove the dust cap, STD-7394, from the electrical connector [2] of the ADM [4].
 - Examine the electrical connector [2] for loose, bent or broken pins.
 - Connect the electrical connector [2] to the ADM [4].
 - Remove the protective cover from the pneumatic connector [3] of the ADM [4].
 - Connect the pneumatic connector [3] to the ADM [4].

SUBTASK 34-21-04-210-001

- (4) Make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fittings.

SUBTASK 34-21-04-860-003

- (5) For the left ADM [4], remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

- (6) For the right ADM [4], remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

G. Pitot Air Data Module Installation Test

SUBTASK 34-21-04-860-004

- (1) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-21-04-740-001

- (2) Do this task: Air Data Inertial Reference System - Operational Test, TASK 34-21-00-710-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-21-04

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-04-000-802

4. Static Air Data Module Removal

(Figure 402)

A. General

- (1) This procedure gives instructions to remove the static ADM [4]. The two static ADMs [4] are located in the forward cargo compartment at STA 405 and STA 435, WL 206, BL 0. They are accessed thru the forward cargo door.
- (2) The removal instructions are the same for the two static ADMs [4].

B. References

Reference	Title
50-10-03-000-801	Cargo Compartment Ceiling Liner Removal (P/B 401)

C. Tools/Equipment

Reference	Description
STD-7394	Cap - Dust, Electrical Connector

D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right

E. Static Air Data Module Removal

SUBTASK 34-21-04-860-005

- (1) For the left ADM [4], open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

- (2) For the right ADM [4], open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-04-010-001

- (3) Remove the ceiling liner for the applicable static ADM [4] in the forward cargo compartment (TASK 50-10-03-000-801).

SUBTASK 34-21-04-020-002

- (4) Do these steps to remove the static ADM [4]:
 - (a) Disconnect the pneumatic connector [3] from the ADM [4].
 - (b) Put a protective cover on the pneumatic connector [3] of the ADM [4].

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 407
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Disconnect the electrical connector [2] from the ADM [4].
- (d) Put a dust cap, STD-7394, on the electrical connector [2] of the ADM [4].
- (e) While you hold the ADM [4], loosen the captive screws [1] at each corner of the ADM [4].
- (f) Remove the ADM [4].

———— **END OF TASK** ————

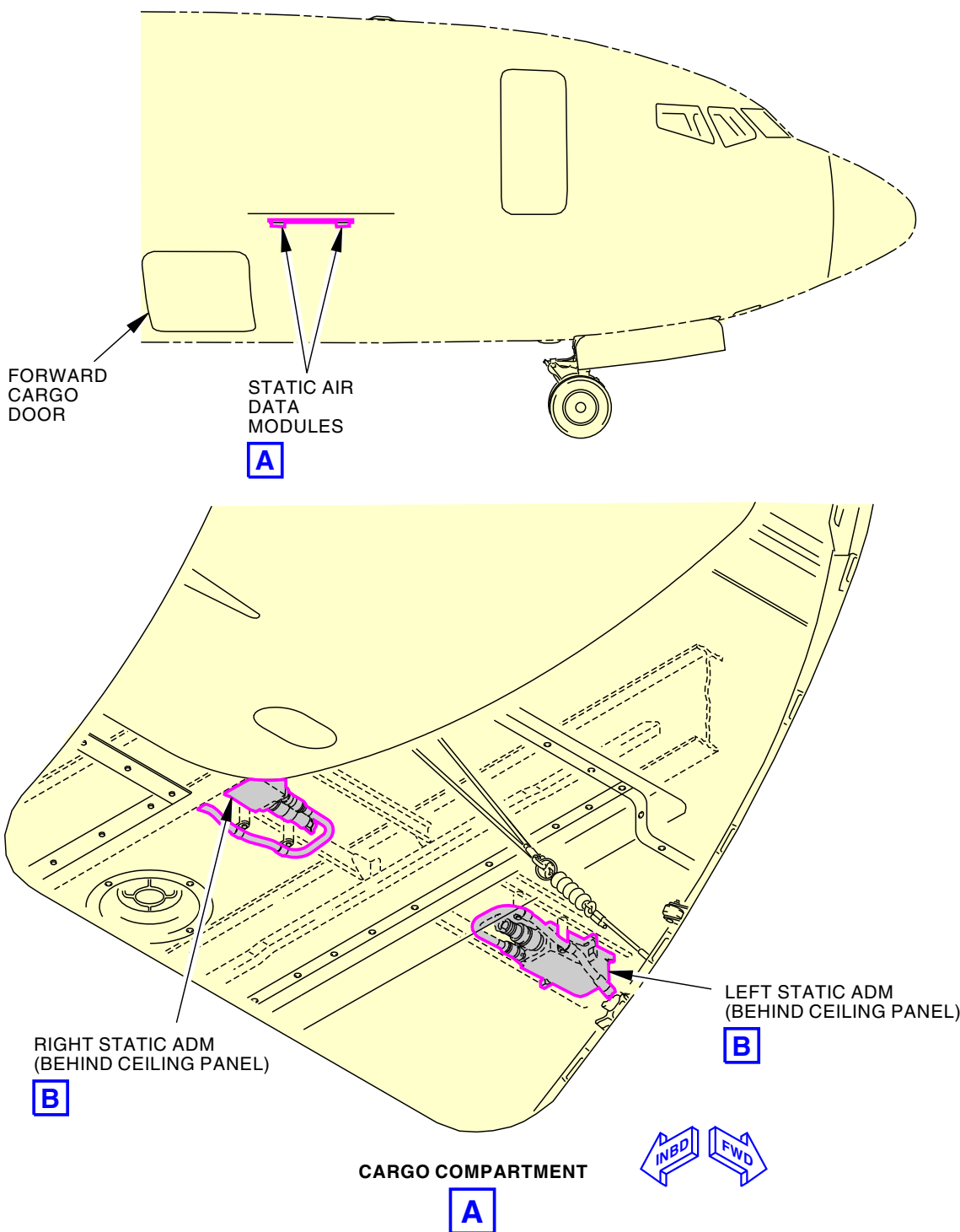
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 408
Sep 15/2021



2414824 S00061536116_V1

Static Air Data Module (ADM) Installation
Figure 402/34-21-04-990-802 (Sheet 1 of 2)

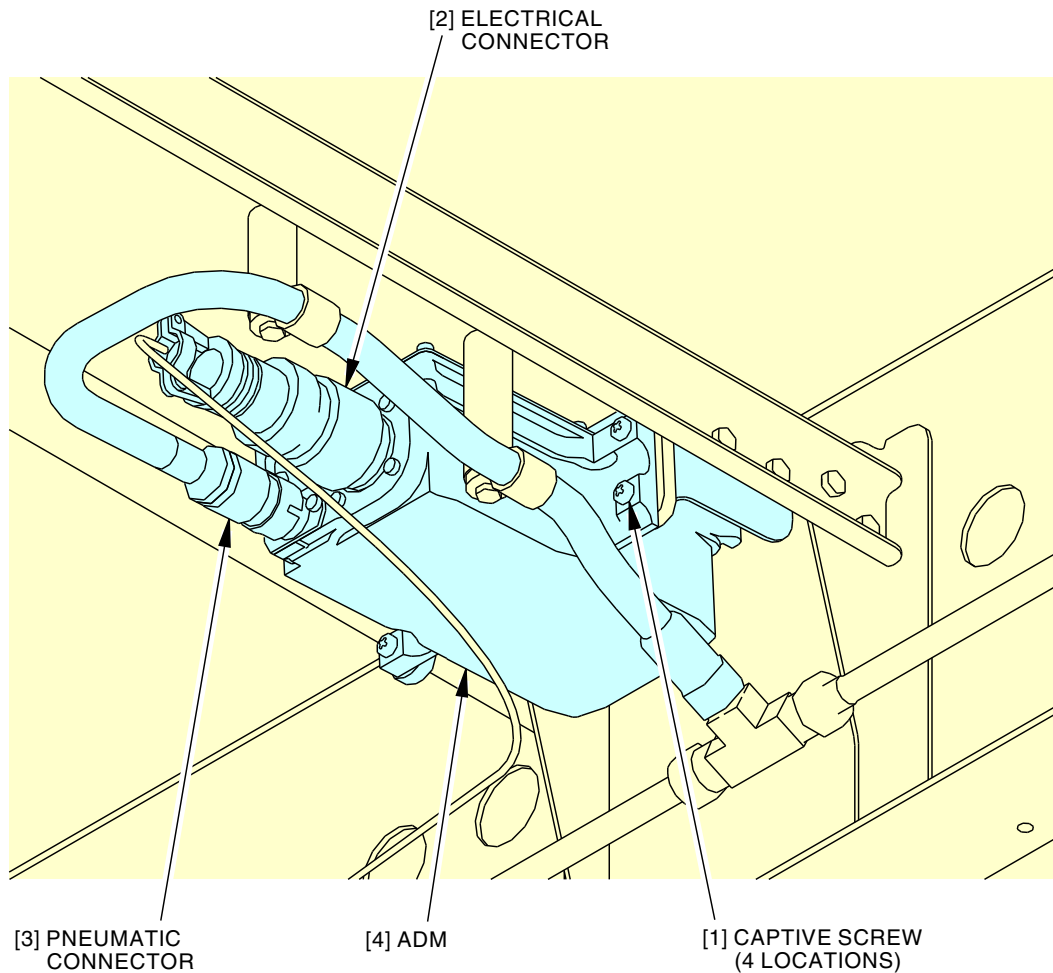
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 409
Sep 15/2021



STATIC AIR DATA MODULE (ADM)
(EXAMPLE)

B



2414825 S00061536117_V1

Static Air Data Module (ADM) Installation
Figure 402/34-21-04-990-802 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 410
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-04-400-802

5. Static Air Data Module Installation

(Figure 402)

A. General

- (1) This procedure gives instructions to install the static ADM [4]. The two static ADMs [4] are located in the forward cargo compartment at STA 405 and STA 435, WL 206, BL 0. They are accessed thru the forward cargo door.
- (2) The installation instructions are the same for the two static ADM [4].

B. References

Reference	Title
34-21-00-710-801	Air Data Inertial Reference System - Operational Test (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
50-10-03-400-801	Cargo Compartment Ceiling Liner Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-7394	Cap - Dust, Electrical Connector

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	ADM	34-21-04-04-010	SIA ALL
		34-21-04-05-005	SIA ALL

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right

F. Static Air Data Module Installation

SUBTASK 34-21-04-860-006

- (1) For the left ADM [4], make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

EFFECTIVITY
SIA ALL

34-21-04

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 411
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (2) For the right ADM [4], make sure that these circuit breakers are open:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-21-04-420-002

- (3) Do these steps to install the static ADM [4]:
- (a) Put the ADM [4] into position on the airplane.
 - (b) Tighten the captive screws [1] at each corner of the ADM [4] to 15 in-lb (1.7 N·m) to 25 in-lb (2.8 N·m).
 - (c) Remove the dust cap, STD-7394, from the electrical connector [2] of the ADM [4].
 - (d) Examine the electrical connector [2] for loose, bent or broken pins.
 - (e) Connect the electrical connector [2] to the ADM [4].
 - (f) Remove the protective cover from the pneumatic connector [3] of the ADM [4].
 - (g) Connect the pneumatic connector [3] to the ADM [4].

SUBTASK 34-21-04-210-002

- (4) Make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fittings.

SUBTASK 34-21-04-410-001

- (5) Install the ceiling liner for the applicable static ADM [4] in the forward cargo compartment (TASK 50-10-03-400-801).

SUBTASK 34-21-04-860-007

- (6) For the left ADM [4], remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

- (7) For the right ADM [4], remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

EFFECTIVITY
SIA ALL

34-21-04

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 412
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Static Air Data Module Installation Test

SUBTASK 34-21-04-860-008

- (1) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-21-04-740-002

- (2) Do this task: Air Data Inertial Reference System - Operational Test, TASK 34-21-00-710-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-04

Page 413
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ANGLE OF ATTACK SENSOR - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Removal of the Angle of Attack (AOA) sensor
 - (2) Installation of the AOA sensor.
- B. Two AOA sensors are installed on the airplane. The left and right AOA sensors are installed on the left and right sides respectively, outboard and above the nose landing gear wheel well.

TASK 34-21-05-000-801

2. Angle of Attack Sensor Removal

(Figure 401)

A. General

- (1) This procedure gives instructions to remove the AOA Sensor [1].
- (2) The removal instructions are the same for the two AOA Sensors [1].

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975
STD-7394	Cap - Dust, Electrical Connector

C. Location Zones

Zone	Area
115	Nose Landing Gear Wheel Well - Left

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-05

Page 401
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area

116	Nose Landing Gear Wheel Well - Right

D. Prepare for the Removal

SUBTASK 34-21-05-860-001

- (1) For the left AOA Sensor [1], open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	6	C01205	SMYD-1 SNSR EXC AC
E	8	C00425	ADIRU LEFT EXC

- (2) For the right AOA Sensor [1], open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	4	C01207	SMYD-2 SNSR EXC AC
C	15	C00426	ADIRU RIGHT EXC

SUBTASK 34-21-05-860-045

- (3) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

E. AOA Sensor Removal

SUBTASK 34-21-05-020-001



WARNING

MAKE SURE THAT THE AOA HEAT IS NOT ON. IF YOU DO NOT, INJURY TO PERSONS CAN OCCUR.

- (1) Do these steps to remove the AOA Sensor [1]:
- (a) Use a sealant removal tool, COM-2481, to remove the sealant from around the AOA Sensor [1].
 - (b) Remove the screws [2] from the AOA Sensor [1].



CAUTION

DO NOT USE TOO MUCH FORCE. TOO MUCH FORCE WILL CAUSE DAMAGE.

- (c) Carefully pull the AOA Sensor [1] out until you can get to the electrical connectors [5].
- (d) Disconnect the electrical connectors [5] from the AOA Sensor [1].
 - 1) Make sure that the electrical connectors [5] do not fall into the fuselage.
- (e) Install dust caps, STD-7394, on the electrical connectors [5].
- (f) Remove and inspect the gasket [4].
 - 1) If there is no visible damage, retain the gasket [4] for installation.

EFFECTIVITY
SIA ALL

34-21-05

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- 2) If gasket is damaged, discard the gasket [4].

———— **END OF TASK** ————

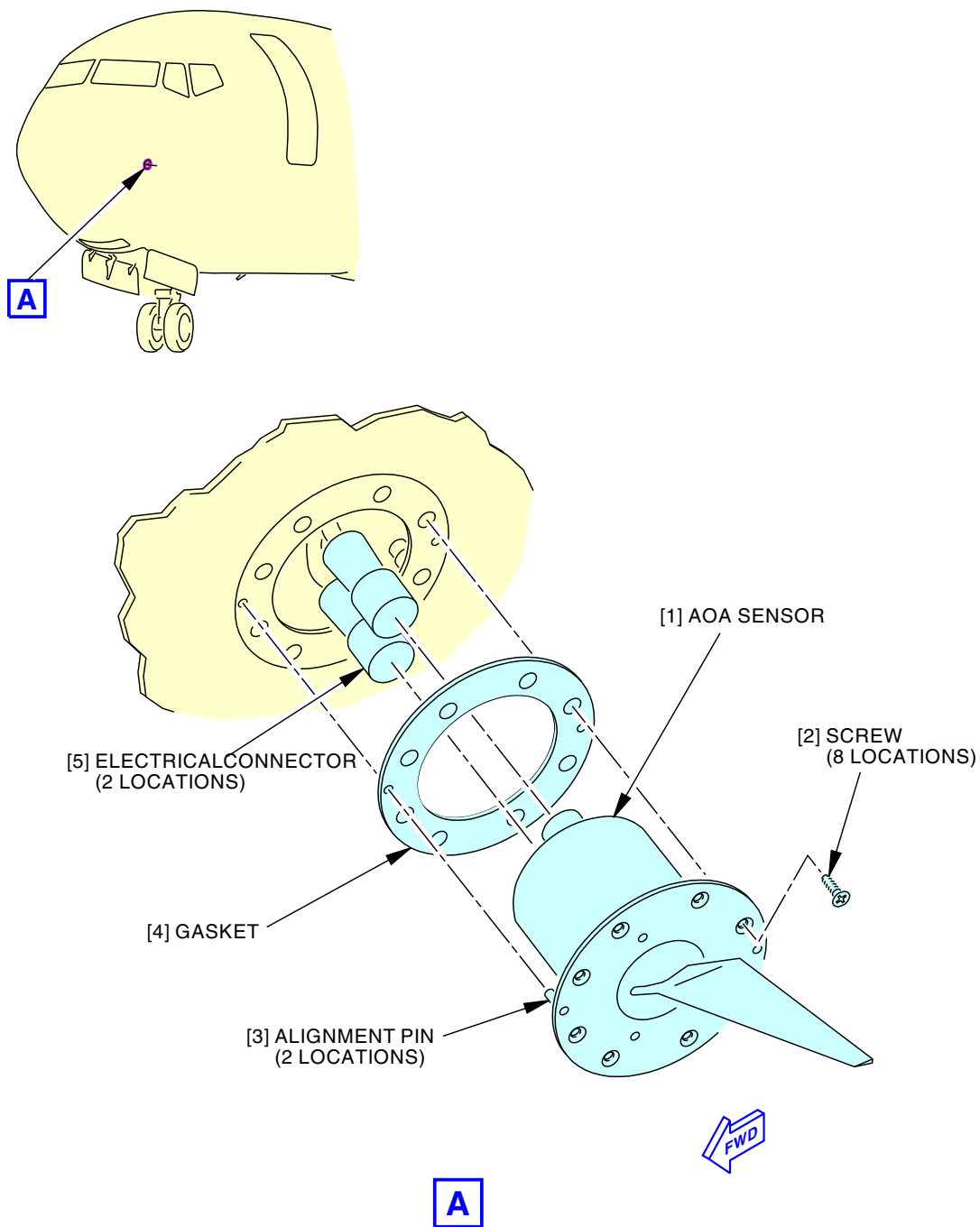
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 403
Sep 15/2021



NOTE: LEFT AOA SENSOR SHOWN, RIGHT AOA SENSOR OPPOSITE.

2414826 S00061536122_V1

Angle of Attack (AOA) Sensor Installation
Figure 401/34-21-05-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-05-400-801

3. Angle of Attack Sensor - Installation

(Figure 401)

A. General

- (1) This procedure gives instructions to install the AOA Sensor [1].
- (2) The installation instructions are the same for the two AOA Sensors [1].

B. References

Reference	Title
20-10-34-110-802	Clean Bare, Clad, or Plated Metal with Solvent (P/B 701)
34-21-05-730-801	Angle of Attack Sensor System Test (P/B 501)
SRM 51-40-02-0G-0	Fastener Installation and Removal
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-614	Bonding Meters - Non-Intrinsically Safe (For use in outside Class I, Divisions I & II non-hazardous locations. For hazardous locations, use COM-1550). Part #: 247000 Supplier: 00426 Part #: 620LK Supplier: 1CRL2 Part #: BLR-0003-XX Supplier: KC432 Part #: BT51 Supplier: 00426 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659 Opt Part #: 247001 Supplier: 00426
STD-7394	Cap - Dust, Electrical Connector

D. Consumable Materials

Reference	Description	Specification
A50250	Sealant - P/S 870 Class B-1/2 Corrosion Inhibitive Sealant	BMS5-95 Class B-1/2
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	AOA Sensor	34-21-05-01A-045	SIA ALL
4	Gasket	34-21-05-01A-030	SIA ALL

F. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right

EFFECTIVITY
SIA ALL

34-21-05

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

G. Angle of Attack Sensor Installation

SUBTASK 34-21-05-110-001

- (1) Clean the surface around the Angle of Attack (AOA) hole and the surface of the alignment pins (TASK 20-10-34-110-802).

SUBTASK 34-21-05-390-001

- (2) Apply a thin layer of grease, D00633, to the alignment pins on the AOA Sensor [1].

SUBTASK 34-21-05-420-001

- (3) Do these steps to install the AOA Sensor [1]:

- (a) Put the gasket [4] into position on the AOA Sensor [1].
 - 1) If the gasket [4] is damaged, install a new gasket [4].
- (b) Remove the dust caps, STD-7394, from the electrical connectors [5].
- (c) Examine the electrical connectors [5] for loose, bent, or broken pins.
- (d) Connect the electrical connectors [5] to the AOA Sensor [1].
- (e) Position AOA Sensor [1] on the fuselage mount by using the AOA sensor alignment pins as a guide.
- (f) Install the screws [2] that hold the AOA Sensor [1] to the airplane.
- (g) Tighten the screws [2] to 35.5 ± 3.5 in-lb (4.0 ± 0.4 N·m).
- (h) Make sure that the face of the AOA Sensor [1] aligns to within ± 0.04 in. (1.02 mm) or less of the airplane skin.

NOTE: The surface of the sensor base must be flush with the skin surface within 0.04 in. (1.02 mm) at the forward and aft edges. Upper and lower edge flushness not necessary.

- (i) Use a non-intrinsically safe bonding meter, COM-614, to measure the resistance between the base of the AOA Sensor [1] and the airplane skin (SWPM 20-20-00, Paragraph 21).
 - 1) Make sure that the resistance is 0.010 ohm (10 milliohms) or less.
 - 2) If the resistance is more than 0.010 ohm (10 milliohms), do these steps:
 - a) Remove the AOA Sensor [1].
 - b) Clean the bonding surfaces, including the countersunk holes in the AOA Sensor [1].
 - c) Replace the screws [2] with new screws [2].
 - d) Re-install the AOA Sensor [1].
 - e) Measure the resistance between the base of the AOA Sensor [1] and the airplane skin with a non-intrinsically safe bonding meter, COM-614 (SWPM 20-20-00, Paragraph 21).
 - <1> If the resistance is more than 0.010 ohm (10 milliohms), do these steps:
 - <a> Remove the AOA Sensor [1].
 - Replace the nutplates and rivets that attach the AOA Sensor [1] (SRM PROCEDURE 51-40-02-0G-0).
 - <c> Reinstall the AOA Sensor [1] and make sure the bonding resistance is 0.010 ohm (10 milliohms) or less.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-05

Page 406
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- (j) Apply P/S 870 Class B-1/2 sealant, A50250, around the AOA Sensor [1].

NOTE: It is not necessary to apply the sealant immediately, if the cure time will cause a flight delay. But, you must apply the sealant as soon as possible to keep the moisture out of the area between the probe and airplane skin. The sealant deferral must not exceed a maximum of eight weeks.

NOTE: When sealant has reach the tack-free time, the airplane can be dispatched for flight. Tack-free time is when the sealant has properly adhered and capable of providing maximum protection to a surface.

SUBTASK 34-21-05-980-001

- (4) Move the AOA Sensor [1] vane in a line with the AOA sensor alignment pins.

SUBTASK 34-21-05-860-043

- (5) For the left AOA Sensor [1], remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	6	C01205	SMYD-1 SNSR EXC AC
E	8	C00425	ADIRU LEFT EXC

SUBTASK 34-21-05-860-044

- (6) For the right AOA Sensor [1], remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01207	SMYD-2 SNSR EXC AC
C	15	C00426	ADIRU RIGHT EXC

SUBTASK 34-21-05-860-004

- (7) Do this task: Angle of Attack Sensor System Test, TASK 34-21-05-730-801.

END OF TASK

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 407
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ANGLE OF ATTACK SENSOR - ADJUSTMENT/TEST

1. General

A. This procedure has this task:

- (1) Angle of Attack (AOA) sensor system test.

TASK 34-21-05-730-801

2. Angle of Attack Sensor System Test

(Figure 501)

A. General

- (1) This task contains the Angle of Attack (AOA) sensor system test (also known as, Alpha Vane).

NOTE: The AOA sensor is required to be tested through both the Air Data Inertial Reference Unit (ADIRU) and the Stall Management Yaw Damper (SMYD). Test readings through both the ADIRU and the SMYD can be viewed at the same time.

NOTE: When the AOA vanes are static with no air passing over them, it is normal to observe the values fluctuate from wind, people movement on the airplane, and vibration from engine runs.

NOTE: When the angle of attack probe test fixture, SPL-1917, is not available, follow the alternate procedures to test the AOA sensor.

- (2) If testing the left and right AOA sensors, complete the ADIRU and SMYD test on the same AOA sensor before testing the other sensor.

B. References

Reference	Title
22-11-00-740-801	Digital Flight Control System (DFCS) - Operational Test (P/B 501)
27-32-00-740-801	Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
34-21-05 P/B 401	ANGLE OF ATTACK SENSOR - REMOVAL/INSTALLATION
34-21-05-200-801	Angle of Attack (AOA) Sensor - Inspection (P/B 601)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1917	Fixture - Test, Angle of Attack Sensor, ROSEMOUNT AOA's Part #: J34002-19 Supplier: 81205 Opt Part #: A34012-19 Supplier: 81205 Opt Part #: A34012-24 Supplier: 81205 Opt Part #: J34002-18 Supplier: 81205

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-05

Page 501
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

D. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left
114	Area Above and Outboard of Nose Landing Gear Wheel Well - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for AOA Sensor Test

SUBTASK 34-21-05-860-026

- (1) Make sure that the ADIRU is operating (Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803).

SUBTASK 34-21-05-860-041

- (2) Make sure that Flight Control Computer (FCC) A and B are operational (Digital Flight Control System (DFCS) - Operational Test, TASK 22-11-00-740-801).
 - (a) Make sure that Library Test No. 10.01 (ADIRU) and 10.22 (SMYD) pass and have no faults for these systems.

SUBTASK 34-21-05-860-027

- (3) Do these steps to make sure that the Flight Management Computer (FMC) is powered and has good weight data entered.

NOTE: Zero Fuel Weight (ZFW) is calculated by subtracting the total fuel weight from the combined total weight of the airplane and contents. For the Built-In-Test Equipment (BITE) test, any number between 70 and 150 (normal ZFW in thousands of pounds) will verify a check pass.

- (a) Push the INIT REF button on the Control Display Unit (CDU).
- (b) On the PERF INIT page, enter the following:
 - 1) 3L: ZFW prompt, enter 88.0 for lbs or 44 for kg.

NOTE: GW/CRZ CG in 1L will auto calculate after ZFW is entered.
 - 2) 4L: RES prompt, enter 4.0.
 - 3) 5L: CI prompt, enter 30.

SUBTASK 34-21-05-860-032

- (4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-21-05-860-033

- (5) On the aft area of the control stand, set the STAB TRIM PRI switch, S272, to the CUTOUT position.

SUBTASK 34-21-05-860-034

- (6) On the P5 forward panel, make sure that the Very High Frequency (VHF) NAV and IRS switches are in the NORMAL positions.

SUBTASK 34-21-05-860-039

- (7) On the P5 forward panel, set the FMC switch to the BOTH ON L position.

EFFECTIVITY
SIA ALL

34-21-05

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 502
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-05-860-028

- (8) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

SUBTASK 34-21-05-210-001



MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

- (9) Make sure that the AOA vane moves smooth from stop to stop and there is no visible damage.

- (a) Move the AOA vane from stop to stop.

- 1) Put the vane in position against one stop, then lightly tap the vane to cause movement to the other stop.
 - a) Make sure that the vane moves smoothly through a range of approximately 200 degrees with just a light resistance caused by the viscous damper.

NOTE: The vane movement gives the condition of the unit. For a satisfactory unit, the vane moves smoothly and the viscous damper will not let the vane touch the opposite stop. In a damaged unit, the vane moves easily with no resistance and hits the opposite stop, or a mechanical failure locks the mechanism.

- b) If the vane does not move smoothly from stop to stop, do one of the following steps:

<1> Do the remaining steps in this task: Angle of Attack (AOA) Sensor - Inspection, TASK 34-21-05-200-801.

<2> Replace the AOA sensor, do these tasks: ANGLE OF ATTACK SENSOR - REMOVAL/INSTALLATION, PAGEBLOCK 34-21-05/401.

- (b) Visually examine the AOA sensor for signs of any physical damage:

- 1) If physical damage is found, do this task: Angle of Attack (AOA) Sensor - Inspection, TASK 34-21-05-200-801.

F. AOA Sensor Test (ADIRU) (Preferred)



MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

SUBTASK 34-21-05-480-003

- (1) Install an angle of attack probe test fixture, SPL-1917, on the applicable AOA sensor.

SUBTASK 34-21-05-740-009

- (2) Push the INIT REF key on the CDU keyboard.

- (a) Push the Line Select Key (LSK) that is adjacent to each selection:

- 1) INDEX
- 2) MAINT

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-05

Page 503
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 3) DFCS
- 4) EXTENDED MAINTENANCE
- 5) SENSOR VALUES
- 6) DIGITAL SIGNALS
- 7) ADIRU-LCL (ADC-BUS)
- 8) ALPHA (221):
 - A is the left AOA (values are shown in degrees)
 - B is the right AOA (values are shown in degrees).

SUBTASK 34-21-05-740-010

- (3) For the applicable AOA sensor (alpha vane) do the steps that follow:

NOTE: The output reading for left AOA sensor is displayed on the A side. The output reading for the right AOA sensor is displayed on the B side.

- (a) Move the applicable AOA sensor vane to 0°.
 - 1) Make sure that the value displayed on the CDU is within the limits below:
 - a) Limits: -1° to +1°.
- (b) Move the applicable AOA sensor vane, trailing edge up, to 30°.
 - 1) Make sure that the value displayed on the CDU is within the limits below:
 - a) Limits: +29° to +31°.
- (c) Move the applicable AOA sensor, trailing edge down, to -30°.
 - 1) Make sure that the value displayed on the CDU is within the limits below:
 - a) Limits: -29° to -31°.

SUBTASK 34-21-05-740-012

- (4) Push the LSK adjacent to EXIT until you get out of the BITE test.

NOTE: If there are instructions on the CDU display, do the instructions that show on the CDU display.

G. AOA Sensor Test (SMYD) (Preferred)



MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

SUBTASK 34-21-05-860-042

- (1) Use the Stall Management Yaw Damper Maintenance Page to see AOA values:
 - (a) Push SYS on the Multi Function Display (MFD) panel.
 - (b) Select MAINT.
 - (c) Select MAINT DATA PGS.
 - (d) Select 27 SMYD DISPLAY.
 - 1) Make sure that under ANALOG INPUT column, AOA SNSR is displayed on the right top side of the MFD.

NOTE: The AOA SNSR SMYD 1 value is the left AOA vane position in degrees.
The AOA SNSR SMYD 2 value is the right AOA vane position in degrees.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 504
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-05-730-004



WARNING

MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

- (2) Move the applicable AOA sensor vane to 0°.

NOTE: The AOA SNSR SMYD 1 value is the left AOA vane position in degrees. The AOA SNSR SMYD 2 value is the right AOA vane position in degrees.

- (a) Make sure that the value displayed on the MFD's ANALOG INPUT, AOA SNSR, SMYD VALUE is between the limits.

- 1) Limits: -1° to +1°.

SUBTASK 34-21-05-730-005

- (3) Move the applicable AOA sensor vane, trailing edge up, to 30°.

- (a) Make sure that the value displayed on the MFD's ANALOG INPUT, AOA SNSR, SMYD VALUE is between the limits.

- 1) Limits: +29° to +31°.

SUBTASK 34-21-05-730-006

- (4) Move the applicable AOA sensor vane, trailing edge down, to -30°.

- (a) Make sure that the value displayed on the MFD's ANALOG INPUT, AOA SNSR, SMYD VALUE is between the limits.

- 1) Limits: -29° to -31°.

SUBTASK 34-21-05-080-002

- (5) Remove the angle of attack probe test fixture, SPL-1917, from the applicable AOA sensor.

SUBTASK 34-21-05-700-012

- (6) Reset SMYD latch messages, do this task: Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults, TASK 27-32-00-740-801.

H. AOA Sensor Test (ADIRU) (Alternate)



WARNING

MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

NOTE: This alternate test is used when an AOA vane test fixture is not available.

SUBTASK 34-21-05-740-013

- (1) Push the INIT REF key on the CDU keyboard.

- (a) Push the LSK that is adjacent to each selection:

- 1) INDEX
- 2) MAINT
- 3) DFCS
- 4) EXTENDED MAINTENANCE
- 5) SENSOR VALUES
- 6) DIGITAL SIGNALS

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 505
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 7) ADIRU-LCL (ADC-BUS)
- 8) ALPHA (221):
 - A is the left AOA (values are shown in degrees)
 - B is the right AOA (values are shown in degrees).

SUBTASK 34-21-05-730-009

- (2) For the applicable AOA sensor (alpha vane) do the steps that follow:

NOTE: The output reading for left AOA sensor is displayed on the A side. The output reading for the right AOA sensor is displayed on the B side.

- (a) Move and hold the applicable AOA sensor vane to 0°, in a line with the AOA sensor alignment pin hole (Figure 501).
 - 1) Make sure that the value displayed on the CDU is within the limits below:
 - a) Limits: -1° to +1°.
- (b) Move and hold the applicable AOA sensor vane, trailing edge up, to align with the center of the second screw up from the AOA sensor alignment pin hole (Figure 501).
 - 1) Make sure that the value displayed on the CDU is within the limits below:
 - a) Limits: +66.5° to +68.5°.
- (c) Move and hold the applicable AOA sensor, trailing edge down, to align with the center of the second screw below from the AOA sensor alignment pin hole (Figure 501).
 - 1) Make sure that the value displayed on the CDU is within the limits below:
 - a) Limits: -66.5° to -68.5°.

SUBTASK 34-21-05-700-010

- (3) If the AOA sensor does not meet the limits, do the AOA sensor test (ADIRU) preferred method using angle of attack probe test fixture, SPL-1917.

SUBTASK 34-21-05-740-019

- (4) Push the LSK adjacent to EXIT until you get out of the BITE test.

NOTE: If there are instructions on the CDU display, do the instructions that show on the CDU display.

I. AOA Sensor Test (SMYD) (Alternate)



MAKE SURE THAT THE HEATER CIRCUIT BREAKERS ABOVE ARE OPEN AND THE AOA SENSOR HEAT IS OFF BEFORE YOU MOVE THE AOA SENSOR. IF THE HEATER CIRCUIT BREAKERS ARE CLOSED, INJURY TO PERSONS CAN OCCUR.

SUBTASK 34-21-05-730-011

- (1) Use the Stall Management Yaw Damper Maintenance Page to see AOA values:
 - (a) Push SYS on the MFD panel.
 - (b) Select MAINT.
 - (c) Select MAINT DATA PGS.
 - (d) Select 27 SMYD DISPLAY.
 - 1) Make sure that under ANALOG INPUT column, AOA SNSR is displayed on the right top side of the MFD.

NOTE: The AOA SNSR SMYD 1 VALUE is the left AOA vane position in degrees.
The AOA SNSR SMYD 2 VALUE is the right AOA vane position in degrees.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-05

Page 506
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-05-730-007

(2) For the applicable AOA sensor (alpha vane) do the steps that follow:

- (a) Move and hold the applicable AOA sensor vane to 0°, in a line with the AOA sensor alignment pin hole (Figure 501).

NOTE: The output reading for left AOA sensor is displayed on the MFD's ANALOG INPUT, AOA SNSR, SMYD 1 VALUE. The output reading for the right AOA sensor is displayed on the MFD's ANALOG INPUT, AOA SNSR, SMYD 2 VALUE.

- 1) Make sure that the applicable AOA sensor value displayed on the MFD is between the limits.

a) Limits: -1° to +1°.

- (b) Move and hold the applicable AOA sensor vane, trailing edge up, to align with the center of the second screw up from the AOA sensor alignment pin hole (Figure 501).

- 1) Make sure that the applicable AOA sensor value displayed on the MFD is between the limits.

a) Limits: +66.5° to +68.5°.

- (c) Move and hold the applicable AOA sensor vane, trailing edge down, to align with the center of the second screw down from the AOA sensor alignment pin hole (Figure 501).

- 1) Make sure that the applicable AOA sensor value displayed on the MFD is between the limits.

a) Limits: -66.5° to -68.5°.

SUBTASK 34-21-05-700-011

- (3) If the AOA sensor does not meet the limits, do the AOA sensor test (SMYD) preferred method using angle of attack probe test fixture, SPL-1917.

SUBTASK 34-21-05-700-013

- (4) Reset SMYD latch messages, do this task: Stall Management Yaw Damper (SMYD) BITE Test - Existing Faults, TASK 27-32-00-740-801.

J. AOA Sensor (Alpha Vane) Heater Test

SUBTASK 34-21-05-710-001

- (1) Do these steps to test the left alpha vane:

- (a) Close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01072	HEATERS ALPHA VANE LEFT

- (b) Set the PROBE HEAT A switch to the ON position.

- 1) Make sure that the L ALPHA VANE light goes off and the R ALPHA VANE light stays on.



WARNING

DO NOT TOUCH AIR DATA SENSORS WHEN HOT. A HOT AIR DATA SENSOR CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Make sure that only the left alpha vane is heating by using one of these methods:

- 1) Measure the temperature of the sensor with an infrared or contact thermometer.
2) Look at the sensor with an infrared or thermal imager.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 507
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Open this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01072	HEATERS ALPHA VANE LEFT

- (e) Make sure that the L ALPHA VANE, R ALPHA VANE, ANTI-ICE, and Master Caution lights are on.
- (f) Make sure that the left alpha vane is no longer heating.
- (g) Push to reset either Master Caution light.
- 1) Make sure that the Master Caution and ANTI-ICE annunciator lights go off.
- (h) Set the PROBE HEAT A switch to the AUTO position.

SUBTASK 34-21-05-710-002

- (2) Do these steps to test the right alpha vane:

- (a) Close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01071	HEATERS ALPHA VANE RIGHT

- (b) Set the PROBE HEAT B switch to the ON position.
- 1) Make sure that the R ALPHA VANE light goes off and the L ALPHA VANE light stays on.



DO NOT TOUCH AIR DATA SENSORS WHEN HOT. A HOT AIR DATA SENSOR CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (c) Make sure that only the right alpha vane is heating by using one of these methods:
- 1) Measure the temperature of the sensor with an infrared or contact thermometer.
- 2) Look at the sensor with an infrared or thermal imager.
- (d) Open this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01071	HEATERS ALPHA VANE RIGHT

- (e) Make sure that the L ALPHA VANE, R ALPHA VANE, ANTI-ICE, and Master Caution lights are on.
- (f) Make sure that the right alpha vane is no longer heating.
- (g) Push to reset either Master Caution light.
- 1) Make sure that the Master Caution and ANTI-ICE annunciator lights go off.
- (h) Set the PROBE HEAT B switch to the AUTO position.

K. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-05-860-036

- (1) Push the captain's or first officer's autopilot disengage switch, on the control wheel, to make sure that the autopilot is disengaged.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 508
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-21-05-860-037

- (2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-21-05-860-038

- (3) Set the STAB TRIM PRI switch, S272, on the aft area of the control stand, to the NORMAL position.

SUBTASK 34-21-05-860-040

- (4) Set the FMC switch, on the P5 panel, to the NORMAL position.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

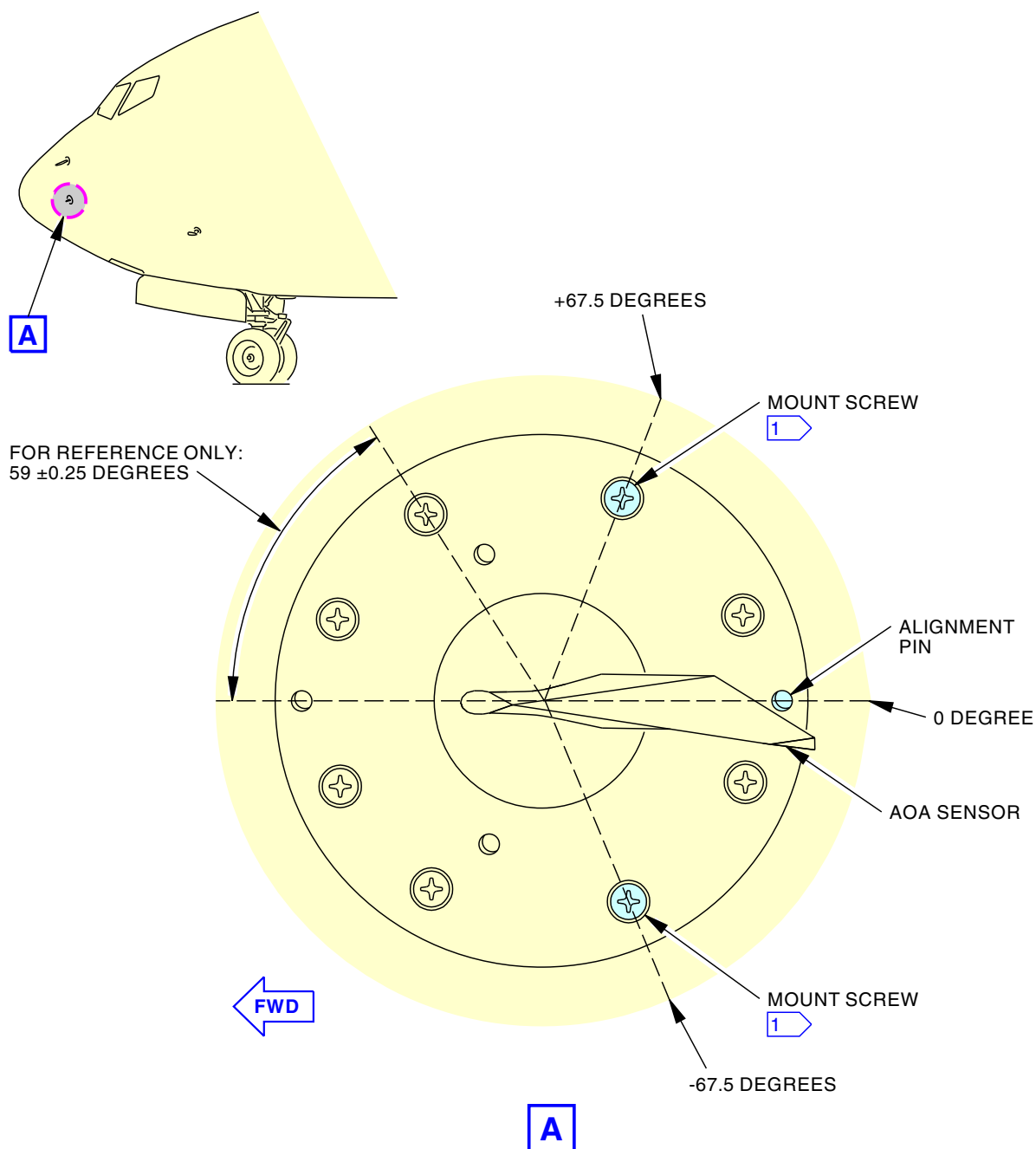
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 509
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



1 USE THIS MOUNT SCREW FOR ALTERNATE AOA SENSOR TEST

2919940 S0000703290_V3

Angle of Attack Sensor
Figure 501/34-21-05-990-803

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 510
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ANGLE OF ATTACK SENSOR - INSPECTION/CHECK

1. General

- A. This procedure does an inspection of the Angle of Attack (AOA) sensor for proper mechanical movement and damage.

TASK 34-21-05-200-801

2. Angle of Attack (AOA) Sensor - Inspection

(Figure 601)

A. **References**

Reference	Title
34-21-05-000-801	Angle of Attack Sensor Removal (P/B 401)

B. **Tools/Equipment**

Reference	Description
STD-19829	Force Gauge, 0 - 30 grams, +/- 1 gram accuracy

C. **Location Zones**

Zone	Area
115	Nose Landing Gear Wheel Well - Left
116	Nose Landing Gear Wheel Well - Right

D. **Prepare for the Inspection**

SUBTASK 34-21-05-280-001



MAKE SURE THAT THE AOA HEAT IS NOT ON. IF YOU DO NOT, INJURY TO PERSONS CAN OCCUR.

- (1) Make sure that the Angle of Attack (AOA) probe heat is off.

SUBTASK 34-21-05-860-022

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	15	C00426	ADIRU RIGHT EXC

E. **Angle of Attack (AOA) Sensor Inspection**

SUBTASK 34-21-05-280-002

- (1) Move the AOA vane from stop to stop.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 601
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Put the vane in position against one stop, lightly tap the vane to cause movement to the other stop.
 - 1) Make sure that the vane moves smoothly through a range of approximately 200 degrees with just a light resistance caused by the viscous damper.

NOTE: The vane movement gives the condition of the unit. For a satisfactory unit, the vane moves smoothly and the viscous damper will not let the vane touch the opposite stop. In a damaged unit, the vane moves easily with no resistance and hits the opposite stop, or a mechanical failure locks the mechanism.

SUBTASK 34-21-05-280-003

- (2) Make sure that the vane counterweight of the AOA sensor does not stick against the upper vane end stop.
 - (a) Turn the vane in an upward direction and put it against the vane end stop.
 - (b) Hold the vane firmly against the vane end stop by hand for 3 seconds and release.
 - (c) Put the measurement arm of a force gauge, STD-19829, against the AOA vane at the base of the upper trailing edge.
 - (d) As slowly as possible, move the vane away from the vane upper end stop position with a force gauge, STD-19829.
 - 1) Make sure that you move the vane about 30 to 50 degrees at a time.
 - 2) Make sure that a force gauge, STD-19829, is aligned with the vane.
 - 3) Make sure that only a force gauge, STD-19829, moves the vane.
 - (e) Record the results.
 - 1) Make sure that a force gauge, STD-19829, reading is less than 0.026 lb (12 g).
 - a) If a force gauge, STD-19829, reading is more than 0.026 lb (12 g), replace the AOA sensor (TASK 34-21-05-000-801).

SUBTASK 34-21-05-280-004

- (3) Make sure that the vane counterweight of the AOA sensor does not stick against the lower vane end stop.
 - (a) Turn the vane downward and put it against the vane end stop.
 - (b) Hold the vane firmly against the vane end stop by hand for 3 seconds and release it.
 - (c) Put the measurement arm of a force gauge, STD-19829, against the AOA vane at the base of the lower trailing edge.
 - (d) As slowly as possible, move the vane away from the vane lower end stop position with a force gauge, STD-19829.
 - 1) Make sure that you move the vane about 30 to 50 degrees at a time.
 - 2) Make sure that a force gauge, STD-19829, is aligned with the vane.
 - 3) Make sure that only a force gauge, STD-19829, moves the vane.
 - (e) Record the results.
 - 1) Make sure that a force gauge, STD-19829, reading is less than 0.026 lb (12 g).
 - a) If a force gauge, STD-19829, reading is more than 0.026 lb (12 g), replace the AOA sensor (TASK 34-21-05-000-801).



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-05-280-006

- (4) Make sure that the vane upper and lower surface does not have any nicks, abrasions or scratches that penetrate the surface.

- (a) If damage is found, remove (replace) the vane.

NOTE: Discoloration and/or cosmetic marks on the vane coating are acceptable.

SUBTASK 34-21-05-280-007

- (5) Make sure that the trailing edge does not have any nicks or wear that cause the edge to be rounded or chamfered.

- (a) If damage is found, remove (replace) the vane.

NOTE: The edge must remain sharp with no deformation or removal of material.

NOTE: Discoloration or cosmetic marks on the surface are acceptable.

SUBTASK 34-21-05-280-008

- (6) Make sure that the leading edge does not show erosion or has nicks deeper than 0.1 in. (2.5 mm).

- (a) If damage is found, remove (replace) the vane.

SUBTASK 34-21-05-000-001

- (7) If the vane was impacted, even without visual signs of external damage, remove and send the vane to a repair facility for testing/analysis to ensure there is no internal damage.

NOTE: Scratches or nicks on the faceplate are acceptable. Surface marks/scratches do not affect the vane aerodynamic performance or the structural integrity of the faceplate.

SUBTASK 34-21-05-280-010

- (8) Return the vane to a horizontal position.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-21-05-860-023

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	15	C00426	ADIRU RIGHT EXC

————— END OF TASK —————

EFFECTIVITY
SIA ALL

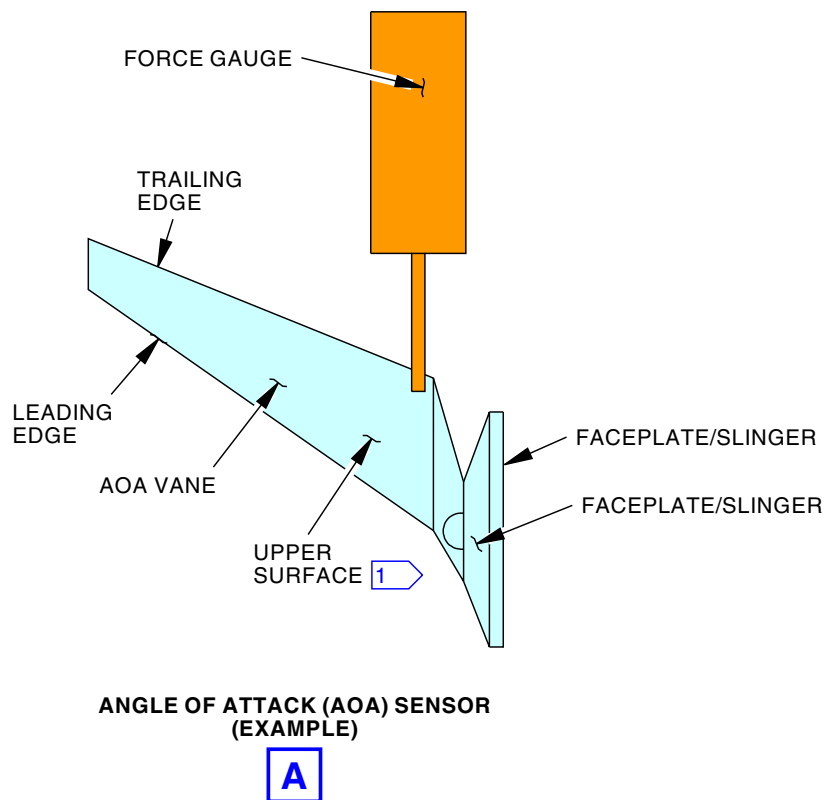
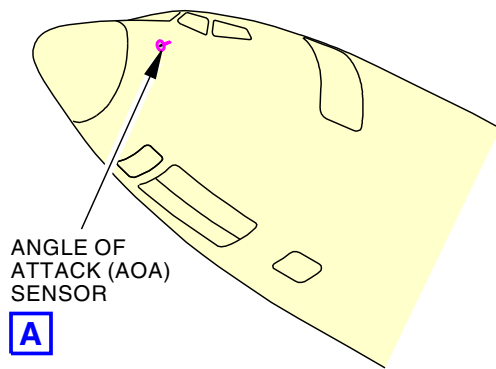
34-21-05

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 603
Sep 15/2021

BOEING
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



1 THE LOWER SURFACE IS BELOW THE UPPER SURFACE

2414827 S00061536126_V3

AOA Sensor - Inspection/Check
Figure 601/34-21-05-990-802

EFFECTIVITY	
SIA ALL	

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-05

Page 604
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TOTAL AIR TEMPERATURE PROBE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the Total Air Temperature (TAT) probe
- (2) An installation of the TAT probe.

TASK 34-21-06-000-801

2. Total Air Temperature Probe - Removal

(Figure 401)

A. **General**

- (1) This task gives instructions to remove the Total Air Temperature (TAT).
- (2) An aspirated TAT probe can be installed in a non-aspirated TAT configuration.

B. **Location Zones**

Zone	Area

113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left

C. **Total Air Temperature Probe Removal**

SUBTASK 34-21-06-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	2	C00238	HEATERS TEMP PROBE

SUBTASK 34-21-06-020-001



WARNING

MAKE SURE THAT THE TAT PROBE HEAT IS OFF. THE PROBE BECOMES HOT IF IT IS ON. INJURIES TO PERSONNEL CAN OCCUR.

- (2) Do these steps to remove the TAT Probe [4]:

- (a) Use the sealant removal tool to remove the sealant from around the TAT Probe [4].

NOTE: Remove the sealant from outside the fuselage.

- (b) Remove the screws [3] from the TAT Probe [4].



CAUTION

DO NOT PULL THE TAT PROBE AWAY FROM THE FUSELAGE WITH TOO MUCH FORCE. TOO MUCH FORCE ON THE TAT PROBE CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTOR [1] OR THE AIRPLANE SKIN.

- (c) Carefully pull the TAT Probe [4] from the fuselage to get access to the electrical connector [1].
- (d) Disconnect the electrical connector [1] from the TAT Probe [4].
- (e) Temporarily attach the electrical connector [1] to make sure that it does not fall into the fuselage.
- (f) Install a protective cap on the electrical connector [1].

EFFECTIVITY
SIA ALL

34-21-06

D633AM101-SIA

Page 401
Jan 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SIA ALL; AIRPLANES WITH ASPIRATED TAT PROBES

- (g) Make sure that the cap assembly [6] is installed on the TAT Probe [4].

SIA ALL

- (h) Remove the gasket [2] and discard it.

NOTE: The gasket [2] can be reused if it is not damaged.

———— **END OF TASK** ————

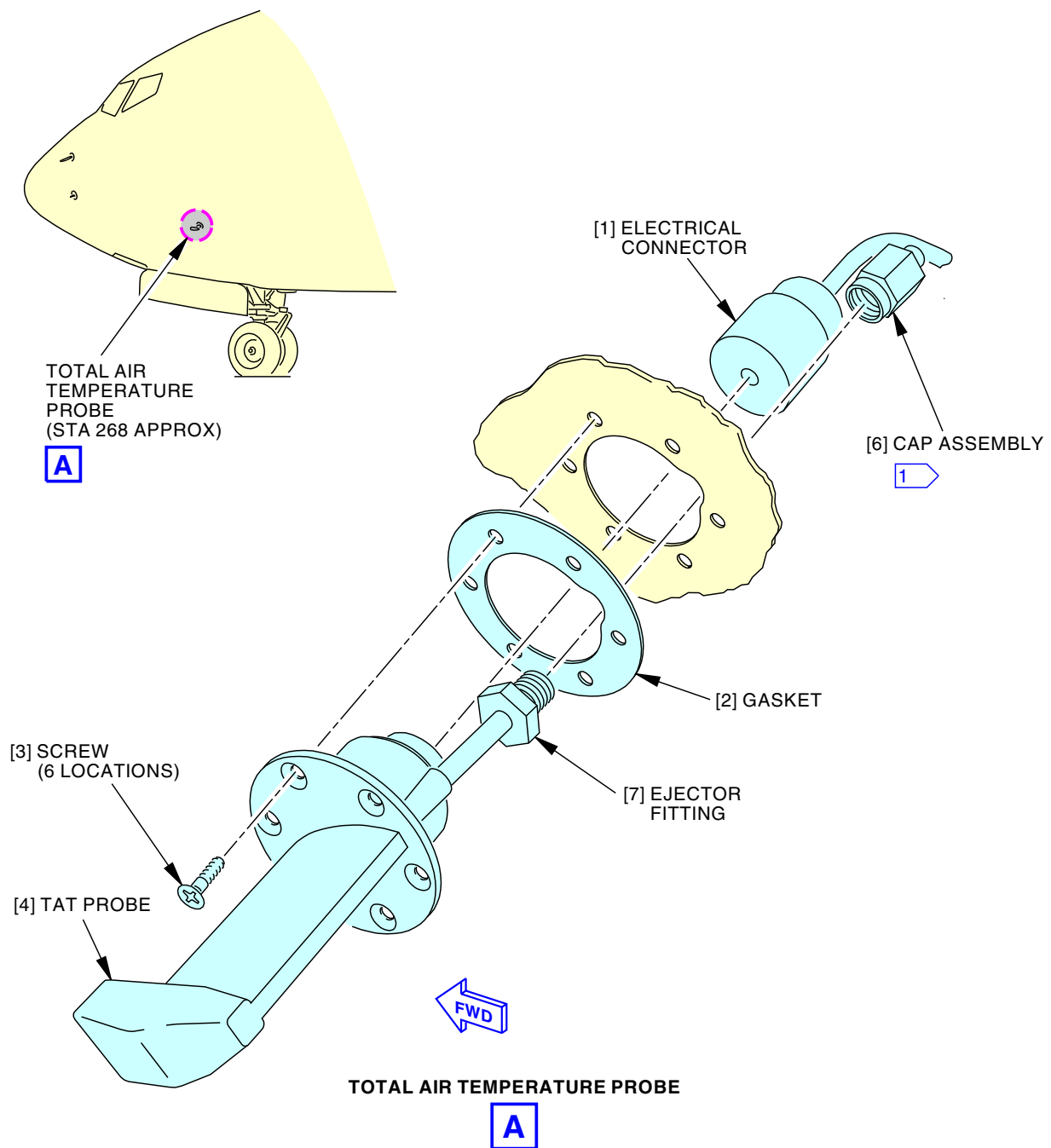
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-06

Page 402
Jan 15/2023



1 USE FOR INSTALLATION OF AN ASPIRATED TAT PROBE IN AIRPLANES CONFIGURED WITH A NON-ASPIRATED TAT PROBE.

3020047 S0000792281_V1

Total Air Temperature (TAT) Probe Installation
Figure 401/34-21-06-990-801

EFFECTIVITY
SIA ALL; AIRPLANES WITH ASPIRATED TAT PROBES

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-06

Page 403
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-06-400-801

3. **Total Air Temperature Probe - Installation**

(Figure 401)

A. General

- (1) This task gives instructions to install the Total Air Temperature (TAT).
- (2) An aspirated TAT probe can be installed in a non-aspirated TAT configuration.

B. References

Reference	Title
20-10-34-110-802	Clean Bare, Clad, or Plated Metal with Solvent (P/B 701)
30-31-00-730-801	Pitot Probe, AOA Sensor, and TAT Probe Heater - System Test (P/B 501)
SRM 51-40-02	FASTENER INSTALLATION AND REMOVAL
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-614	Bonding Meters - Non-Intrinsically Safe (For use in outside Class I, Divisions I & II non-hazardous locations. For hazardous locations, use COM-1550). Part #: 247000 Supplier: 00426 Part #: 620LK Supplier: 1CRL2 Part #: BLR-0003-XX Supplier: KC432 Part #: BT51 Supplier: 00426 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659 Opt Part #: 247001 Supplier: 00426

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Gasket	34-21-06-01-020	SIA ALL
4	TAT Probe	34-21-06-01-015	SIA ALL

F. Location Zones

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left

EFFECTIVITY
SIA ALL

34-21-06

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

G. Total Air Temperature Probe Installation

SUBTASK 34-21-06-860-002

- (1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	2	C00238	HEATERS TEMP PROBE

SUBTASK 34-21-06-110-001

- (2) Clean and prepare the surface and the sides of the installation hole (TASK 20-10-34-110-802).

SUBTASK 34-21-06-420-001

- (3) Do these steps to install the TAT Probe [4]:

SIA ALL; AIRPLANES WITH ASPIRATED TAT PROBES

- (a) Make sure that the cap assembly [6] is installed on the TAT Probe [4].

SIA ALL

- (b) Put the new gasket [2] into its position on the TAT Probe [4].

NOTE: It is not necessary to fit a new gasket if acquiring one will cause a flight delay. The old gasket, if in good condition, can be reused and replaced with a new gasket in one week or less.

- (c) Remove the protective cap from the electrical connector [1].
(d) Examine the electrical connector [1] for loose, bent, or broken pins.
(e) Connect the electrical connector [1] to the TAT Probe [4].
(f) Carefully put the TAT Probe [4] into its position.

NOTE: The large intake must point forward.

- (g) Install the screws [3] that hold the TAT Probe [4] to the airplane.
(h) Tighten the screws [3] to 20 $\pm$ 2 in-lb (2.3 $\pm$ 0.3 N·m).

SUBTASK 34-21-06-760-001

- (4) Use an non-intrinsically safe bonding meter, COM-614, to measure the resistance between the body of the TAT Probe [4] and the airplane skin.
- (a) Make sure that the resistance is less than 0.010 ohms.
- (b) If the resistance is more than 0.010 ohms, do these steps:
- 1) Remove the TAT Probe [4].
 - 2) Clean the bonding surfaces, including the countersunk holes in the TAT Probe [4] (SWPM 20-20-00).
 - 3) Replace the screws [3] with new screws [3].
 - 4) Install the TAT Probe [4].
 - 5) Use an non-intrinsically safe bonding meter, COM-614, to measure the resistance between the body of the TAT Probe [4] and the airplane skin.
 - 6) If the resistance is more than 0.010 ohms, do these steps:
 - a) Remove the TAT Probe [4].
 - b) Replace the nut plates and rivets that attach the TAT Probe [4] (SRM SUBJECT 51-40-02).

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-06

Page 405
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- c) Install the TAT Probe [4] and make sure that the bonding resistance is not more than 0.010 ohms.

SUBTASK 34-21-06-390-001

- (5) Apply sealant, A00247, around the TAT Probe [4].

NOTE: It is not necessary to apply the sealant immediately, if the cure time will cause a flight delay. The sealant must be applied as soon as possible to keep moisture out of the area between the probe and airplane skin. The sealant deferral must not exceed a maximum of eight weeks.

SUBTASK 34-21-06-860-003

- (6) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	2	C00238	HEATERS TEMP PROBE

H. Total Air Temperature Probe Installation Test

SUBTASK 34-21-06-730-001

- (1) Do this task: Pitot Probe, AOA Sensor, and TAT Probe Heater - System Test, TASK 30-31-00-730-801.

SUBTASK 34-21-06-860-005

- (2) Do these steps to show the Air Data Inertial Reference System (ADIRS) maintenance index on the Control Display Unit (CDU):
- (a) Push the INIT REF key.
 - 1) Make sure that the CDU shows the INIT REF INDEX page.
 - (b) Push the LSK adjacent to MAINT> on the CDU.
 - 1) Make sure that the CDU shows the MAINT BITE INDEX page.
 - (c) Push the LSK adjacent to <ADIRS on the CDU.
 - 1) Make sure that the CDU shows the ADIRS BITE page.

SUBTASK 34-21-06-710-001

- (3) Do these steps to show the left ADIRS current faults:
- (a) Set the IRS MSU left mode select switch to NAV position.
 - (b) Push the LSK adjacent to <ADIRS L on the CDU.
 - 1) Make sure that the CDU shows the ADIRS L BITE MAIN MENU page.
 - (c) Push the LSK adjacent to <CURRENT STATUS on the CDU.
 - 1) Make sure that the CDU shows the ADIRS L BITE CURRENT FAULTS page.
 - 2) Make sure that the CDU does not show the TAT PROBE SIGNAL FAIL message.
- NOTE:** If there is a maintenance message that shows on the CDU, go to the IFIM and do the applicable procedures.

SUBTASK 34-21-06-710-002

- (4) Do these steps to show the right ADIRS current faults:
- (a) Set the IRS MSU right mode select switch to NAV position.
 - (b) Push the LSK adjacent to <ADIRS R on the CDU from the ADIRS BITE page.
 - 1) Make sure that the CDU shows the ADIRS R BITE MAIN MENU page.
 - (c) Push the LSK adjacent to <CURRENT STATUS on the CDU.

EFFECTIVITY
SIA ALL

34-21-06

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the CDU shows the ADIRS R BITE CURRENT FAULTS page.
 - 2) Make sure that the CDU does not show the TAT PROBE SIGNAL FAIL message.
- NOTE: If there is a maintenance message that shows on the CDU, go to the IFIM and do the applicable procedures.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-06

Page 407
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TOTAL AIR TEMPERATURE PROBE - INSPECTION/CHECK

1. General

- A. This procedure does an inspection of the Total Air Temperature (TAT) probe for damage.

TASK 34-21-06-000-802

2. Total Air Temperature Probe - Inspection

(Figure 601)

A. **References**

Reference	Title
34-21-06 P/B 401	TOTAL AIR TEMPERATURE PROBE - REMOVAL/INSTALLATION

B. **Location Zones**

Zone	Area
113	Area Above and Outboard of Nose Landing Gear Wheel Well - Left

C. **Prepare for Inspection.**

SUBTASK 34-21-06-860-006

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	2	C00238	HEATERS TEMP PROBE

D. **Procedure**

SUBTASK 34-21-06-200-001



WARNING

MAKE SURE THAT THE TAT PROBE HEAT IS OFF. THE PROBE BECOMES HOT IF IT IS ON. INJURIES TO PERSONNEL CAN OCCUR.

- (1) Visually examine the Total Air Temperature (TAT) probe of the air inlet scoop and air exit ports for blockages caused by unwanted material.
- (a) Make sure that air goes freely through the tube.
- 1) If there is unwanted material, contamination, or Foreign Object Debris (FOD), then replace the TAT probe (PAGEBLOCK 34-21-06/401).

SUBTASK 34-21-06-210-001

- (2) Visually examine the sensor for physical damage such as cracking or separation of parts on the air scoop and strut.
- (a) If there is any cracking or separation visible, then replace the TAT probe (PAGEBLOCK 34-21-06/401).

SIA ALL; AIRPLANES WITH ASPIRATED TAT PROBES

SUBTASK 34-21-06-200-002

- (3) Check for wear and indentations greater than 0.17 in. (4.32 mm) deep, measured from the leading edge of the strut. When measuring from the trailing edge of the strut, any measurement less than 1.83 in. (46.48 mm) is unacceptable.
- (a) If there is any cracking or separation visible, then replace the TAT probe (PAGEBLOCK 34-21-06/401).

EFFECTIVITY
SIA ALL

34-21-06

D633AM101-SIA

Page 601
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SIA ALL; AIRPLANES WITH ASPIRATED TAT PROBES (Continued)

SUBTASK 34-21-06-200-004

- (4) Check for wear and indentations greater than 0.04 in. (1.02 mm) deep, measured from the front of scoop. When measuring from back of scoop, any measurement less than 2.11 in. (53.59 mm) is unacceptable.
- (a) If there is any cracking or separation visible, then replace the TAT probe (PAGEBLOCK 34-21-06/401).

SIA ALL

SUBTASK 34-21-06-200-006

- (5) Visually check the interior of the air scoop to see if the airbump has worn away. The sensor is serviceable regardless of condition of airbump as long as it is present.
- (a) If the airbump has worn away, then replace the TAT probe (PAGEBLOCK 34-21-06/401).

E. Put the Airplane Back to its Usual Condition.

SUBTASK 34-21-06-860-007

- (1) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	2	C00238	HEATERS TEMP PROBE

————— END OF TASK —————

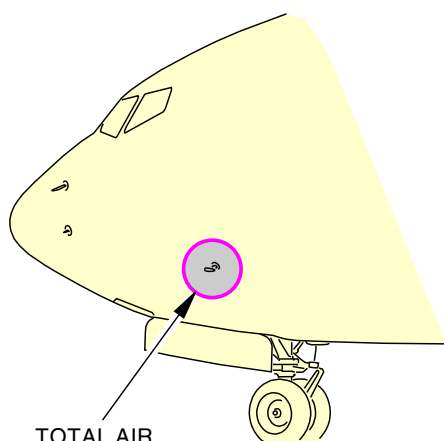
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

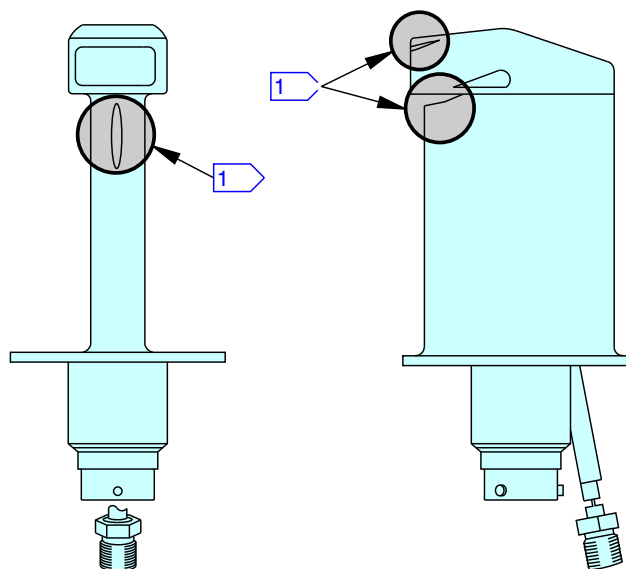
34-21-06

Page 602
Sep 15/2023



TOTAL AIR
TEMPERATURE
PROBE

A



TOTAL AIR TEMPERATURE PROBE

A

1 REJECT: CRACKING AND/OR SEPARATION VISIBLE

2783803 S0000631374_V1

TAT Probe - Inspection/Check
Figure 601/34-21-06-990-803 (Sheet 1 of 3)

EFFECTIVITY
SIA ALL; AIRPLANES WITH ASPIRATED TAT
PROBES

D633AM101-SIA

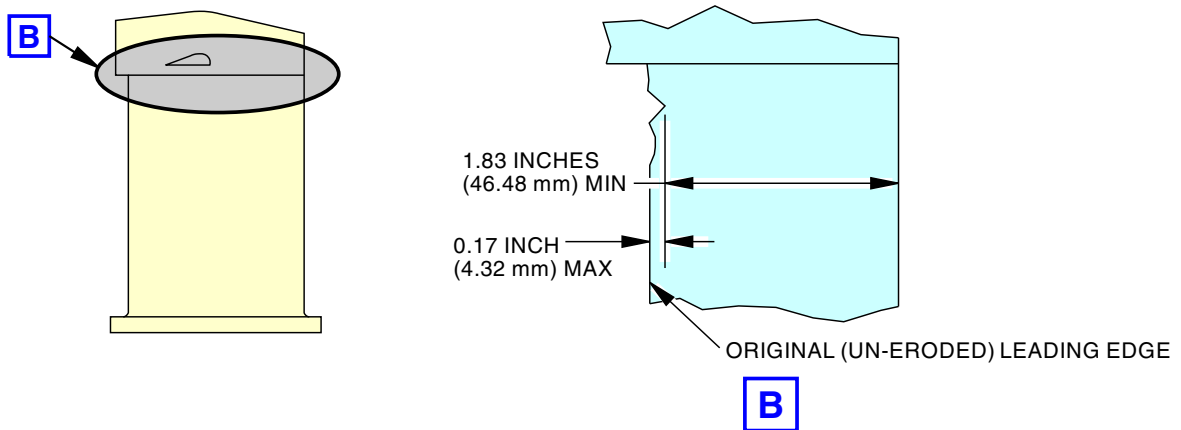
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-06

Page 603
Sep 15/2021



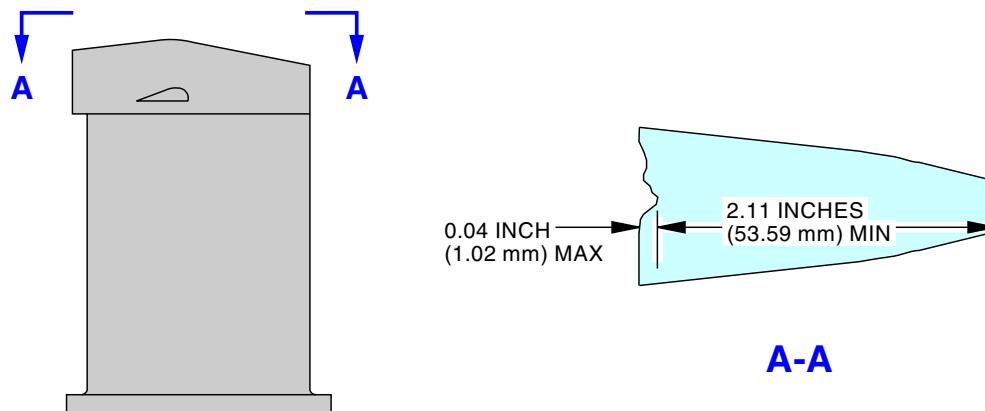
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



NOTE:

DIMENSIONS ARE STRAIGHT LINE (NOT ALONG CURVED SURFACES).

REJECT: WEAR/INDENTATION EXCEEDING 0.17 INCH (4.32 mm) DEEP FROM FRONT OR MEASURING LESS THAN 1.83 INCHES (46.48 mm) FROM BACK.



NOTE:

DIMENSIONS ARE STRAIGHT LINE (NOT ALONG CURVED SURFACES).

REJECT: WEAR/INDENTATION EXCEEDING 0.04 INCH (1.02 mm) DEEP FROM FRONT OR MEASURING LESS THAN 2.11 INCHES (53.59 mm) FROM BACK.

2783804 S0000631375_V1

TAT Probe - Inspection/Check
Figure 601/34-21-06-990-803 (Sheet 2 of 3)

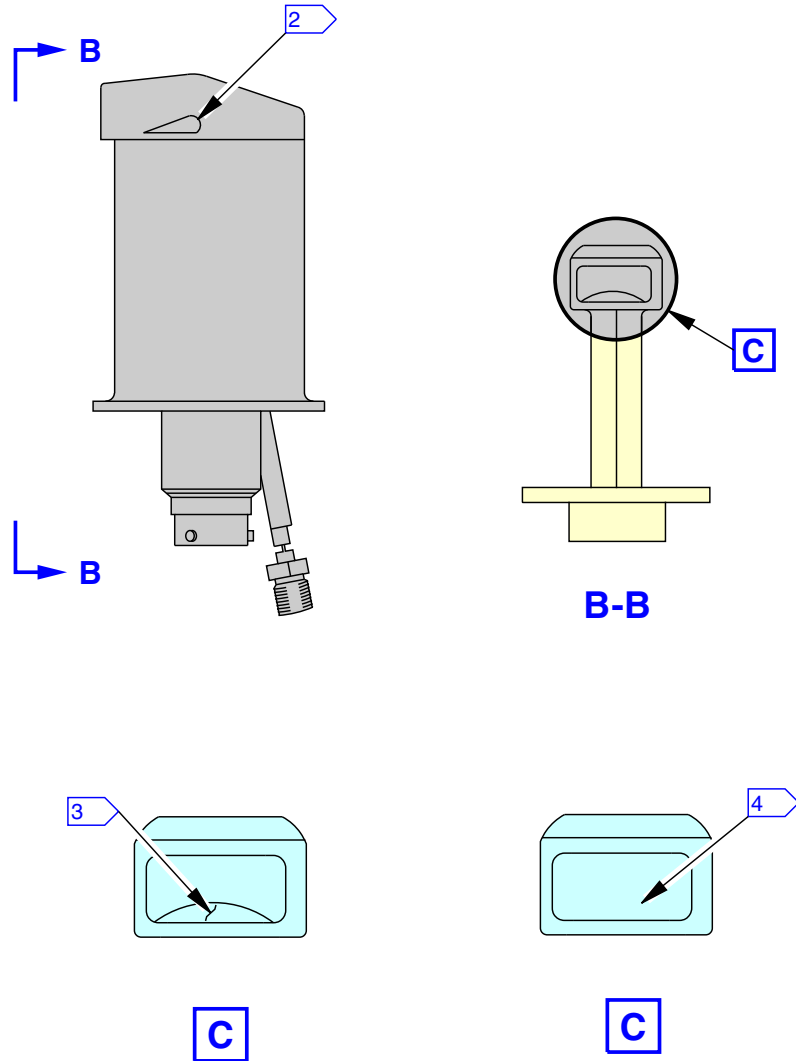
EFFECTIVITY
SIA ALL; AIRPLANES WITH ASPIRATED TAT
PROBES

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-06

Page 604
Sep 15/2021



- 2 AIRBUMP FEATURE
- 3 ACCEPTABLE AIRBUMP PRESENT REGARDLESS OF CONDITION
- 4 REJECT: AIRBUMP MISSING

2783805 S0000631376_V1

TAT Probe - Inspection/Check
Figure 601/34-21-06-990-803 (Sheet 3 of 3)

EFFECTIVITY
SIA ALL; AIRPLANES WITH ASPIRATED TAT
PROBES

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-06

Page 605
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

IRS MASTER CAUTION UNIT - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) A removal of the IRS master caution unit (MCU)
 - (2) An installation of the IRS MCU.
- B. The IRS MCU is installed in the P61 panel in the flight compartment.

TASK 34-21-07-000-801

2. **IRS Master Caution Unit Removal**

(Figure 401)

A. General

- (1) This procedure gives instructions to remove the IRS master caution unit [1].

B. References

Reference	Title
20-40-12-000-801	ESDS Handling for Printed Circuit Board Removal (P/B 201)
20-40-12-400-803	Conductive Dust Cap and Connector Cover Installation (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Removal Procedure

SUBTASK 34-21-07-860-001

- (1) Set the two mode select switches on the IRS mode select unit (MSU) to the OFF position.

SUBTASK 34-21-07-860-002

- (2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

SUBTASK 34-21-07-020-001

- (3) Do these steps to remove the IRS master caution unit [1]:
 - (a) Release the quarter-turn fasteners [2] on the front of the IRS master caution unit [1].



CAUTION

DO NOT TOUCH THE IRS MCU MODULE ASSEMBLY BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE IRS MCU.

- (b) Before you touch the IRS master caution unit [1], do this task: ESDS Handling for Printed Circuit Board Removal, TASK 20-40-12-000-801.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-07

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CAUTION

CAREFULLY REMOVE THE IRS MCU MODULE ASSEMBLY FROM THE PANEL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS AT THE REAR OF THE IRS MCU.

- (c) Carefully pull the IRS master caution unit [1] away from the panel until you can get access to the electrical connectors.
- (d) Disconnect the electrical connectors from the rear of the IRS master caution unit [1].
- (e) Install dust caps on the electrical connectors. To install them, do this task: Conductive Dust Cap and Connector Cover Installation, TASK 20-40-12-400-803.

———— **END OF TASK** ————

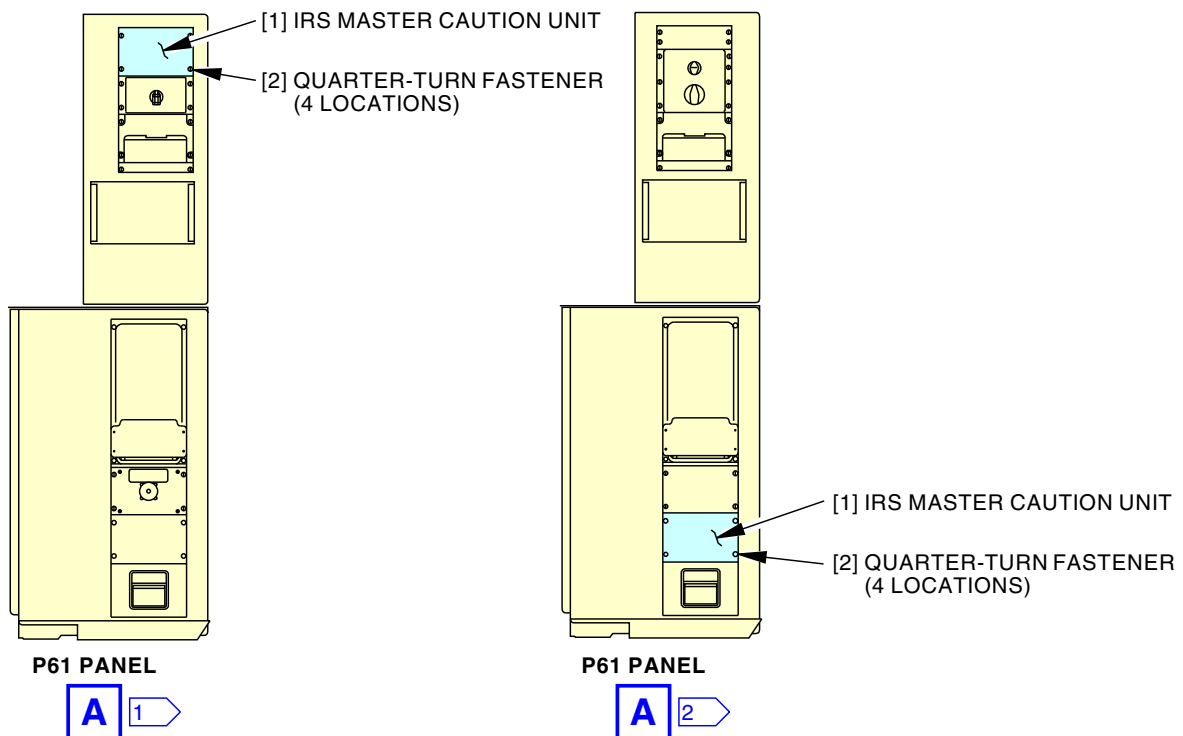
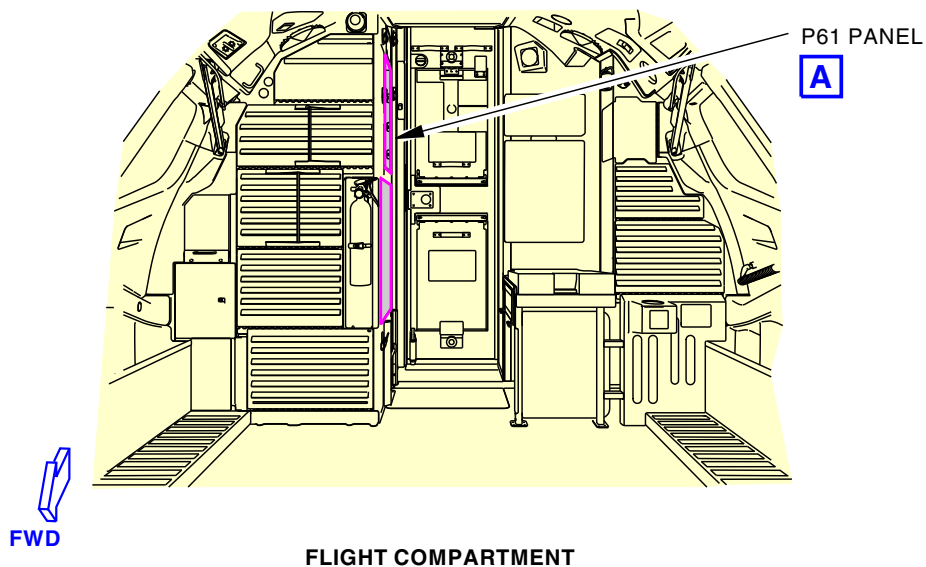
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-07

Page 402
Sep 15/2021



- 1 AIRPLANES WITH ONE SWITCH ON THE DATA LOADER CONTROL PANEL
- 2 AIRPLANES WITH TWO SWITCHES ON THE DATA LOADER CONTROL PANEL

2414832 S00061536140_V1

Master Caution Unit Installation
Figure 401/34-21-07-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-21-07

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-21-07-400-801

3. IRS Master Caution Unit Installation

(Figure 401)

A. General

- (1) This procedure gives instructions to install the IRS master caution unit [1].
- (2) The installation test makes sure the IRS master caution unit [1] is installed correctly.

B. References

Reference	Title
20-40-12-000-803	Conductive Dust Cap and Connector Cover Removal (P/B 201)
20-40-12-400-801	ESDS Handling for Printed Circuit Board Installation (P/B 201)
24-22-00-860-801	Supply Electrical Power (P/B 201)
34-21-00-710-801	Air Data Inertial Reference System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Installation Procedure

SUBTASK 34-21-07-860-003

- (1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

SUBTASK 34-21-07-420-001

- (2) Do these steps to install the IRS master caution unit [1]:



CAUTION

DO NOT TOUCH THE IRS MCU MODULE ASSEMBLY BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE IRS MCU.

- (a) Before you touch the IRS master caution unit [1], do this task: ESDS Handling for Printed Circuit Board Installation, TASK 20-40-12-400-801.
- (b) Remove the dust caps on the electrical connectors. To remove them, do this task: Conductive Dust Cap and Connector Cover Removal, TASK 20-40-12-000-803.
- (c) Connect the electrical connectors to the IRS master caution unit [1].



CAUTION

CAREFULLY INSTALL THE IRS MCU MODULE ASSEMBLY INTO THE PANEL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE ELECTRICAL CONNECTORS AT THE REAR OF THE IRS MCU.

- (d) Carefully install the IRS master caution unit [1] into the P61 panel.
- (e) Lock the quarter-turn fastener [2] on the front of the IRS master caution unit [1].

EFFECTIVITY
SIA ALL

34-21-07

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-21-07-860-004

- (3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

E. Installation Test

SUBTASK 34-21-07-860-005

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-801.

SUBTASK 34-21-07-860-006

- (2) Do this task: Air Data Inertial Reference System - Operational Test, TASK 34-21-00-710-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-21-07

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

STANDBY MAGNETIC COMPASS - MAINTENANCE PRACTICES

1. **General**

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
- (1) Standby Magnetic Compass Deactivation.
 - (2) Standby Magnetic Compass Activation.
 - (3) Each task is a different procedure that you can use to do a compass swing of the standby magnetic compass. One procedure is to use a standby compass calibrator (Calibrator Procedure). The other procedure is to tow the airplane around a compass rose (Tow Around Procedure). Use only one of these procedures to do a swing of the standby compass.
NOTE: Air bubbles can occur in the standby magnetic compass because of temperature change and/or decrease of liquid. Maintenance limits made for liquid quantity make sure of satisfactory compass operation. When air bubble is larger than 3/8 inch (9.5 mm) wide and 1/8 inch (3.2 mm) high, with the glass approximately vertical position, replace the standby compass.
 - (a) Each task has two parts. The first part is to do a swing of the standby compass through four compass points (north, east, south, west). Use this procedure for compass calibration. The second part is to do a swing the standby compass through 12 compass points that are approximately 30 degrees apart. Use this procedure to measure the remaining errors and to make sure the standby compass heading is accurate. Use this data to make the compass correction card. This card must stay with the standby compass.
 - (4) Standby Magnetic Compass Degaussing.
 - (5) Standby Magnetic Compass System (Spot Check) - Inspection.
- C. It is not necessary to keep a constant radius or tangency during airplane tow around the compass rose or swing area. Tow direction is optional. These make no difference when you calculate the solutions.
- D. Do not park vehicles less than 220 feet (67.1 meters) from the airplane during the compass swing.
- E. You can use the auxiliary power unit (APU) during the compass swing.

TASK 34-23-00-040-801

2. **Standby Magnetic Compass - Deactivation**

(Figure 201)

A. General

- (1) This procedure removes electrical power from the Standby Magnetic Compass.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

C. Procedure

SUBTASK 34-23-00-860-001

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

D. Standby Magnetic Compass -Tryout

NOTE: This tryout is to make sure the Standby Magnetic Compass is in a zero energy state.

SUBTASK 34-23-00-860-002

- (1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

SUBTASK 34-23-00-700-001

- (2) Turn the light switch for the standby compass to the BRIGHT position and make sure the internal light is not illuminated.

————— **END OF TASK** —————

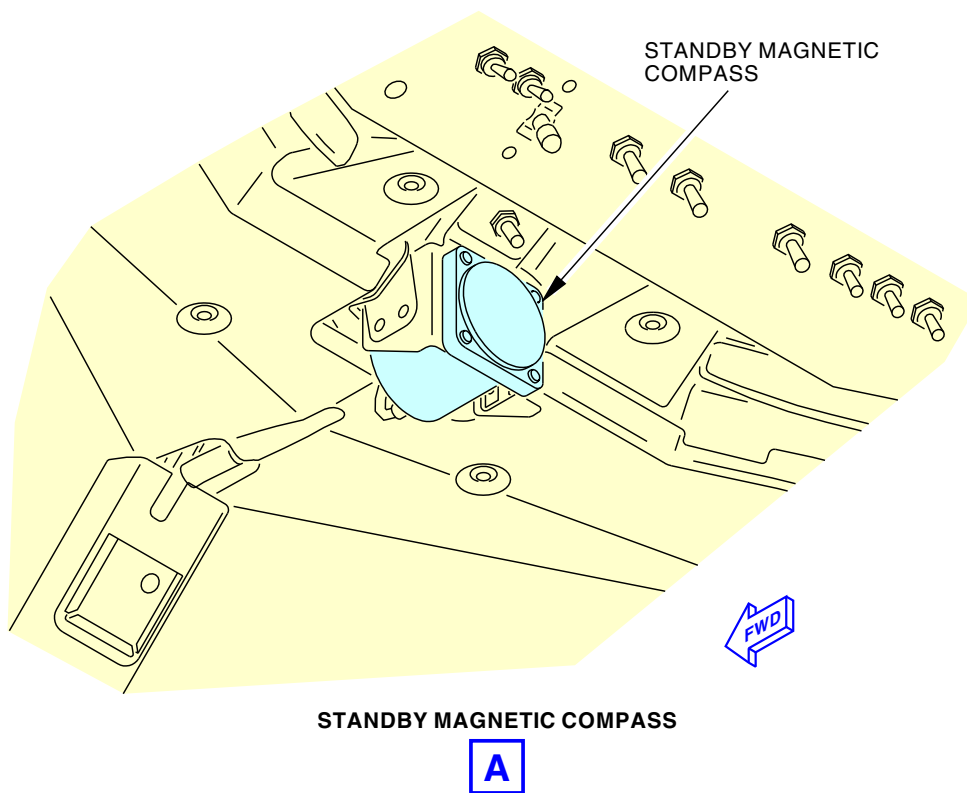
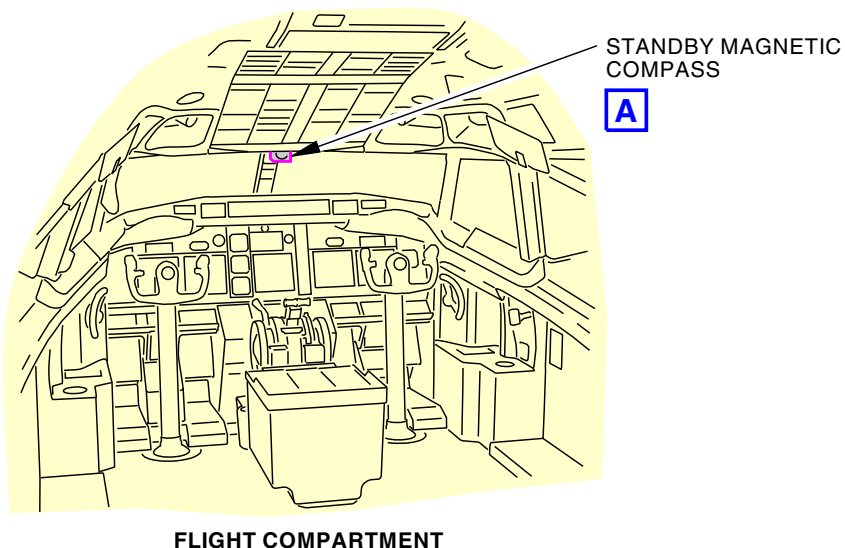
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 202
Sep 15/2021



2414834 S00061536155_V1

Standby Magnetic Compass
Figure 201/34-23-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-23-00-440-801

3. Standby Magnetic Compass - Activation

(Figure 201)

A. General

- (1) This procedure adds electrical power to the Standby Magnetic Compass.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-23-00-860-003

- (1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

————— END OF TASK —————

TASK 34-23-00-820-801

4. Standby Magnetic Compass Calibrator Procedure

(Figure 202)

A. General

- (1) Use tools that are not magnetic to adjust the standby magnetic compass.

B. References

Reference	Title
09-10-00 P/B 201	TOWING - MAINTENANCE PRACTICES
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1925	Kit - Calibration, Standby Compass Part #: 2591553-901 Supplier: 3BMV1 Part #: 2591553-903 Supplier: 3BMV1
STD-1167	Tripod - Non-magnetic

D. Location Zones

Zone	Area
211	Flight Compartment - Left

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 204
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area

212	Flight Compartment - Right

E. Calibrator Adjustment

SUBTASK 34-23-00-820-001

- (1) To calibrate the Standby Compass Calibrator (SCC) (standby compass calibration kit, COM-1925) to the magnetic field at the location of the compass swing area, do these steps:
 - (a) Measure the horizontal component if magnetic material (such as a new building) is less than 600 ft (182.9 m) from the compass rose.

NOTE: The horizontal component of the earth's magnetic field must be constant (± 1 degree) in the test area.

 - 1) Do not use the compass rose if the horizontal component is not constant (± 1 degree).
 - (b) Make sure that there are no vehicles or airplanes less than 220 ft (67.1 m) away.
 - (c) Make sure that there are no buildings less than 220 ft (67.1 m) away.
 - (d) Put a tripod, STD-1167, at the center of the compass swing area.
 - (e) Remove the magnet assembly from the SCC.
 - (f) Remove the knob assembly from the SCC.
 - (g) Attach a master magnetic compass to the SCC with two mounting screws.

NOTE: You can use an accurate standby magnetic compass for a master magnetic compass.

 - 1) Make sure that the N-S and E-W adjustment screws are at neutral.
 - (h) Put the SCC/master compass assembly on the tripod, STD-1167.
 - 1) Make sure that the SCC/master compass assembly is level.
 - (i) Turn the assembly until the master magnetic compass shows an indication of magnetic north (N).
 - (j) Re-install the magnet assembly to the SCC.
 - (k) Re-install the knob assembly to the SCC.
 - (l) Turn the top and bottom SCC dials to show an indication of E at the index line.
 - (m) Make a record of the heading shown on the master magnetic compass.
 - (n) Turn the top and bottom SCC dials to show an indication of W at the index line.
 - (o) Make a record of the heading shown on the master magnetic compass.
 - (p) Turn the magnetic field cancellation adjustment screw on the SCC to decrease the heading errors in each direction (E and W) to a minimum.
 - (q) Continue to adjust the SCC dials for each direction (E and W).
 - 1) Use the Magnetic Field Cancellation Adjustment (MFCA) screw until the errors are at a minimum.

NOTE: Continue to do this procedure until the error in each direction is at a minimum. When the errors are at a minimum, do not move the MFCA screw until the compass swing is completed.
 - (r) Remove the master magnetic compass from the SCC.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 205
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Four Point Calibration Swing Procedure

SUBTASK 34-23-00-580-001

- (1) Tow the airplane to the compass swing area (PAGEBLOCK 09-10-00/201).

NOTE: The compass swing area must be a level area with a smooth surface. It must be sufficiently strong to hold the weight of the airplane. The area must be large enough to tow or taxi the airplane.

- (a) Make sure that no vehicles other than the tow vehicle are less than 220 ft (67.1 m) from the airplane.

SUBTASK 34-23-00-860-005

- (2) Energize all of the electronic equipment, radios, and flight compartment lights for the usual conditions that occur in flight.

SUBTASK 34-23-00-820-002

- (3) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-23-00-860-006

- (4) Set the ND mode selector on the left EFIS control panel on the glareshield to the VOR/ILS position.

SUBTASK 34-23-00-860-009

- (5) Lower the mounting bracket for the standby magnetic compass to give sufficient space for the SCC:
- (a) Loosen the screws on the mounting bracket to let it tilt down.
 - (b) Move the mounting bracket to you and approximately 15° down.
 - (c) Tighten the screws on the mounting bracket.

SUBTASK 34-23-00-020-001

- (6) Remove the lower left and upper right mounting screws on the standby magnetic compass.

SUBTASK 34-23-00-480-001

- (7) Use the two mounting screws to install the SCC on the face of the standby magnetic compass.

SUBTASK 34-23-00-820-003

- (8) Turn the top and bottom SCC dials to show an indication of E at the index line.

SUBTASK 34-23-00-970-001

- (9) Make a record of the heading shown on the standby magnetic compass.

SUBTASK 34-23-00-820-004

- (10) Turn the top and bottom SCC dials to show an indication of W at the index line.

SUBTASK 34-23-00-970-002

- (11) Make a record of the heading shown on the standby magnetic compass.

SUBTASK 34-23-00-820-005

- (12) Turn the E-W adjustment screw on the standby magnetic compass until the error in the last two recorded values is at a minimum.

NOTE: Divide the error in each of the two directions as equally as possible.

SUBTASK 34-23-00-820-006

- (13) Turn the top and bottom SCC dials to show an indication of N at the index line.

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 206
Sep 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-23-00-970-003

- (14) Make a record of the heading shown on the standby magnetic compass.

SUBTASK 34-23-00-820-007

- (15) Turn the top and bottom SCC dials to show an indication of S at the index line.

SUBTASK 34-23-00-970-004

- (16) Make a record of the heading shown on the standby magnetic compass.

SUBTASK 34-23-00-820-008

- (17) Turn the N-S adjustment screw on the standby magnetic compass until the error in the last two recorded values is at a minimum.

NOTE: Divide the error in each of the two directions as equally as possible.

SUBTASK 34-23-00-820-009

- (18) Continue to adjust the SCC dials for each pair of directions (E-W, N-S).

- (a) Turn the E-W and N-S adjustment screws until the errors are at a minimum.

SUBTASK 34-23-00-820-015

- (19) Continue to do this procedure until the error in each pair of directions is at a minimum.

SUBTASK 34-23-00-820-016

- (20) Start with E-W and turn the E-W adjustment screw.

SUBTASK 34-23-00-820-017

- (21) Do N-S and turn the N-S adjustment screw.

SUBTASK 34-23-00-820-010

- (22) When the errors are at a minimum, do the steps that follow for the 12-point accuracy swing.

G. Twelve Point Accuracy Swing Procedure

SUBTASK 34-23-00-580-003

- (1) Move the airplane to a location near the center of the compass swing area.

NOTE: For each of the magnetic headings that follow, the remaining deviation for the standby magnetic compass must not be more than ± 5 degrees.

SUBTASK 34-23-00-820-011

- (2) Adjust the SCC dials to indicate these magnetic headings: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, and 330 degrees.

SUBTASK 34-23-00-970-005

- (3) Make a record of the magnetic heading, MH, and the standby compass heading, CH, for each 30 degree increment.

SUBTASK 34-23-00-970-006

- (4) Make a record of the standby compass heading, CH, in the steer column of the compass correction card for each 30 degree heading increment.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-23-00-080-001

- (1) Remove the SCC from the face of the standby magnetic compass:
- (a) Remove the mounting screws that hold the SCC to the face of the standby magnetic compass.
 - (b) Remove the SCC.
 - (c) Install and tighten the mounting screws on the standby magnetic compass.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 207
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-23-00-860-010

- (2) Put the mounting bracket back to its usual position:
- (a) Loosen the screws on the mounting bracket.
 - (b) Push the mounting bracket up and into the mounting slots.
 - (c) Tighten the screws on the mounting bracket.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

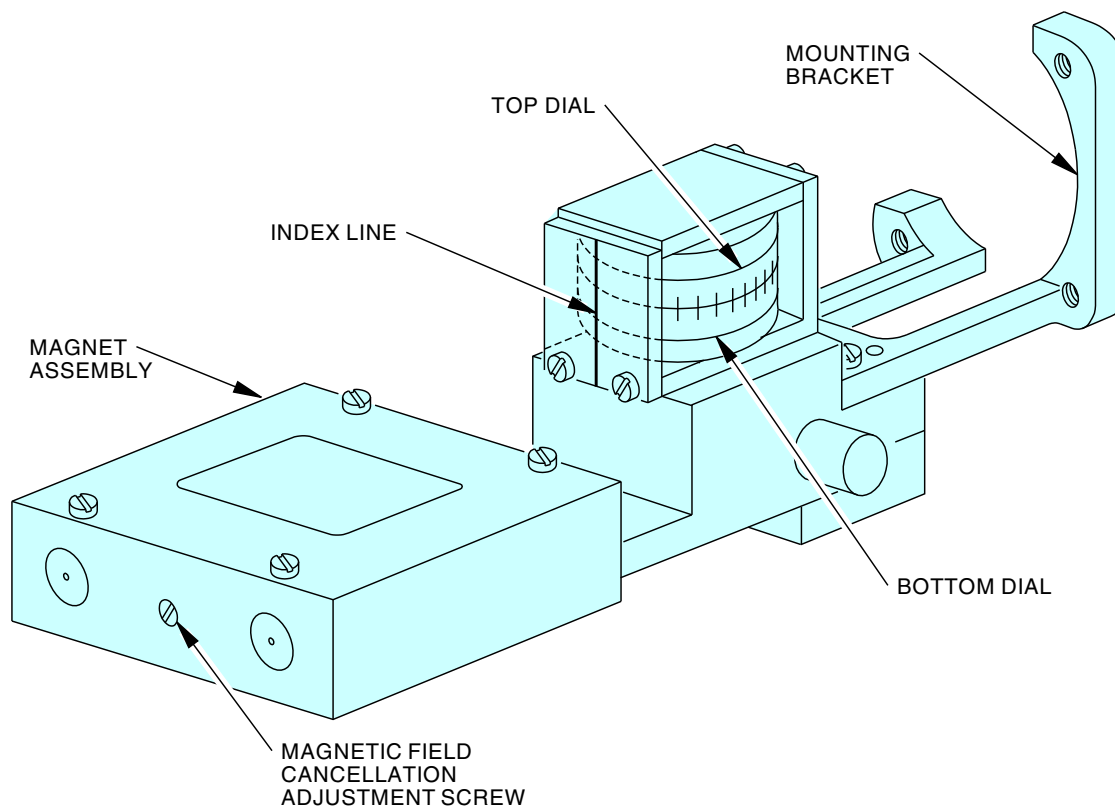
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 208
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414835 S00061536158_V1

Standby Compass Calibrator
Figure 202/34-23-00-990-802

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 209
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-23-00-820-802

5. Standby Magnetic Compass Taxi/Tow Around Procedure

A. General

- (1) Use tools that are not magnetic to adjust the standby magnetic compass.

B. References

Reference	Title
09-10-00 P/B 201	TOWING - MAINTENANCE PRACTICES
09-20-00-580-801	Taxi the Airplane (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal on Ground Condition (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Four Point Calibration Swing Procedure

SUBTASK 34-23-00-580-004

- (1) Position the airplane in the compass swing area:
 - (a) Do this task: Taxi the Airplane, TASK 09-20-00-580-801.
 - (b) Tow the airplane (PAGEBLOCK 09-10-00/201).
 - (c) If a compass rose or an approved swing site is not available, an alternate swing method is to position the airplane on a ramp line with a known magnetic heading, then continue with the standby compass adjustment/test.

NOTE: The compass swing area must be a level area with a smooth surface. It must be sufficiently strong to hold the weight of the airplane. The area must be large enough to tow or taxi the airplane. The horizontal component of the earth's magnetic field must be constant (± 1 degree) for a certified compass rose.
 - (d) Make sure that no vehicles other than the tow vehicle are less than 220 ft (67.1 m) from the airplane.
 - (e) Measure the direction of the horizontal component if magnetic material (such as a new building) is less than 600 ft (182.9 m) from the compass rose.
 - (f) If you are using the alternate swing method, make sure the display on the ND is within 2 degrees of the ramp line used to align the airplane, before you begin the compass swing procedure.

NOTE: When accomplishing the alternate swing procedure, the airplane Navigation Display (ND) is used to align the airplane to the headings required to accomplish the swing.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-23-00

Page 210
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-23-00-860-013

- (2) Energize all of the electronic equipment, radios, and flight compartment lights for the usual conditions that occur in flight.

SUBTASK 34-23-00-820-012

- (3) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-23-00-840-001



WARNING

PREPARE THE SAFETY-SENSITIVE SYSTEMS FOR THE AIR MODE BEFORE YOU INSTALL THE DEACTUATORS. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (4) Do this task: Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.

SUBTASK 34-23-00-860-015

- (5) Attach deactuators to the face of the air/ground sensors for the nose and main landing gear (TASK 32-09-00-860-801).

NOTE: The installation of the deactuators will energize the landing gear latch solenoid. Because the landing gear latch solenoid is close to the standby magnetic compass, the solenoid must be energized to create a normal level of magnetic and electrical interference during calibration of the compass.

- (a) Let the landing gear latch solenoid stay energized for 20 minutes before you continue.

SUBTASK 34-23-00-860-016

- (6) Set the ND mode selector on the left EFIS control panel on the glareshield to the VOR/ILS position.

SUBTASK 34-23-00-750-002

- (7) Make sure that the captain's ND shows a magnetic heading.

SUBTASK 34-23-00-860-018



CAUTION

USE TOOLS THAT ARE NOT MAGNETIC. MAGNETIC TOOLS CAN CAUSE COMPASS ADJUSTMENT ERRORS.

- (8) Make sure that the N-S and E-W adjustment screws on the standby compass are at neutral.

SUBTASK 34-23-00-580-005

- (9) Turn the airplane to a direction where the captain's ND shows a heading (± 2 degrees) of magnetic north, (MH)_n.

SUBTASK 34-23-00-970-007

- (10) Make a record of the magnetic heading, (MH)_n, and the standby compass heading, (CH)_n.

SUBTASK 34-23-00-970-008

- (11) Calculate and make a record of the north heading deviation, D_n, as follows: $D_n = (MH)_n - (CH)_n$.

SUBTASK 34-23-00-580-006

- (12) Turn the airplane to a direction where the captain's ND shows a heading (± 2 degrees) of magnetic east, (MH)_e.

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 211
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-23-00-970-009

- (13) Make a record of the magnetic heading, (MH)_e, and the standby compass heading, (CH)_e.

SUBTASK 34-23-00-970-010

- (14) Calculate and make a record of the east heading deviation, D_e , as follows: $D_e = (MH)_e - (CH)_e$.

SUBTASK 34-23-00-580-007

- (15) Turn the airplane to a direction where the captain's ND shows a heading (± 2 degrees) of magnetic south, (MH)_s.

SUBTASK 34-23-00-970-011

- (16) Make a record of the magnetic heading, (MH)_s, and the standby compass heading, (CH)_s.

SUBTASK 34-23-00-970-012

- (17) Calculate and make a record of the south heading deviation, D_s , as follows: $D_s = (MH)_s - (CH)_s$.

SUBTASK 34-23-00-970-013

- (18) Calculate and make a record of the north-south single-cycle error coefficient, C , and its sign as follows: $C = 0.5(D_n - D_s)$.

SUBTASK 34-23-00-820-013

- (19) Turn the N-S adjustment screw on the standby compass (while at the south magnetic heading) to give a compass heading indication of $(CH)_s - C$.

SUBTASK 34-23-00-580-008

- (20) Turn the airplane to a direction where the captain's ND shows a heading (± 2 degrees) of magnetic west, (MH)_w.

SUBTASK 34-23-00-970-014

- (21) Make a record of the magnetic heading, (MH)_w, and the standby compass heading, (CH)_w.

SUBTASK 34-23-00-970-015

- (22) Calculate and make a record of the west heading deviation, D_w , as follows: $D_w = (MH)_w - (CH)_w$.

SUBTASK 34-23-00-970-016

- (23) Calculate and make a record of the east-west single-cycle error coefficient, B , and its sign as follows: $B = 0.5(D_e - D_w)$.

SUBTASK 34-23-00-820-014

- (24) Turn the E-W adjustment screw on the standby compass (while at the west magnetic heading) to give a compass heading indication of $(CH)_w - B$.

E. Twelve Point Correction Swing Procedure

SUBTASK 34-23-00-580-009

- (1) Move the airplane to a location near the center of the compass swing area.
- (a) For FAA certification, make sure that for each of the magnetic headings in the steps below, the remaining deviation for the standby magnetic compass is not be more than ± 10 degrees.
 - (b) For CAA and EASA certification, make sure that for each of the magnetic headings in the steps below, the remaining deviation for the standby magnetic compass is not be more than ± 5 degrees.

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

Page 212
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-23-00-580-010

- (2) Turn the airplane to each of these ND magnetic headings: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, and 330 degrees.

SUBTASK 34-23-00-970-017

- (3) Make a record of the magnetic heading, MH, and the standby compass heading, CH, for each 30 degree increment.

SUBTASK 34-23-00-970-018

- (4) Calculate and make a record of the deviation, D, for each 30 degree heading in the steer column of the compass correction card as follows: $D = MH - CH$.

SUBTASK 34-23-00-970-019

- (5) Make a record of the standby compass heading, CH, in the steer column of the compass correction card for each 30 degree heading increment.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-23-00-860-020

- (1) Remove the deactuators from the nose and main landing gear.

SUBTASK 34-23-00-840-002

- (2) Do this task: Return the Airplane Systems Back to Their Normal on Ground Condition, TASK 32-09-00-840-802.

SUBTASK 34-23-00-860-021

- (3) Set the mode select switches on the Inertial Reference System (IRS) Mode Select Unit (MSU) to the OFF position for at least 30 seconds.

————— END OF TASK —————

TASK 34-23-00-820-803

6. Standby Magnetic Compass - Degaussing

(Figure 203)

A. General

- (1) Use tools that are not magnetic to adjust the standby magnetic compass.

B. References

Reference	Title
34-23-00-000-801	Standby Magnetic Compass Removal (P/B 401)
34-23-00-400-801	Standby Magnetic Compass Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-4745	Compass - Handheld
STD-6158	Coil - Demagnetizing, AC

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for Standby Magnetic Compass Degaussing

SUBTASK 34-23-00-820-018

- (1) Precautions necessary to demagnetize the standby compass are as follows:

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

Page 213
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Do not permit the AC demagnetizing coil, STD-6158 to remain within 10 ft (3.05 m) of any part of aircraft unless it is energized.
- (b) Do not operate the AC demagnetizing coil, STD-6158 in vicinity of magnetic compass.
- (c) Care should be taken to ensure that the AC demagnetizing coil, STD-6158 is not actually in contact with surface when used. (To be effective, it should be used as close to surface as possible.)

F. Standby Magnetic Compass Degaussing Procedure.

SUBTASK 34-23-00-820-019

- (1) Find and identify the area to be demagnetized as follows:
 - (a) Move a Handheld Compass, STD-4745, into the area adjacent to the standby compass.
 - 1) Make sure that the needle of the Handheld Compass, STD-4745, points to magnetic north before using it.
 - (b) If the Handheld Compass, STD-4745, needle moves away from magnetic north, identify the area for demagnetization.
- (2) Demagnetize the standby compass area to restore to normal configuration (area about windshields and flight compartment) as follows: (Figure 203).
 - (a) Deactivate the standby magnetic compass. Do this task: Standby Magnetic Compass - Deactivation, TASK 34-23-00-040-801.
 - (b) Remove the standby compass and store it in an area away from the aircraft. Do this task: Standby Magnetic Compass Removal, TASK 34-23-00-000-801.
 - (c) Energize the AC demagnetizing coil, STD-6158 at a distance of at least 10 ft (3.05 m) from the aircraft.



MAKE SURE THAT YOU OBEY THE PROCEDURES TO REMOVE THE MAGNETIC PARTICLES FROM THE WINDSHIELD AND THE FLIGHT COMPARTMENT AREAS. KEEP THE TOOL ABOVE THE LOWER PART OF THE WINDSHIELD SILLS. THIS WILL PREVENT DAMAGE TO THE INSTRUMENTS.

- (d) Move the AC demagnetizing coil, STD-6158 slowly towards windshield areas, bring the AC demagnetizing coil, STD-6158 as close as possible to the structure without touching the structure. Move it in series of parallel strokes over the entire windshield area.

NOTE: The windshield area is defined as the area from top of windshield aft for a distance of 36 in. (914.4 mm), bounded on each side by the left and right sliding windshields.
- (e) Demagnetize the windshield screws by moving the AC demagnetizing coil, STD-6158 in line with the screws.
- (f) Slowly withdraw the AC demagnetizing coil, STD-6158 at least 10 ft (3.05 m) from the aircraft before deenergizing.
- (g) Check the areas that are degaussed with a Handheld Compass, STD-4745 for signs of any remaining magnetization. If magnetization still exists, repeat process of degaussing until evidence of magnetization disappears.
- (h) When the area is satisfactorily demagnetized, install the standby compass. Do this task: Standby Magnetic Compass Installation, TASK 34-23-00-400-801.

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

Page 214
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-23-00-940-001

- (1) Remove all the tools and equipment from the work area. Make sure the area is clean.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

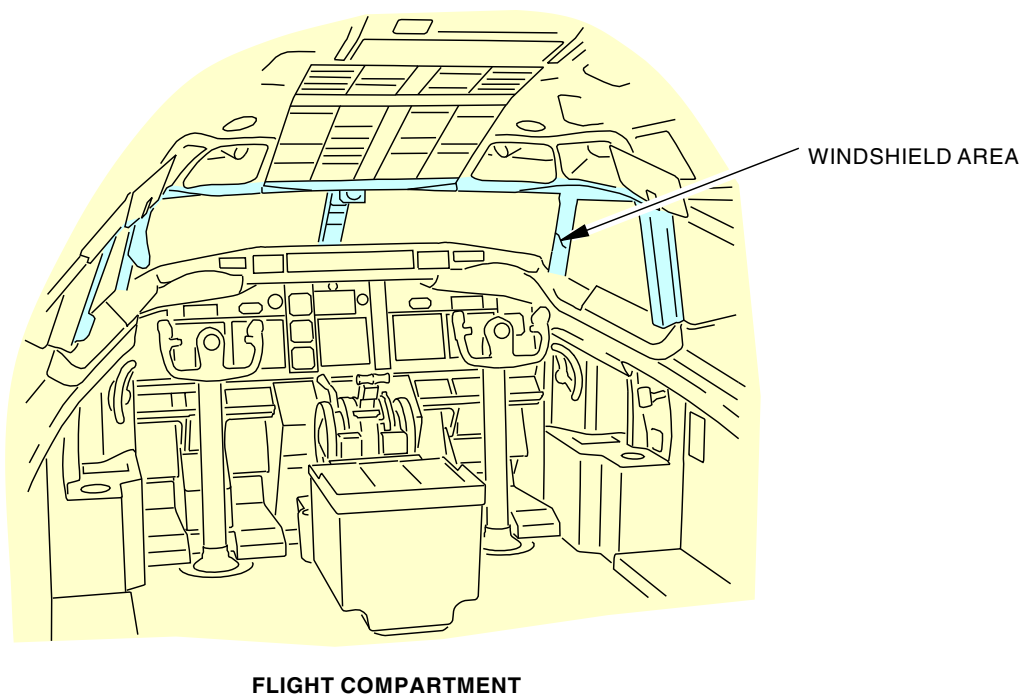
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 215
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2871662 S0000677870_V1

Standby Magnetic Compass
Figure 203/34-23-00-990-803

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 216
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-23-00-730-801

7. Standby Magnetic Compass System (Spot Check) - Inspection

A. General

- (1) This task gives instructions to do a spot check of the standby magnetic compass.
- (2) Magnetic declination is the angle between magnetic north and true north. Declination is positive east of true north and negative when west. Magnetic declination changes over time and with location. The local value of magnetic declination is accurate can be confirmed using a magnetic declination calculator on the following National Oceanic and Atmospheric Administration (NOAA) website:
 - <https://www.ngdc.noaa.gov/geomag-web/#declination>
- (3) The compass swing area must be a level area with a smooth surface away from buildings.
- (4) A spot check of the standby magnetic compass may be performed during taxi, with engines running and equipment on similar to that of normal flight conditions.
- (5) This task can also be used post storage if airplane on-ground greater than one year at the same heading.

B. References

Reference	Title
09-10-00 P/B 201	TOWING - MAINTENANCE PRACTICES
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left

D. Prepare for the Spot Check

SUBTASK 34-23-00-580-011

- (1) Tow the airplane to the compass swing area (PAGEBLOCK 09-10-00/201).

SUBTASK 34-23-00-860-025

- (2) Energize all of the electronic equipment, radios, and flight compartment lights for the usual conditions that occur in flight.

SUBTASK 34-23-00-820-023

- (3) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-23-00-860-026

- (4) Set the Navigation Display (ND) mode selector on the left Electronic Flight Instrument System (EFIS) control panel on the glareshield to the VOR/ILS position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 217
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Standby Magnetic Compass System (Spot Check)

SUBTASK 34-23-00-820-024

- (1) Check the difference between the true heading and the magnetic heading, do the following steps:
 - (a) Make sure that the mode selection switch on the Inertial Reference System (IRS) Mode Select Unit (MSU), on the P5-69 overhead panel, is in the NAV position.

NOTE: It is needed to pull the switch to turn it.
 - (b) Set the DSPL SEL switch on the Inertial System Display Unit (ISDU), on the P5-70 overhead panel, to the HDG/STS position.
 - 1) Make sure that the left section displays the true heading.
 - (c) Make sure that the Primary Flight Display (PFD) displays the magnetic heading.
 - (d) Make sure that the true heading and the magnetic heading is equal to the local magnetic declination.
 - 1) If it is equal, then use the magnetic heading from the PFD.

NOTE: An error of less than 1 degree between the left and right IRS heading is within tolerance. Add left and right heading values and divide by 2 and use the result as the magnetic heading for a compass spot check.
 - 2) If it is not equal, then use the true heading from the ISDU, and add/subtract the local magnetic declination.

SUBTASK 34-23-00-580-012

- (2) Turn the airplane and do a compass heading spot checks for at least 4-8 directions spread evenly around the compass.

NOTE: The airplane does not need to stay in the same spot for each heading check point.

SUBTASK 34-23-00-820-025

- (3) Make sure that the magnetic compass headings are within the following limits:
 - The magnetic compass headings are within 3 degrees of the actual magnetic heading
 - The magnetic compass headings plus the compass card corrections are within 1 degree of the actual magnetic heading.
 - (a) If the magnetic compass headings are not within the limits, do this task: Standby Magnetic Compass Taxi/Tow Around Procedure, TASK 34-23-00-820-802 or Standby Magnetic Compass Calibrator Procedure, TASK 34-23-00-820-801.

NOTE: If the magnetic compass headings are within the limits, the calibrating procedure is not required.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 218
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

STANDBY MAGNETIC COMPASS - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the standby magnetic compass
 - (2) An installation of the standby magnetic compass.
- B. The standby magnetic compass is installed below the center of the forward overhead panel, P5, in the flight compartment.

TASK 34-23-00-000-801

2. Standby Magnetic Compass Removal

(Figure 401)

A. **Location Zones**

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left
212	Flight Compartment - Right

B. **Removal Procedure**

SUBTASK 34-23-00-860-023

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

SUBTASK 34-23-00-020-002



USE ONLY TOOLS THAT ARE NOT MAGNETIC FOR THE REMOVAL AND THE INSTALLATION OF THE STANDBY MAGNETIC COMPASS. MAGNETIC TOOLS CAN CAUSE DAMAGE TO THE INSTRUMENT.

- (2) Remove the standby magnetic compass [1]:
- (a) Disconnect the connector [3].
 - (b) Remove the four brass screws [2] that hold the standby magnetic compass [1] to the mounting bracket.
 - (c) Remove the standby magnetic compass [1].
 - (d) Put protective covers on the connector [3] and the connector on the back of the standby magnetic compass [1].

———— **END OF TASK** ————

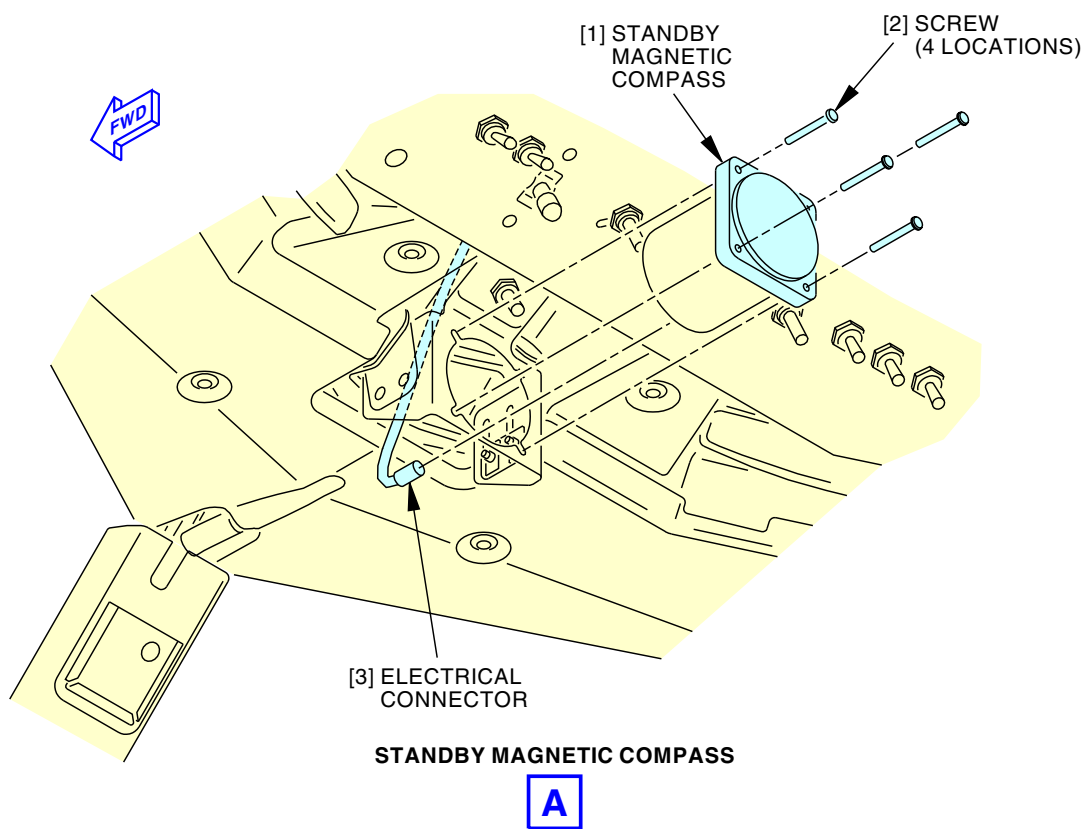
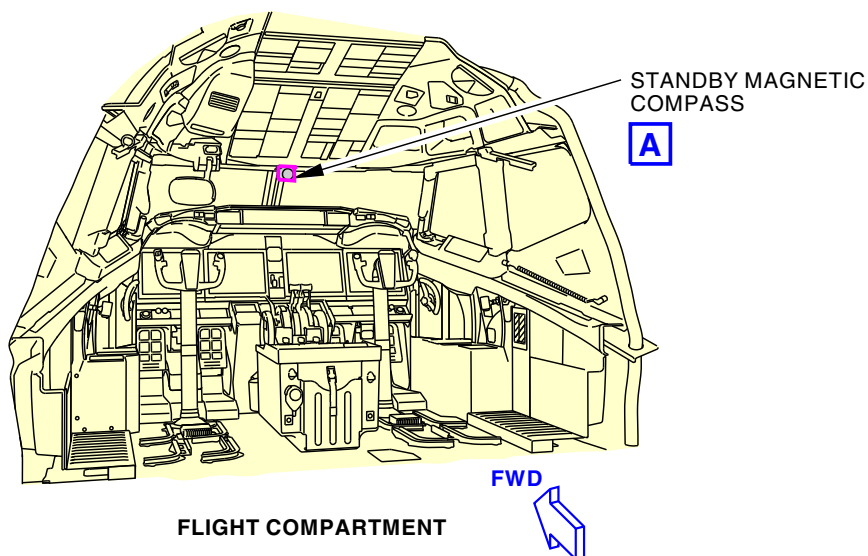
EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



2414837 S00061536167_V1

Standby Magnetic Compass Installation
Figure 401/34-23-00-990-804

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-23-00-400-801

3. Standby Magnetic Compass Installation

(Figure 401)

A. References

Reference	Title
34-23-00-730-801	Standby Magnetic Compass System (Spot Check) - Inspection (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Compass	34-23-01-02-030	SIA ALL

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Installation Procedure

SUBTASK 34-23-00-420-001

 CAUTION	USE ONLY TOOLS THAT ARE NOT MAGNETIC FOR THE REMOVAL AND THE INSTALLATION OF THE STANDBY MAGNETIC COMPASS. MAGNETIC TOOLS CAN CAUSE DAMAGE TO THE INSTRUMENT.

- (1) Install the standby magnetic compass [1]:
- (a) Remove the protective covers from the connector [3] and the connector on the back of the standby magnetic compass [1].
 - (b) Examine the connector [3] for bent or broken pins, dirt, and damage.
 - (c) Install the standby magnetic compass [1] onto the mounting bracket.
 - (d) Connect the connector [3] to the standby magnetic compass [1].
 - 1) Push the connector [3] until it locks into its position with a click.
 - 2) Wind 1 inch wide Scotch No. 24 wire mesh tape around the junction of the connector [3] and standby magnetic compass [1] a minimum of three times.

NOTE: Securing the connector with tape only applies to AMETEK C-5L and C5-M compasses that have not been modified to MOD A. "MOD A" will appear next to the part number if the compass has been modified.

NOTE: The tape must touch against the rear of the standby magnetic compass case. Keep sufficient tension on the tape while you wind the junction to make it the shape of the connector. You can use thinner tape, if you wind the connector with a minimum overlap of 50 percent. Wind all parts of the connector within 1 inch of the compass with a minimum of three wrappings. Temporarily secure the end of the tape.
 - 3) Wind the mesh tape a minimum of two times with 1 inch wide Scotch No. 70 or A-A-59163 Type I self-fusing silicone rubber tape.

NOTE: Keep sufficient tension on the tape while you wind the junction to make it the shape of the connector. You can use thinner tape, if you wind the connector with a minimum overlap of 50 percent. Wind all of the wire mesh tape with a minimum of two wrappings of the silicone rubber tape.

EFFECTIVITY
SIA ALL

34-23-00

D633AM101-SIA

Page 403
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 4) If the connector [3] is removed for any reason, discard all tape and connect the connector [3] with a new tape.
- (e) Install the four brass screws [2] at the corners of the standby magnetic compass [1].

SUBTASK 34-23-00-860-024

- (2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

E. Installation Test

SUBTASK 34-23-00-750-003

- (1) Make sure that the light for the standby magnetic compass [1] is on.

SUBTASK 34-23-00-820-020

- (2) Do this task: Standby Magnetic Compass System (Spot Check) - Inspection, TASK 34-23-00-730-801.

NOTE: In the event the compass is removed and there are no modifications to the area or equipment, and the same equipment is installed, there is no need or requirement to spot check the compass.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-00

Page 404
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

STANDBY MAGNETIC COMPASS LIGHT - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) Standby Magnetic Compass Light - Removal
 - (2) Standby Magnetic Compass Light - Installation

TASK 34-23-01-000-801

2. Standby Magnetic Compass Light - Removal

(Figure 201)

A. General

- (1) The Standby Magnetic Compass Light is located on the front of the Standby Magnetic Compass, which is below the P5 FWD Overhead Panel.

B. Location Zones

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-23-01-860-001

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

SUBTASK 34-23-01-000-001



DO NOT PULL THE SPRING WHEN YOU REMOVE THE LAMP. THE SPRING CAN BREAK AND CAUSE PERMANENT DAMAGE TO THE COMPASS.

- (2) Do these steps to remove the standby compass light:
 - (a) Remove the lamp cap [1] by unscrewing it counter-clockwise.
 - (b) Remove the lamp [2] from the coil spring.

NOTE: Gently twisting the lamp can assist in its removal.

———— **END OF TASK** ————

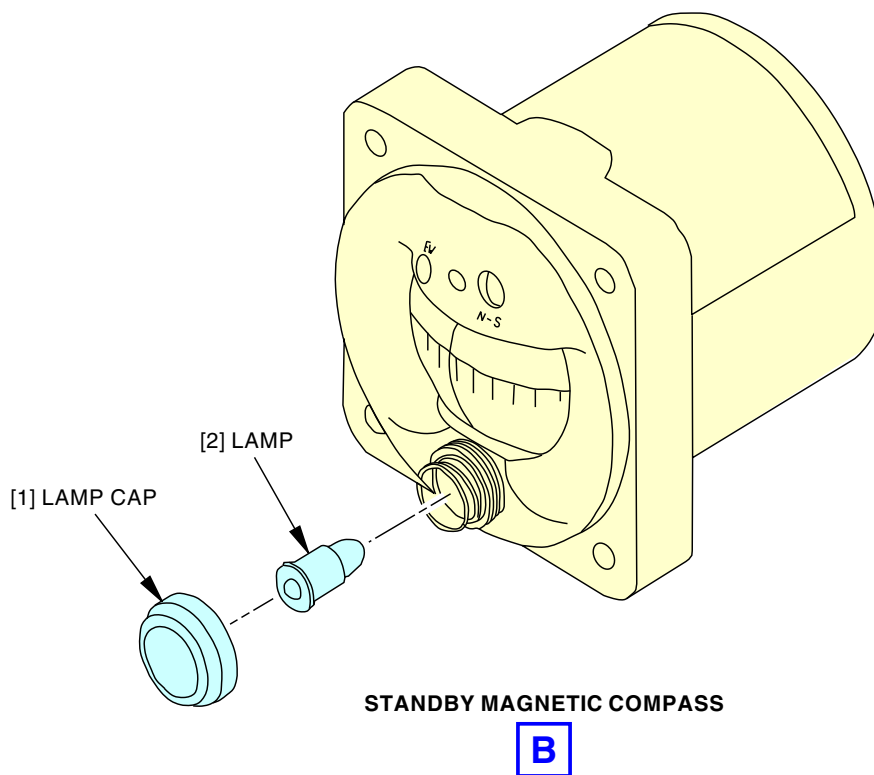
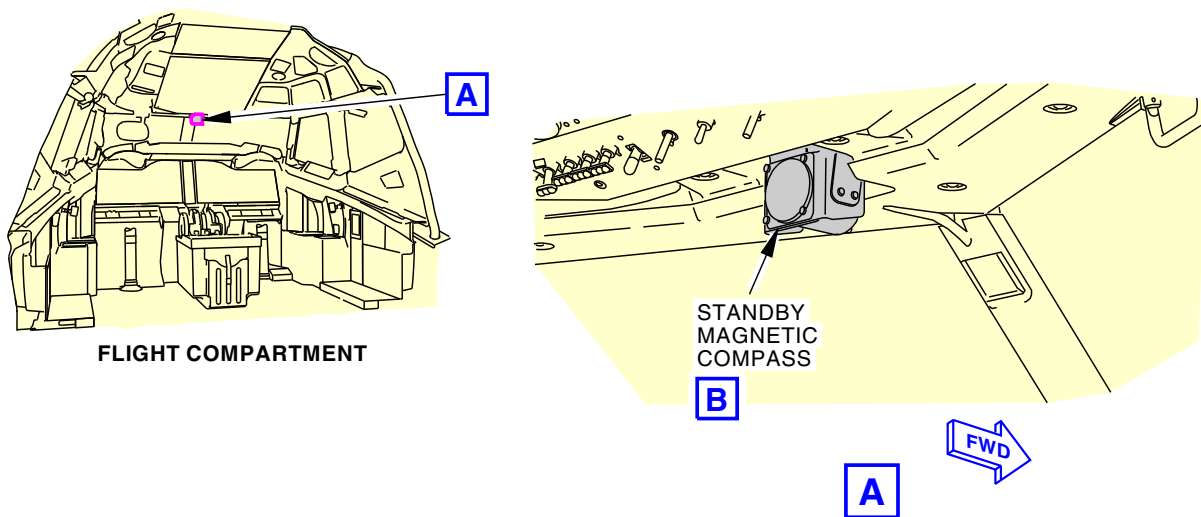
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-01

Page 201
Sep 15/2021



2414836 S00061536163_V2

Standby Magnetic Compass Light
Figure 201/34-23-01-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-23-01

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-23-01-400-801

3. **Standby Magnetic Compass Light - Installation**

(Figure 201)

A. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Lamp cap	34-23-01-02-036	SIA ALL

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Installation Procedure

SUBTASK 34-23-01-860-002

- (1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

SUBTASK 34-23-01-400-001

- (2) Do these steps to install the standby magnetic compass light:
- (a) Put the lamp [2] (bulb end first) into the coil spring on the compass.
 - (b) Screw the lamp cap [1] onto the compass.

SUBTASK 34-23-01-860-003

- (3) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
A	14	C00161	CONTROL CABIN LIGHTING STBY COMPASS

SUBTASK 34-23-01-860-005

- (4) Make sure that the panel light switch is in the ON position.

SUBTASK 34-23-01-210-001

- (5) Make sure that the standby magnetic compass internal lights are ON.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

34-23-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

INTEGRATED STANDBY FLIGHT DISPLAY SYSTEM- MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) Integrated Standby Flight Display System Deactivation.
- (2) Integrated Standby Flight Display System Activation.

TASK 34-24-00-040-801

2. Integrated Standby Flight Display System - Deactivation

(Figure 201)

A. **General**

- (1) This procedure removes electrical power from the Standby Attitude Reference System.

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Procedure**

SUBTASK 34-24-00-860-001

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	9	C00331	PANEL & INSTR 28V PRI CAPT & CTR

D. **Standby Attitude Reference System - Tryout**

NOTE: This tryout is to make sure the Standby Attitude Reference System is in a zero energy state.

SUBTASK 34-24-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	9	C00331	PANEL & INSTR 28V PRI CAPT & CTR
D	8	C00701	EMER PANEL LTG

SUBTASK 34-24-00-700-001

- (2) Make sure the panel lights for the indicator are not on.

SUBTASK 34-24-00-040-001

- (3) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

SUBTASK 34-24-00-040-002

- (4) Open this circuit breaker and attach DO-NOT-CLOSE tag:
 - (a) Front of the ISFD Dedicated Battery System, M2100, E5-2:
 - 1) DBC Output circuit breaker.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

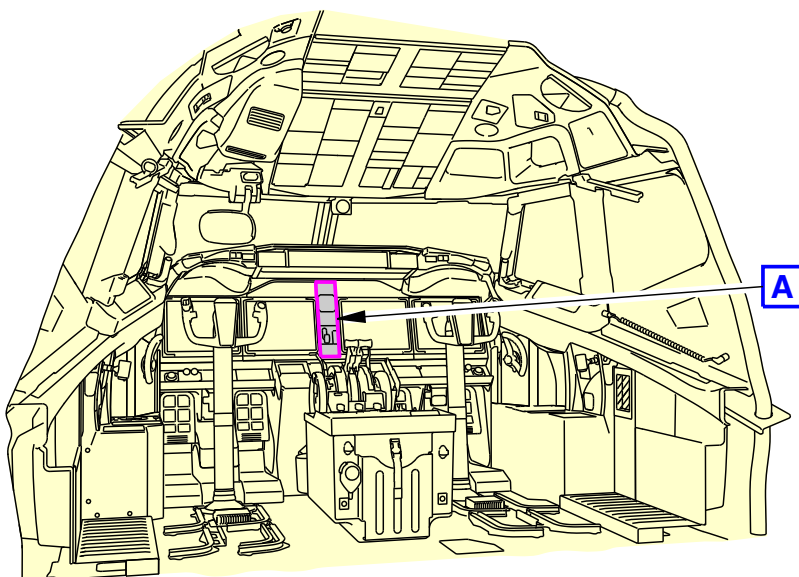
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

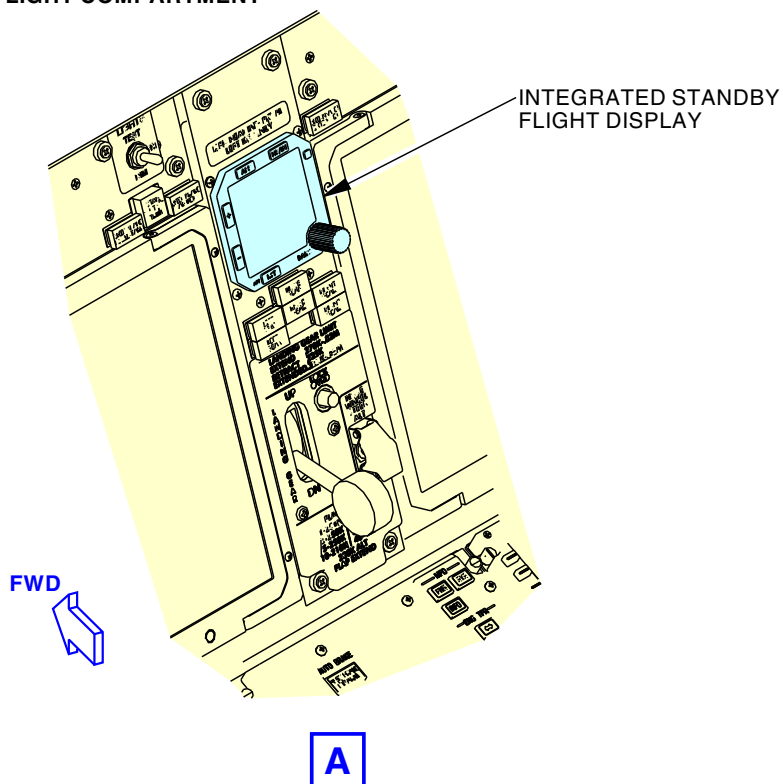
Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



FLIGHT COMPARTMENT



2414838 S00061536173_V1

Integrated Standby Flight Display System
Figure 201/34-24-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-24-00-440-801

3. Standby Attitude Reference System - Activation

(Figure 201)

A. General

- (1) This procedure adds electrical power to the Standby Attitude Reference System.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-24-00-860-003

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	9	C00331	PANEL & INSTR 28V PRI CAPT & CTR
D	8	C00701	EMER PANEL LTG

SUBTASK 34-24-00-440-001

- (2) Close this circuit breaker and remove DO-NOT-CLOSE tag:
- (a) Front of the ISFD Dedicated Battery System, M2100, E5-2:
- 1) DBC Output circuit breaker.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

INTEGRATED STANDBY FLIGHT DISPLAY SYSTEM - ADJUSTMENT/TEST

1. **General**

A. This procedure has these tasks:

- (1) Integrated Standby Flight Display System - Operational Test
- (2) Integrated Standby Flight Display System - System Test
- (3) Integrated Standby Flight Display Dedicated Battery System - Operational Test

TASK 34-24-00-710-801

2. **Integrated Standby Flight Display System - Operational Test**

A. **General**

- (1) This task gives instructions to test the integrated standby flight display system for correct operation.

B. **References**

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left

D. **Procedure**

SUBTASK 34-24-00-860-016

- (1) Make sure Integrated Standby Flight Display (ISFD) Output circuit breaker located in the front of ISFD Dedicated Battery System, M2100, E5-2 is closed.
 - (a) Make sure that Light Emitting Diode (LED) in front of ISFD Dedicated Battery Charger (DBC) is not on.

SUBTASK 34-24-00-710-001

- (2) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-24-00-040-003

- (3) Open ISFD Output circuit Breaker in the front of the ISFD Dedicated Battery System, M2100, E5-2.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

Page 501
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-00-440-003



CAUTION

WHEN YOU CLOSE THE DBC CIRCUIT BREAKER, DO NOT MOVE THE AIRPLANE WHILE THE YELLOW "ATT" MESSAGE AND "INIT90S" MESSAGES SHOW ON THE ISFD. IF YOU MOVE THE AIRPLANE DURING THE ISFD SYSTEM POWER-UP AND INITIALIZATION ALIGNMENT, THE ISFD MAY DISPLAY INCORRECT ATTITUDE INFORMATION WITH NO ATT FLAG OR MESSAGE.

- (4) Close ISFD Output circuit Breaker in the front of the ISFD Dedicated Battery System, M2100, E5-2.
- (a) Make sure that the following yellow flags are displayed on the ISFD 10 to 15 seconds after power up:
- 1) ALT
 - 2) SPD
 - 3) ATT
 - 4) INIT XXs.

NOTE: "XXs" refers to the time remaining (in seconds) for the ISFD to complete its initialization. Timer starts at 90s and counts down to 0s.

SUBTASK 34-24-00-710-004

- (5) Wait 15 seconds and make sure that the following indications and flags are displayed on the ISFD:
- (a) Altitude tape
 - (b) Airspeed tape
 - (c) ATT yellow flag
 - (d) INIT XXs yellow flag.

SUBTASK 34-24-00-710-005

- (6) Wait at least 120 seconds and make sure that the following indications are displayed on the ISFD with no red error flags:
- (a) Altitude tape
 - (b) Heading
 - (c) Airspeed tape
 - (d) Attitude pitch
 - (e) Attitude roll.

NOTE: The initialization sequence may take minutes to complete before the attitude is seen.

SUBTASK 34-24-00-040-004

- (7) Open this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

SUBTASK 34-24-00-710-002

- (8) Make sure the following indications are displayed on the ISFD with no red error flags:
- (a) Altitude tape
 - (b) Heading

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 502
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Airspeed tape
- (d) Attitude pitch
- (e) Attitude roll.

SUBTASK 34-24-00-860-017

- (9) Set the BAT switch, P5-13 panel to OFF.
 - (a) Make sure that the ISFD display goes off.

SUBTASK 34-24-00-860-025

- (10) Set BAT switch, P5-13 panel to ON.

SUBTASK 34-24-00-710-003

- (11) Close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

- (a) Make sure that the following yellow flags are displayed on the ISFD 10 to 15 seconds after power up:
 - 1) ALT
 - 2) SPD
 - 3) ATT
 - 4) INIT XXs.

NOTE: "XXs" refers to the time remaining (in seconds) for the ISFD to complete its initialization. Timer starts at 90s and counts down to 0s.

SUBTASK 34-24-00-710-006

- (12) Wait 15 seconds and make sure that the following indications and flags are displayed on the ISFD:
 - (a) Altitude tape
 - (b) Airspeed tape
 - (c) ATT yellow flag
 - (d) INIT XXs yellow flag.

SUBTASK 34-24-00-710-007

- (13) Wait at least 120 seconds and make sure that the following indications are displayed on the ISFD with no red error flags:
 - (a) Altitude tape
 - (b) Heading
 - (c) Airspeed tape
 - (d) Attitude pitch
 - (e) Attitude roll.

SUBTASK 34-24-00-710-008

- (14) Make sure the ISFD heading agrees with the Captain's Primary Flight Display within 2 degrees.

SUBTASK 34-24-00-710-009

- (15) Make sure airplane is a static (level) condition.

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 503
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that both pitch and roll attitude displayed on the ISFD are visually 0 degrees ± 1 .
- (b) Make sure the roll pointer on the ISFD visually agrees with the roll pointer on the Captain's MAX Display System (MDS) Electronic Attitude Director Indicator (EADI) within one half degree.
 - 1) If ISFD is not in agreement with Captain's MDS display, loosen the ISFD mounting screws and hand adjust the ISFD, and retighten screws.

SUBTASK 34-24-00-710-013

- (16) Push the APP and HP/IN buttons at the same time for 3 to 5 seconds to enter ISFD MAINTENANCE page.
 - (a) Make sure that MAINTENANCE page is displayed.

SUBTASK 34-24-00-710-014

- (17) Turn the BARO knob to select FUNCTIONAL TESTS.

SUBTASK 34-24-00-710-015

- (18) Press the BARO knob button to begin the test.
 - (a) Make sure that TESTS IN PROGRESS (110 s) is displayed for at least 2 minutes.
 - (b) Make sure the TEST result displays TEST OK.

SUBTASK 34-24-00-710-016

- (19) Push and release RST button twice to return to the operational display.

————— END OF TASK —————

TASK 34-24-00-730-801

3. Integrated Standby Flight Display System - System Test

A. General

- (1) This task are system test instructions for the integrated standby flight display system for correct operation.

B. References

Reference	Title
21-33-02-000-801	Cabin Altitude and Differential Pressure Indicator Removal (P/B 401)
21-33-02-400-801	Cabin Altitude and Differential Pressure Indicator Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 504
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701-4 Supplier: 38002 Part #: P75701M2-3 Supplier: 38002
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: ADA737-678 Supplier: 38002 Part #: AK737-900 Supplier: 3BSK6 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

D. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

E. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
121	Forward Cargo Compartment - Left

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

Page 505
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

G. Prepare for the System Test

SUBTASK 34-24-00-710-012

- (1) Do this task: Integrated Standby Flight Display System - Operational Test, TASK 34-24-00-710-801.

SUBTASK 34-24-00-860-021



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-24-00-860-022

- (3) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-24-00-750-004

- (4) Make sure the following indications are displayed on the Integrated Standby Flight Display (ISFD) with no red flags:
- (a) Altitude tape
 - (b) Airspeed tape
 - (c) Heading
 - (d) Attitude pitch and roll.

SUBTASK 34-24-00-860-023

- (5) Set the BARO scale of the ISFD to 29.92 in/Hg (1013.21 mBar).

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

H. Installation of the Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-24-00-480-001



IF THERE IS A COVER ON THE STATIC PORTS, MAKE SURE THAT YOU CAN SEE THE COVERS FROM THE GROUND. IF YOU DO NOT REMOVE COVERS ON THE STATIC PORTS BEFORE FLIGHT, IT CAN CAUSE LARGE ERRORS IN AIRSPEED OR ALTITUDE SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.



DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (1) Seal the two alternate static ports with vinyl adhesive Scotch Brand No.471 tape, G02219 at these locations:
 - (a) The ALTERNATE static port on the right side of the fuselage.
 - (b) The ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-24-00-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-24-00-480-002

- (3) Remove cap from the No. 5 Alternate Static Drain, in the electronic equipment compartment, below E-5 rack.

SUBTASK 34-24-00-400-001

- (4) Install the coupling, COM-1927, on the No. 5 Alternate Static Drain.

SUBTASK 34-24-00-400-002

- (5) Connect the air data model test set, COM-1914 to the coupling, COM-1927.

I. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-24-00-400-003



INSTALL THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT. SCRATCHES CAN CAUSE INCORRECT ALTITUDE INDICATIONS.

- (1) Install the static test adapter, COM-1921, on the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-24-00-400-004

- (2) Connect the air data model test set, COM-1914, to the static test adapter, COM-1921.

SUBTASK 34-24-00-480-003



IF THERE IS A COVER ON THE STATIC PORTS, MAKE SURE THAT YOU CAN SEE THE COVERS FROM THE GROUND. IF YOU DO NOT REMOVE COVERS ON THE STATIC PORTS BEFORE FLIGHT, IT CAN CAUSE LARGE ERRORS IN AIRSPEED OR ALTITUDE SIGNALS. THIS CAN CAUSE AN DANGEROUS FLIGHT.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

Page 507
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



CAUTION

DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

- (3) Seal the ALTERNATE static port on the right side of the fuselage with vinyl adhesive Scotch Brand No.471 tape, G02219.

J. Installation of the Pitot Probe Adapter

SUBTASK 34-24-00-480-006



CAUTION

MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE WEIGHT OF THE TEST HOSE CAN BEND OR TWIST THE PITOT PROBE OUT OF TOLERANCE.

- (1) Install the pitot test adapter, COM-1916 on the lower pitot probe located at STA 192, WL 213, RBL 34.

SUBTASK 34-24-00-480-007

- (2) Connect the air data model test set, COM-1914 to the pitot test adapter, COM-1916.

SUBTASK 34-24-00-020-001



CAUTION

THE CABIN ALTITUDE DIFFERENTIAL PRESSURE INDICATOR MUST BE DISCONNECTED FROM ITS STATIC PRESSURE SOURCE AND THE SOURCE CAPPED. FAILURE TO DISCONNECT THE CABIN DIFFERENTIAL PRESSURE INDICATOR MAY RESULT IN DAMAGE TO THE INDICATOR.

- (3) Do this task: Cabin Altitude and Differential Pressure Indicator Removal, TASK 21-33-02-000-801.

K. Test Procedure

SUBTASK 34-24-00-860-019

- (1) Apply pressure to the alternate pitot and alternate static systems for each test point as shown in the table that follows (Table 501)
- (a) When you apply pressure to the static system, make sure that the rate is less than 5,000 feet for each minute.
- (b) When you apply pressure to the pitot system, make sure that the rate is less than 300 knots for each minute.

Table 501/34-24-00-993-801

TEST POINT	STATIC (In. Hg)	STATIC (mBar)	PITOT (In. Hg)	PITOT (mBar)	ISFD ALTITUDE (feet)	ISFD ALTITUDE (meters)	ISFD AIRSPEED (knots)
1	29.921	1,013	30.311	1,026	0±30	0±9.14	90±3.5
2	24.896	843	27.996	948	5,000±50	1,524±15.24	250±3.5
3	16.886	572	17.703	599	15,000±110	4,572±33.52	130±3.5
4	11.104	376	17.013	576	25,000±160	7,620±48.76	340±8
5	7.041	238	10.963	371	35,000±210	10,668±64.00	279±6

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

Page 508
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 501/34-24-00-993-801 (Continued)

TEST POINT	STATIC (In. Hg)	STATIC (mBar)	PITOT (In. Hg)	PITOT (mBar)	ISFD ALTITUDE (feet)	ISFD ALTITUDE (meters)	ISFD AIRSPEED (knots)
6	5.286	179	7.95	269	41,000±235	12,496±71.62	233±6

SUBTASK 34-24-00-730-001

- (2) At each test value, permit the pressure to become stable for one minute.
- (a) Do not hit or shake the display before you read the values.

SUBTASK 34-24-00-780-001

- (3) Make sure that the altitude and airspeed data on the ISFD is in tolerance for each test point in Table 501

SUBTASK 34-24-00-080-001

- (4) Put the system back to ambient pressure.
- (a) When you release the pressure form the system, make sure that the rate is less than 5,000 feet for each minute.
- (b) When you release the pressure form the pitot system, make sure the rate is less than 300 knots for each minute.

SUBTASK 34-24-00-080-002

- (5) Removal of Drain Coupling, coupling, COM-1927



CAUTION

MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (a) Disconnect the air data model test set, COM-1914 from the coupling, COM-1927.
- (b) Disconnect the coupling, COM-1927, from the No. 5 Alternate Static Drain.
- (c) Install the cap on the No.5 Alternate Static Drain.
- (d) Close this access panel:

Number

Name/Location

117A

Electronic Equipment Access Door



WARNING

FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED SENSING AND ALTITUDE SENSING SIGNALS, MAY LEAD TO LOSS OF SAFE FLIGHT.



CAUTION

DO NOT PUT PLUGS IN THE HOLES OR CHANGE THE SHAPE OF THE HOLES IN THE STATIC PORT. REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE STATIC PORT MUST BE SMOOTH AND CLEAN. THE SYSTEM WILL NOT OPERATE CORRECTLY IF THE STATIC PORT IS DAMAGED.

- (e) Remove the Scotch Brand No.471 tape, G02219, from the alternate static ports at these locations:
- 1) The ALTERNATE static port on the right side of the fuselage.
 - 2) The ALTERNATE static port on the left side of the fuselage.

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

Page 509
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-00-080-003

- (6) Removal of Static Port Adapter,static test adapter, COM-1921



CAUTION

MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (a) Disconnect the air data model test set, COM-1914 from the static test adapter, COM-1921.



CAUTION

REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

- (b) Remove the static test adapter, COM-1921, from the ALTERNATE static port on the left side of the fuselage.
- (c) Remove the Scotch Brand No.471 tape, G02219, from the ALTERNATE static port on the right side of the fuselage.

SUBTASK 34-24-00-080-004

- (7) Removal of the Pitot Probe Adapter



CAUTION

MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

- (a) Disconnect the air data model test set, COM-1914 from the pitot test adapter, COM-1916.
- (b) Remove the pitot test adapter, COM-1916, from the pitot probe.

SUBTASK 34-24-00-400-005

- (8) Do this task: Cabin Altitude and Differential Pressure Indicator Installation, TASK 21-33-02-400-801.

L. Put the Airplane Back to Its Usual Condition

SUBTASK 34-24-00-440-002

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

————— END OF TASK —————

TASK 34-24-00-710-802

4. Integrated Standby Flight Display Dedicated Battery System - Operational Test

NOTE: This procedure is a scheduled maintenance task.

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 510
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

A. General

- (1) This task gives instruction to check if the battery charger and battery pack for the Integrated Standby Flight Display (ISFD) are operational.

B. References

Reference	Title
24-22-00-860-801	Supply Electrical Power (P/B 201)
24-22-00-860-802	Remove Electrical Power (P/B 201)
34-24-02-000-801	ISFD Dedicated Battery Charger Removal (P/B 401)
34-24-02-400-801	ISFD Dedicated Battery Charger Installation (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Operational Test

SUBTASK 34-24-00-710-027

- (1) Make sure that the electrical power is on (TASK 24-22-00-860-801).

SUBTASK 34-24-00-710-024

- (2) Make sure that the BAT switch, on the P5-13 electrical meters, battery, and galley power module, is in the ON position.

SUBTASK 34-24-00-860-024

- (3) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

Standby Power Control Unit, M01720

Row	Col	Number	Name
C	4	C03061	BAT BUS SECT 1

SUBTASK 34-24-00-010-002

- (4) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 511
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Dedicated Battery System and Battery Pack for the Integrated Standby Flight Display Operational Test

SUBTASK 34-24-00-710-017

- (1) Do these steps to check if the ISFD Dedicated Battery System and battery pack are serviceable:
- (a) Make sure that the circuit breaker in front of the Dedicated Battery System charger is closed.
 - (b) Make sure that the red FAULT light on the front of the battery charger is not on.
NOTE: The red FAULT light shows that the battery charger or the battery pack are not serviceable. The battery charger or battery pack can be not serviceable because of problems with battery charger operating temperature, battery charger voltage output, or battery pack cell voltage.
NOTE: If the red FAULT light is not on and a display shows on the integrated standby flight display, the battery charger and battery are serviceable.
NOTE: It can take up to 150 minutes to charge a drained internal battery of the Dedicated Battery System.
 - (c) If the battery charger or battery pack are not serviceable, do these tasks to remove and install a new unit:
 - ISFD Dedicated Battery Charger Removal, TASK 34-24-02-000-801
 - ISFD Dedicated Battery Charger Installation, TASK 34-24-02-400-801.
 - (d) Make sure that the yellow “ALT”, “SPD”, “ATT”, and “INIT XXs” flags are displayed on the ISFD for approximately 10 to 15 seconds after power up.
NOTE: “XXs” refers to the time remaining (in seconds) for the ISFD to complete its initialization. Timer starts at 90s and counts down to 0s.
NOTE: Airplane movement should be minimized during ISFD initialization. Airplane weight, servicing work, or loading/unloading of cargo or passengers can cause airplane movement.
 - (e) After 15 seconds make sure that the display still shows “ATT” and “INIT XXs” on the ISFD.
 - (f) After 120 seconds, make sure that the display changes to an attitude display with no red error flags.

SUBTASK 34-24-00-710-023

- (2) Open this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

SUBTASK 34-24-00-710-026

- (3) Make sure that the ISFD display is not blank and continues to operate for 5-10 minutes.
NOTE: A fully charged ISFD battery can operate for up to 150 minutes.

EFFECTIVITY
SIA ALL

34-24-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 512
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-00-710-025

- (4) Close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-24-00-410-001

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-24-00-860-027

- (2) If the electrical power is not necessary, do this task: Remove Electrical Power, TASK 24-22-00-860-802.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-00

Page 513
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

INTEGRATED STANDBY FLIGHT DISPLAY - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Integrated standby flight display removal
 - (2) Integrated standby flight display installation.
- B. The integrated standby flight display is installed on the center instrument panel, P2, in the flight compartment.

TASK 34-24-01-000-802

2. Integrated Standby Flight Display (ISFD) Removal

(Figure 401)

A. General

- (1) This task gives the instructions to remove the Integrated Standby Flight Display (ISFD).

B. References

Reference	Title
20-40-12-400-803	Conductive Dust Cap and Connector Cover Installation (P/B 201)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-12596	Tool - Extracting Part #: F1402369 Supplier: F9111
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Location Zones

Zone	Area
211	Flight Compartment - Left

E. Integrated Standby Flight Display (ISFD) Removal

SUBTASK 34-24-01-040-002

- (1) Open this circuit breaker and attach DO-NOT-CLOSE tag:
 - (a) Front of the ISFD Dedicated Battery System, M2100, E5-2:
 - 1) DBC Output circuit breaker.

SUBTASK 34-24-01-860-006

- (2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	9	C00331	PANEL & INSTR 28V PRI CAPT & CTR
D	8	C00701	EMER PANEL LTG

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-01

Page 401
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-01-000-005



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) Do these steps to remove the integrated standby flight display [1]:
- (a) Loosen, but do not remove the upper right and lower left adjustment screws [6] adjacent to the ISFD until the display can be removed.
 - 1) If necessary, push the loosened adjustment screws [6] to release the ISFD from the mount.



CAUTION

DO NOT USE THE BARO KNOB TO PULL THE DISPLAY FROM THE INSTRUMENT PANEL. YOU WILL CAUSE DAMAGE TO THE DISPLAY IF YOU USE THE BARO KNOB TO REMOVE THE DISPLAY.



CAUTION

CAREFULLY PULL THE DISPLAY FROM THE INSTRUMENT PANEL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE ELECTRICAL CABLE, AND THE HOSES ON THE REAR OF THE DISPLAY.

- (b) Use the ISFD extracting tool, SPL-12596, to pull the integrated standby flight display [1] from the instrument panel until you can get access to the electrical connector [5], pitot hose [3], and static hose [4].
- (c) If the integrated standby flight display [1] is not easy to remove, loosen the two mounting screws [2] to make the removal easier.



CAUTION

MAKE SURE THAT THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE PITOT AND STATIC HOSES. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE DISPLAY CAN OCCUR.

- (d) Disconnect the pitot hose [3] and static hose [4] from the integrated standby flight display [1].



CAUTION

MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



CAUTION

USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (e) Use a teflon-jawed pliers, STD-664, to disconnect the electrical connector [5] from the integrated standby flight display [1] (TASK 70-00-01-910-803-G00).
 - 1) Disconnect the electrical connector [5] from the integrated standby flight display [1].
- (f) Remove the integrated standby flight display [1].
- (g) Install the protective covers on the electrical receptacle of the integrated standby flight display [1] and the electrical connector [5].

EFFECTIVITY
SIA ALL

34-24-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Do this task: Conductive Dust Cap and Connector Cover Installation,
TASK 20-40-12-400-803

————— **END OF TASK** —————

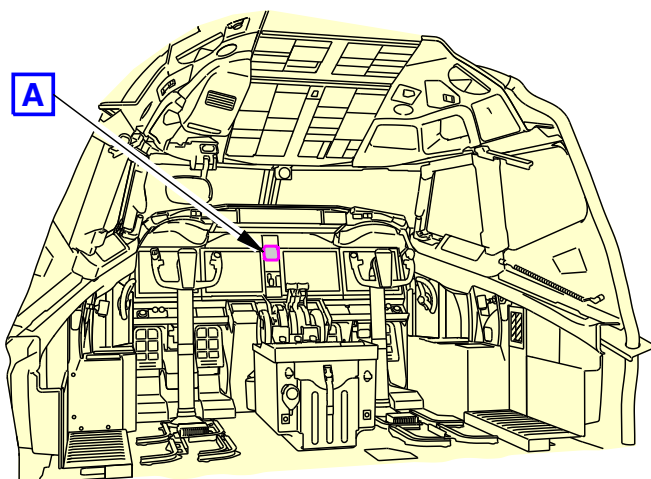
EFFECTIVITY
SIA ALL

D633AM101-SIA

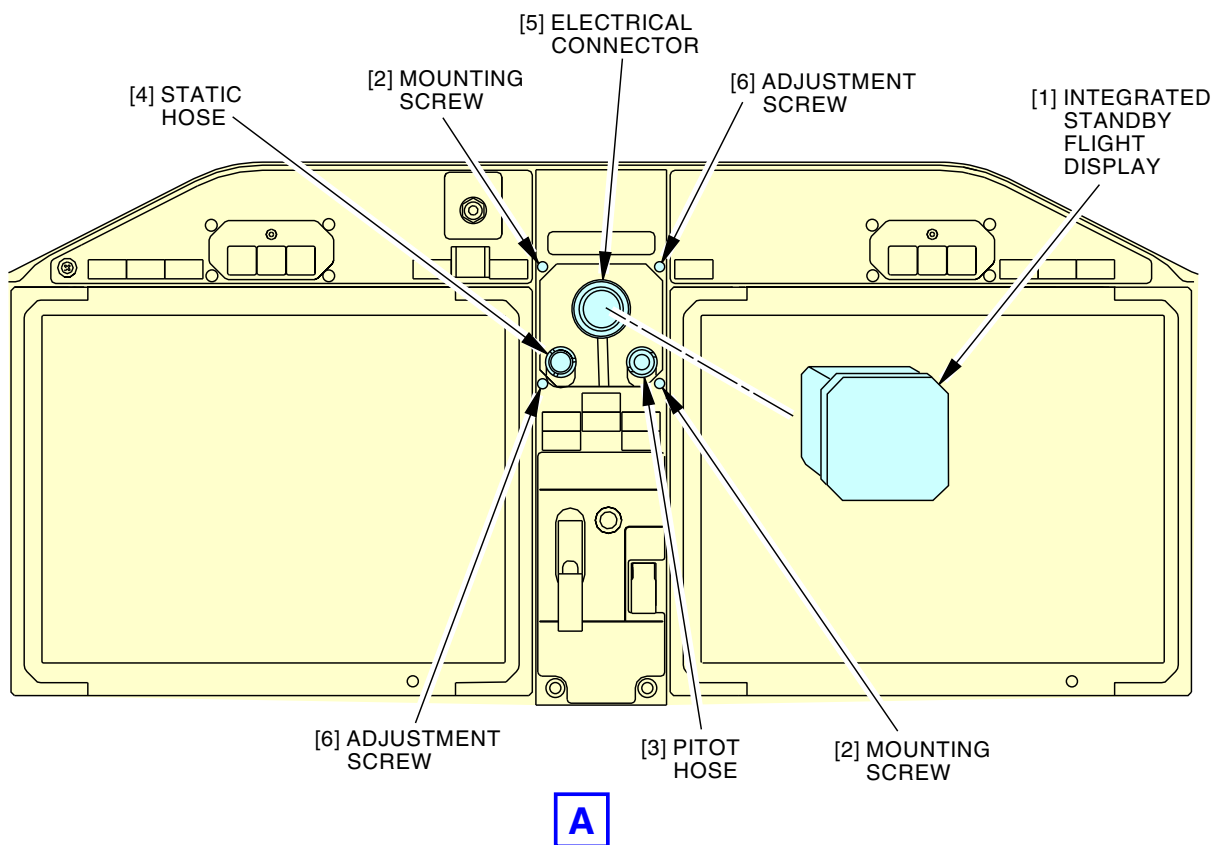
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-01

Page 403
Sep 15/2022



FLIGHT COMPARTMENT



2414840 S00061536184_V3

Integrated Standby Flight Display (ISFD) Installation
Figure 401/34-24-01-990-802

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-01

Page 404
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-24-01-400-802

3. **Integrated Standby Flight Display (ISFD) Installation**

(Figure 401)

A. General

- (1) This task gives the instructions to install the Integrated Standby Flight Display (ISFD).

B. References

Reference	Title
20-40-12-000-803	Conductive Dust Cap and Connector Cover Removal (P/B 201)
34-24-00-710-801	Integrated Standby Flight Display System - Operational Test (P/B 501)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Integrated standby flight display	34-24-01-01-050	SIA ALL

E. Location Zones

Zone	Area
211	Flight Compartment - Left

F. Integrated Standby Flight Display (ISFD) Installation

SUBTASK 34-24-01-420-002

- (1) Make sure that this circuit breaker is open:
- (a) Front of the ISFD Dedicated Battery System, M2100, E5-2:
- 1) DBC Output circuit breaker.



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (2) Do these steps to install the integrated standby flight display [1]:
- (a) Remove the protective covers from the electrical receptacle of the integrated standby flight display [1] and the electrical connector [5].
- 1) Do this task: Conductive Dust Cap and Connector Cover Removal, TASK 20-40-12-000-803.



MAKE SURE THAT THE ELECTRICAL CONNECTOR AND RECEPTACLE ARE CLEAN WHEN YOU CONNECT THEM. DIRTY CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.

EFFECTIVITY
SIA ALL

34-24-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(CAUTION PRECEDES)



DO NOT USE PLIERS THAT HAVE METAL JAWS TO TIGHTEN THE ELECTRICAL CONNECTOR. DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

- (b) Use the teflon-jawed pliers, STD-664, to connect the electrical connector [5] to the integrated standby flight display [1] (TASK 70-00-01-910-803-G00).
- 1) Examine the electrical connector [5] for bent or broken pins, dirt and damage.
 - 2) Connect the electrical connector [5] to the integrated standby flight display [1].
 - a) Tighten the connector with the teflon-jawed pliers, STD-664.



MAKE SURE THAT THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU CONNECT THE PITOT HOSE AND STATIC HOSE TO THE INTEGRATED STANBY FLIGHT DISPLAY, IF PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE DISPLAY CAN OCCUR.

- (c) Connect the pitot hose [3] and static hose [4] to the integrated standby flight display [1].
- (d) Do a visual inspection to make sure that the pitot-static hose connections and quick disconnect fittings are locked in the sealed position.
- 1) Make sure that the actuation ring of the quick-disconnect fitting is fully engage on the lock pins, and that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.
- (e) Install the integrated standby flight display [1] into the instrument panel.
- 1) Make sure that the integrated standby flight display [1] is seated all the way into the panel opening and pushed tight against the panel face with no gaps between the instrument bezel and the panel face.
- (f) Torque the two adjustment screws [6] to 4 in-lb (5 kg-cm) to 9 in-lb (10 kg-cm).
- (g) If the mounting screws were loosened, torque the two mounting screws [2] to 4 in-lb (5 kg-cm) to 9 in-lb (10 kg-cm).
- (h) Do a visual inspection to make sure that the integrated standby flight display [1] is properly fitted in its clamp and aligned with cockpit panel.

SUBTASK 34-24-01-860-008

- (3) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	9	C00331	PANEL & INSTR 28V PRI CAPT & CTR
D	8	C00701	EMER PANEL LTG

G. Integrated Standby Flight Display (ISFD) Installation Test

SUBTASK 34-24-01-040-001

- (1) Close this circuit breaker and remove the DO-NOT-CLOSE tag:
- (a) Front of the ISFD Dedicated Battery System, M2100, E5-2.
 - 1) DBC Output circuit breaker.

EFFECTIVITY
SIA ALL

34-24-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-01-710-003

- (2) Do this task: Integrated Standby Flight Display System - Operational Test,
TASK 34-24-00-710-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-01

Page 407
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ISFD DEDICATED BATTERY CHARGER - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) ISFD dedicated battery charger removal
 - (2) ISFD dedicated battery charger installation.

TASK 34-24-02-000-801

2. **ISFD Dedicated Battery Charger Removal**

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives the instructions to remove the Integrated Standby Flight Display (ISFD) dedicated battery charger.

B. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)
20-40-12 P/B 201	ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES - MAINTENANCE PRACTICES
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for Removal



WARNING

REMOVE ELECTRICAL POWER AND GROUND THE UNIT BEFORE YOU DO MAINTENANCE WORK. THE UNIT CAN CONTAIN ELECTRICITY AND CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

SUBTASK 34-24-02-840-001

- (1) Before you touch the battery charger, do the procedure for devices that are sensitive to electrostatic discharge (ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES - MAINTENANCE PRACTICES, PAGEBLOCK 20-40-12/201).

F. ISFD Dedicated Battery Charger Removal

SUBTASK 34-24-02-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

EFFECTIVITY
SIA ALL

34-24-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-02-860-004

- (2) Put the S5 BAT. switch on the P5-13 Electrical Meters, Battery, and Galley Power Module to the OFF position.

SUBTASK 34-24-02-010-001

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-24-02-760-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (4) Before you touch the ISFD dedicated battery [1], do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 34-24-02-860-005

- (5) Open the circuit breaker on the front of the ISFD dedicated battery [1] and install safety tag.

SUBTASK 34-24-02-020-001

- (6) Remove the ISFD dedicated battery [1] (E/E Box Removal, TASK 20-10-07-000-801).

———— **END OF TASK** ————

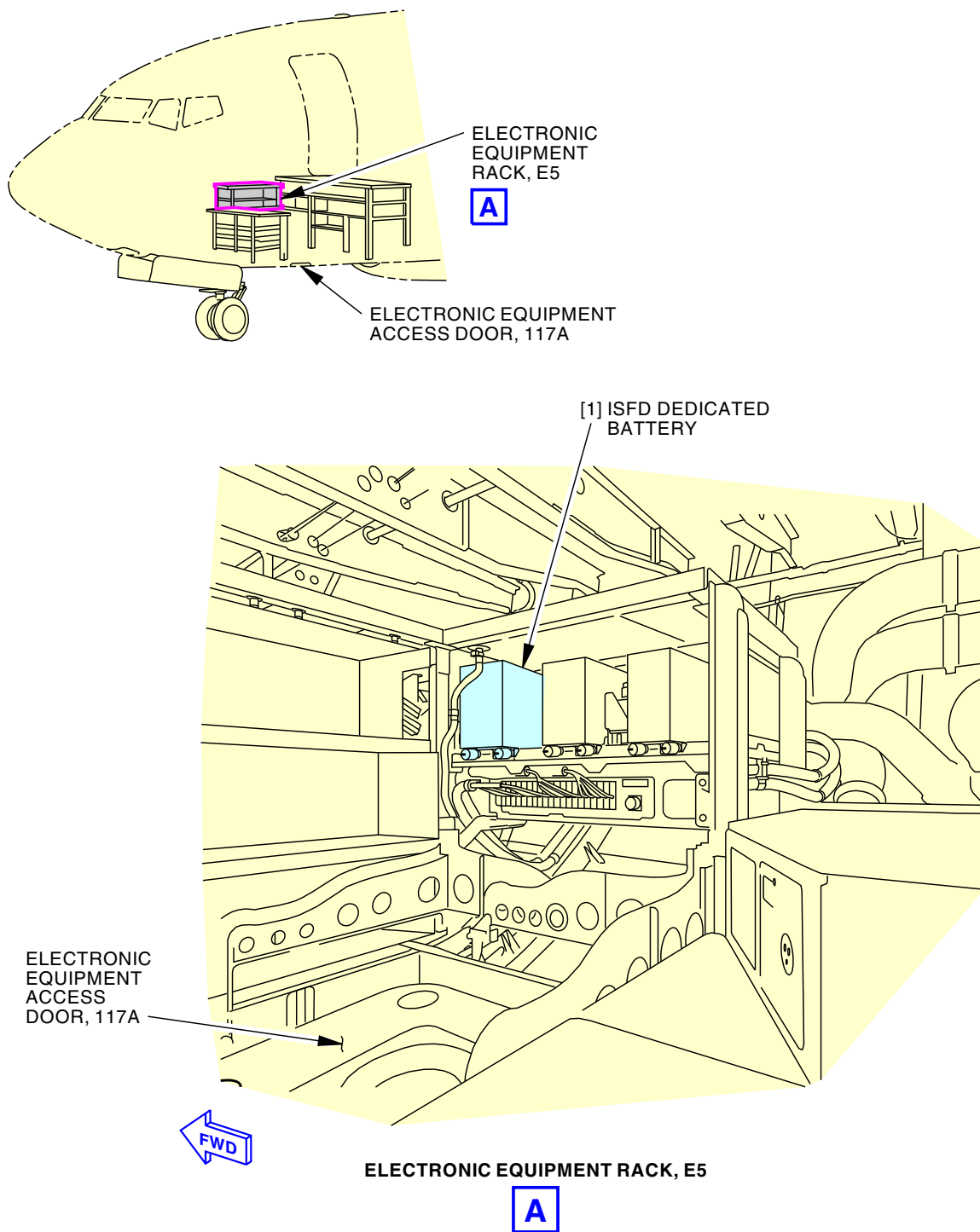
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-02

Page 402
Sep 15/2021



2532215 S0000599726_V2

ISFD Dedicated Battery Charger Installation
Figure 401/34-24-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-02



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-24-02-400-801

3. **ISFD Dedicated Battery Charger Installation**

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives the instructions to install the Integrated Standby Flight Display (ISFD) dedicated battery charger.

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	ISFD dedicated battery	34-24-02-01-025	SIA ALL

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. ISFD Dedicated Battery Charger Installation

SUBTASK 34-24-02-760-002



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (1) Before you touch the ISFD dedicated battery [1], do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 34-24-02-400-001

- (2) To install the ISFD dedicated battery [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-24-02-860-006

- (3) Close the circuit breaker on the front of the ISFD dedicated battery [1] and remove the safety tag.

SUBTASK 34-24-02-420-001

- (4) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

34-24-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-24-02-860-002

- (5) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	8	C01551	ISFD

G. ISFD Dedicated Battery Charger Installation Test

SUBTASK 34-24-02-420-002

- (1) Put the S5 BAT. switch, on the P5-13 Electrical Meters, Battery, and Galley Power Module, in the ON position.

SUBTASK 34-24-02-420-003

- (2) Make sure that the N226 Integrated Standby Flight Display comes on.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-24-02

Page 405
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

INSTRUMENT LANDING SYSTEM - MAINTENANCE PRACTICES

1. **General**

A. This procedure has these tasks:

- (1) Instrument Landing System Deactivation
- (2) Instrument Landing System Activation

TASK 34-31-00-040-801

2. **Instrument Landing System - Deactivation**

(Figure 34-31-42-990-801)

A. **General**

- (1) This procedure removes electrical power to the Instrument Landing System.

B. **References**

Reference	Title
34-31-42-990-801	Figure: Multi-Mode Receiver Installation (P/B 401)

C. **Location Zones**

Zone	Area
111	Radome
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

D. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Procedure**

SUBTASK 34-31-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	13	C01480	RADIO NAVIGATION MMR 2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

F. **Instrument Landing System - Tryout**

NOTE: This tryout is to make sure that the Instrument Landing system is in a zero energy state.

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

Page 201
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-00-010-001

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-31-00-210-001

- (2) Make sure that the status light/LCD display (as applicable) is not illuminated on the mode receiver.

————— END OF TASK —————

TASK 34-31-00-440-801

3. Instrument Landing System - Activation

(Figure 34-31-42-990-801)

A. General

- (1) This procedure adds electrical power to the Instrument Landing System (ILS).

B. References

<u>Reference</u>	<u>Title</u>
34-31-42-990-801	Figure: Multi-Mode Receiver Installation (P/B 401)

C. Location Zones

<u>Zone</u>	<u>Area</u>
111	Radome
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

E. Procedure

SUBTASK 34-31-00-860-003

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	13	C01480	RADIO NAVIGATION MMR 2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-00-210-002

- (2) Make sure that the status light/LCD display (as applicable) is illuminated on the mode receiver.

SUBTASK 34-31-00-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

INSTRUMENT LANDING SYSTEM - ADJUSTMENT/TEST

1. **General**

A. This procedure has these tasks:

- (1) An operational test of the instrument landing system.
- (2) A system test of the instrument landing system.

TASK 34-31-00-710-801

2. **Instrument Landing System - Operational Test**

A. **References**

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Prepare for the Test**

SUBTASK 34-31-00-710-001

- (1) Do these steps to prepare for the operational test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (c) Set the mode selector on the captain's and the first officer's EFIS control panel to the APP position.
 - (d) Push the Approach Mode Selector (APP) button on the Integrated Standby Flight Display (ISFD) until APP is displayed on the ISFD screen.
 - (e) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned and in the NAV mode.
 - 1) To align the ADIRU, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.
 - (f) Set the captain's and the first officer's course select controls on the Mode Control Panel (MCP) to the same course as the airplane heading.

D. **Power and Tuning Test**

SUBTASK 34-31-00-860-005

- (1) Set a ILS frequency of 108.10 MHz on the captain's and the first officer's navigation control panels.
 - (a) Push the MODE key (V or reverse V) until "ILS" is displayed in the STBY (lower) window.

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

Page 501
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (b) Use the keypad to push the number "108.10".
- (c) Push the ACT/STBY transfer button.
 - 1) Make sure that "ILS 108.10" MHz shows in the ACT (upper) window.
 - 2) Make sure that the following are on the CAPT and F/O Primary Flight Displays (PFD's):
 - a) "ILS" is displayed on the upper left corner of the attitude indicator.
 - b) Localizer and Glideslope deviation scales are displayed.

SUBTASK 34-31-00-860-006

- (2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-31-00-710-002

- (3) Push and release the TEST button on the captain's navigation control panel.
 - (a) Make sure that these indications show on the captain's display:

NOTE: It takes approximately 16 to 44 seconds for the test sequence to complete.

 - 1) The LOC and G/S flags show momentarily
 - 2) The glideslope deviation pointer shows one dot up and the localizer deviation bar shows one dot left.
 - 3) The glideslope deviation pointer shows one dot down and the localizer deviation bar shows one dot right.
 - 4) The LOC and G/S flags do not show on the captain's display at the end of the test.

SUBTASK 34-31-00-860-043

- (4) Make sure that the LOC and G/S flags show on the first officer's display.

SUBTASK 34-31-00-860-026

- (5) Set a VOR frequency of 108.00 MHz on the first officer's navigation control panel.
 - (a) Make sure that the LOC and G/S flags do not show on the first officer's display.

SUBTASK 34-31-00-860-027

- (6) Set a ILS frequency of 108.10 MHz on the first officer's navigation control panel.

SUBTASK 34-31-00-860-007

- (7) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-31-00-860-008

- (8) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

SUBTASK 34-31-00-860-040

- (9) Wait approximately 60 seconds for the receiver to energize.

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 502
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-00-710-003

- (10) Push and release the TEST button on the first officer's navigation control panel.
- (a) Make sure that these indications show on the first officer's display:
- NOTE: It takes approximately 16 to 44 seconds for the test sequence to complete.
- 1) The LOC and G/S flags show momentarily
 - 2) The glideslope deviation pointer shows one dot up and the localizer deviation bar shows one dot left.
 - 3) The glideslope deviation pointer shows one dot down and the localizer deviation bar shows one dot right.
 - 4) The LOC and G/S flags do not show on the first officer's display at the end of the test.

SUBTASK 34-31-00-860-042

- (11) Make sure that the LOC and G/S flags show on the captain's display.

SUBTASK 34-31-00-860-028

- (12) Set a VOR frequency of 108.00 MHz on the captain's navigation control panel.
- (a) Make sure that the LOC and G/S flags do not show on the captain's display.

SUBTASK 34-31-00-860-029

- (13) Set a ILS frequency of 108.10 MHz on the captain's navigation control panel.

SUBTASK 34-31-00-860-009

- (14) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

SUBTASK 34-31-00-860-041

- (15) Wait approximately 60 seconds for the receiver to energize.

E. Data Out, Source Select, and ILS Tuned Discrete Test

SUBTASK 34-31-00-710-004

- (1) Push and release the TEST button on the captain's navigation control panel.
- (a) Make sure that these indications show on the integrated standby flight display:
- NOTE: It takes approximately 16 to 44 seconds for the test sequence to complete.
- 1) The LOC and G/S scales disappear momentarily.
 - 2) The glideslope deviation bar shows one dot up and the localizer deviation bar shows one dot left.
 - 3) The glideslope deviation bar shows one dot down and the localizer deviation bar shows one dot right.
 - 4) The LOC and G/S flags do not show at the end of the test.

SUBTASK 34-31-00-710-005

- (2) Set the VHF NAV switch on the instrument switching module to the BOTH ON 1 position.
- (a) Make sure that the message "EFIS MODE/NAV FREQ DISAGREE" does not show on the captain's and the first officer's displays.

SUBTASK 34-31-00-710-018

- (3) Set a GLS channel of 21000 on the captain's navigation control panel.

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 503
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Push the MODE key (V or reverse V) until "GLS" is displayed in the STBY (lower) window of the NCP.
- (b) Use the NCP keypad to push the number "21000"
- (c) Push the ACT/STBY transfer key until "GLS 21000" is displayed in the ACT (upper) window on the NCP.
 - 1) Make sure that the following are on the CAPT and F/O Primary Flight Displays (PFD's):
 - a) "GLS" is displayed on the upper left corner of the attitude indicator.
 - b) Localizer and Glideslope deviation scales are displayed.
 - 2) Make sure that the message "EFIS MODE/NAV FREQ DISAGREE" does not appear on the CAPT and F/O Approach Mode of the Nav display format.

SUBTASK 34-31-00-710-006

- (4) Set a VOR frequency of 108.00 MHz on the captain's navigation control panel.
 - (a) Make sure that the message "EFIS MODE/NAV FREQ DISAGREE" shows on the captain's and the first officer's displays.

SUBTASK 34-31-00-710-007

- (5) Set the VHF NAV switch on the instrument switching module to the BOTH ON 2 position.
 - (a) Make sure that the message "EFIS MODE/NAV FREQ DISAGREE" does not show on the captain's and the first officer's displays.

SUBTASK 34-31-00-710-019

- (6) Set a GLS channel of 21000 on the F/O navigation control panel.
 - (a) Push the MODE key (V or reverse V) until "GLS" is displayed in the STBY (lower) window of the NCP.
 - (b) Use the NCP keypad to push the number "21000".
 - (c) Push the ACT/STBY transfer key until "GLS 21000" is displayed in the ACT (upper) window on the NCP.
 - 1) Make sure that the following are on the CAPT and F/O Primary Flight Displays (PFD's):
 - a) "GLS" is displayed on the upper left corner of the attitude indicator.
 - b) Localizer and Glideslope deviation scales are displayed.
 - 2) Make sure that the message "EFIS MODE/NAV FREQ DISAGREE" does not appear on the CAPT and F/O Approach Mode of the Nav display format.

SUBTASK 34-31-00-710-008

- (7) Set a VOR frequency of 108.00 MHz on the first officer's navigation control panel.
 - (a) Make sure that the message "EFIS MODE/NAV FREQ DISAGREE" shows on the captain's and the first officer's displays.

SUBTASK 34-31-00-860-012

- (8) Set the VHF NAV switch on the instrument switching module to the NORMAL position.

SUBTASK 34-31-00-860-013

- (9) Set the SOURCE switch on the instrument switching module to the ALL ON 1 position.

SUBTASK 34-31-00-860-014

- (10) Set a ILS frequency of 108.10 MHz on the captain's navigation control panel.

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

Page 504
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-00-710-020

- (11) Set a GLS channel of 21000 on the on the first officer's navigation control panel.
- (a) Push the MODE key (V or reverse V) until "GLS" is displayed in the STBY (lower) window of the NCP.
 - (b) Use the NCP keypad to push the number "21000".
 - (c) Push the ACT/STBY transfer key until "GLS 21000" is displayed in the ACT (upper) window on the NCP.

SUBTASK 34-31-00-710-021

- (12) Set the SOURCE switch on the instrument switching module to the ALL ON 2 position.
- (a) Make sure that 108.10 MHz shows on the captain's display.
 - (b) Make sure that GLS 21000 shows on the first officer's display.

SUBTASK 34-31-00-860-015

- (13) Set the SOURCE switch on the instrument switching module to the AUTO position.

————— **END OF TASK** —————

TASK 34-31-00-730-801

3. Instrument Landing System - System Test

A. References

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-00

Page 505
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

D. Prepare for the System Test

SUBTASK 34-31-00-710-011

- (1) Do these steps to prepare for the system test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (c) Set the mode selector on the captain's and the first officer's EFIS control panel to the APP position.
 - (d) Set the approach mode selector switch on the standby attitude indicator to the APP position.
 - (e) Make sure that the air data inertial reference unit (ADIRU) is aligned and in the NAV mode. To align it, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.
 - (f) Set the captain's and the first officer's course select controls on the mode control panel (MCP) to the same course as the airplane heading.

E. Operational Test

SUBTASK 34-31-00-710-012

- (1) Do this task: Instrument Landing System - Operational Test, TASK 34-31-00-710-801.

F. Audio Out and Audio Discrete Test

SUBTASK 34-31-00-860-016

- (1) Make sure that the voice filter is not selected on an available audio control panel.

SUBTASK 34-31-00-860-017

- (2) Push the receiver volume control for NAV-1 on the same audio control panel to set the volume to on.

SUBTASK 34-31-00-860-018

- (3) Turn the receiver volume control clockwise for NAV-1 to make sure that you can hear sound through the flight interphone system.

SUBTASK 34-31-00-710-013

- (4) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 feet from the forward localizer antenna.

SUBTASK 34-31-00-860-030

- (5) Push the MODE key on the NAV/COMM ramp test set, COM-1913 until the LOC mode screen is displayed.

SUBTASK 34-31-00-730-001

- (6) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS localizer signal that follows to the tail (VOR) antenna:

Table 501/34-31-00-993-801

OUTPUT LEVEL	+13 dBm
DEFLECTION	Right 1 Dot (0.069 DDM)
FREQUENCY	1020 Hz
IDENT TONE	ON

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that you can hear an ILS tone over the flight interphone system.

SUBTASK 34-31-00-730-002

- (7) Set a ILS frequency of 111.95 MHz on the captain's navigation control panel.

- (a) Make sure that you cannot hear an ILS tone over the flight interphone system.

SUBTASK 34-31-00-860-019

- (8) Push the receiver volume control for NAV-2 on the same audio control panel to set the volume to on.

SUBTASK 34-31-00-860-020

- (9) Turn the receiver volume control clockwise for NAV-2 to make sure that you can hear sound through the flight interphone system.

SUBTASK 34-31-00-730-003

- (10) Set a ILS frequency of 108.10 MHz on the first officer's navigation control panel.

- (a) Make sure that you can hear an ILS tone over the flight interphone system.

G. Localizer Antenna and Antenna Switch Test

SUBTASK 34-31-00-860-021

- (1) Make sure that the F/D switches on the DFCS mode control panel are in the OFF position.

SUBTASK 34-31-00-730-004

- (2) Set a frequency of 108.10 MHz on the captain's navigation control panel.

- (a) Make sure that the localizer deviation bars on the captain's and the first officer's displays show one dot right.

SUBTASK 34-31-00-860-022

- (3) Slowly decrease the RF level on the NAV/COMM ramp test set, COM-1913, until the localizer deviation bars on the captain's and the first officer's displays do not show.

SUBTASK 34-31-00-860-023

- (4) Set the F/D switches on the DFCS mode control panel to the ON position.

SUBTASK 34-31-00-730-005

- (5) Push the APP switch on the DFCS mode control panel.

- (a) Make sure that the localizer deviation bars on the captain's and the first officer's displays show one dot right.

SUBTASK 34-31-00-860-024

- (6) Set the F/D switches on the DFCS mode control panel to the OFF position.

H. Glideslope Antenna Test

SUBTASK 34-31-00-860-031

- (1) Push the MODE key on the NAV/COMM ramp test set, COM-1913 until the GLIDESLOPE mode screen is displayed.

SUBTASK 34-31-00-730-006

- (2) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS glideslope signal that follows to the nose antenna:

Table 502/34-31-00-993-802

OUTPUT LEVEL	-15 dBm
DEFLECTION	Down 1 Dot (0.091 DDM)

EFFECTIVITY
SIA ALL

34-31-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 507
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 502/34-31-00-993-802 (Continued)

FREQUENCY

108.10 MHz

- (a) Make sure that the glideslope deviation pointers on the captain's and the first officer's displays show one dot down.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-00

Page 508
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ILS GLIDE SLOPE ANTENNA - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) ILS glide slope antenna removal
 - (2) ILS glide slope antenna installation.
- B. The ILS glideslope antenna is in the nose radome.

TASK 34-31-21-000-801

2. **ILS Glide Slope Antenna Removal**

(Figure 401)

A. General

- (1) This task gives the instructions to remove the ILS glide slope antenna.

B. References

Reference	Title
53-52-00-000-802	Nose Radome Removal (P/B 401)
53-52-31-000-801	Glide Slope Director Bar Removal (P/B 401)
53-52-31-400-801	Glide Slope Director Bar Installation (P/B 401)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Location Zones

Zone	Area
111	Radome
211	Flight Compartment - Left
212	Flight Compartment - Right

E. ILS Glide Slope Antenna Removal

SUBTASK 34-31-21-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-21

Page 401
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-21-860-002



WARNING

DO NOT OPERATE THE WEATHER RADAR SYSTEM WHILE YOU REMOVE THE GLIDE SLOPE ANTENNA. IF THE WEATHER RADAR OPERATES, INJURY TO PERSONS CAN OCCUR.

- (2) Open the nose radome to get access to the ILS glide slope antenna [1] (TASK 53-52-00-000-802).

SUBTASK 34-31-21-860-003

- (3) Make sure that the antenna director bar is not damaged.

NOTE: The antenna director bar is a 13-inch continuous strip of aluminum foil tape. The strip is installed horizontally across the centerline on the inner surface of the nose radome.

- (a) If the antenna director bar is damaged, it must be replaced.

These are the tasks:

Glide Slope Director Bar Removal, TASK 53-52-31-000-801,

Glide Slope Director Bar Installation, TASK 53-52-31-400-801.

SUBTASK 34-31-21-020-001

- (4) Do these steps to remove the ILS glide slope antenna [1]:

- (a) Remove the screws [2] that attach the ILS glide slope antenna [1] to the airplane structure.
- (b) Pull the ILS glide slope antenna [1] assembly away from the airplane structure to get access to the electrical connector [3].



CAUTION

MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



CAUTION

USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (c) Use a teflon-jawed pliers, STD-664 to disconnect the electrical connector [3] from the ILS glide slope antenna [1] (TASK 70-00-01-910-803-G00).
- 1) Disconnect the electrical connector [3] from the ILS glide slope antenna [1].
- (d) Remove the ILS glide slope antenna [1].
- (e) Install the protective covers on the electrical receptacle of the ILS glide slope antenna [1] and the electrical connector [3].

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-31-21

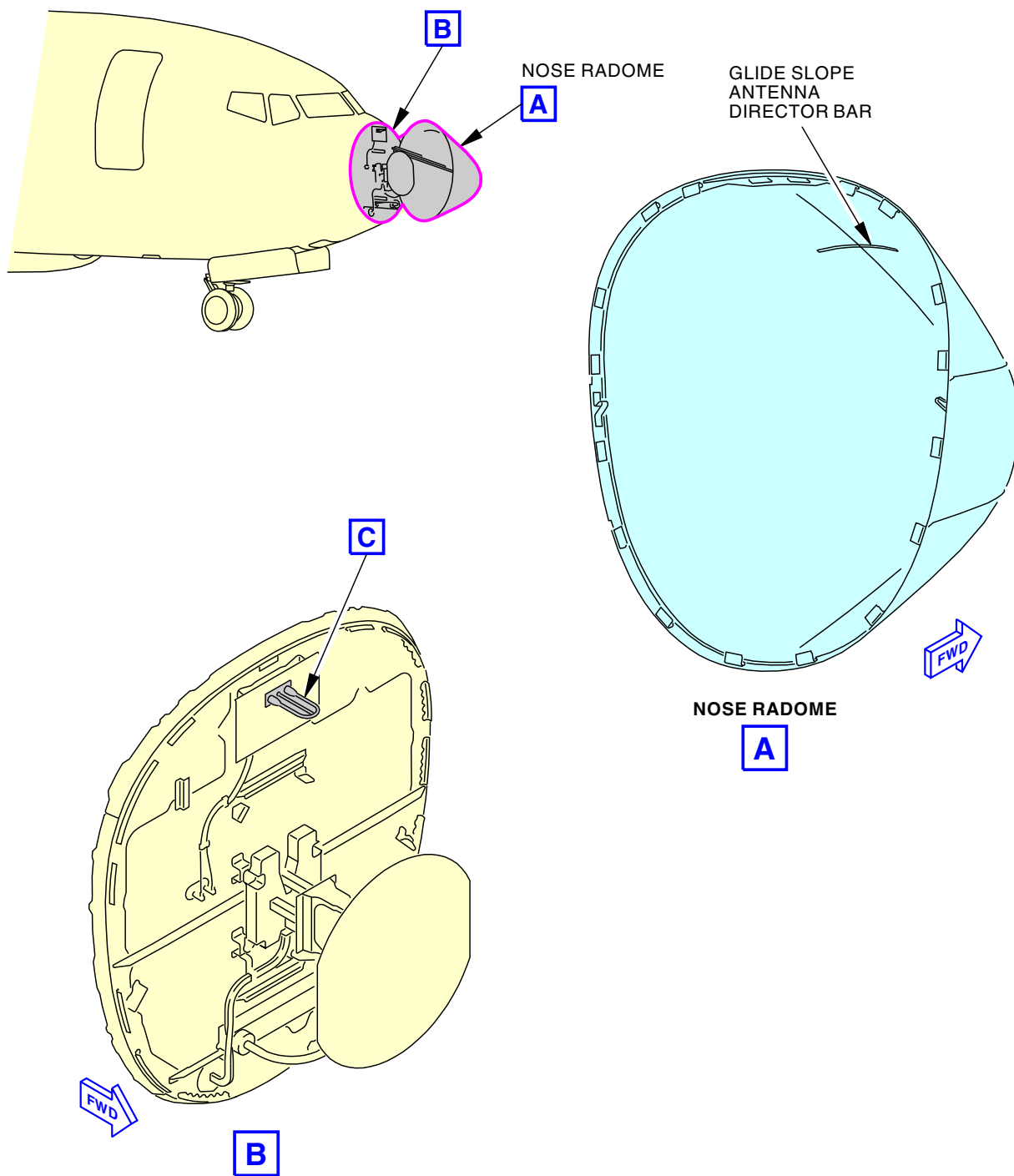
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414841 S00061536197_V1

ILS Glide Slope Antenna Installation
Figure 401/34-31-21-990-801 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

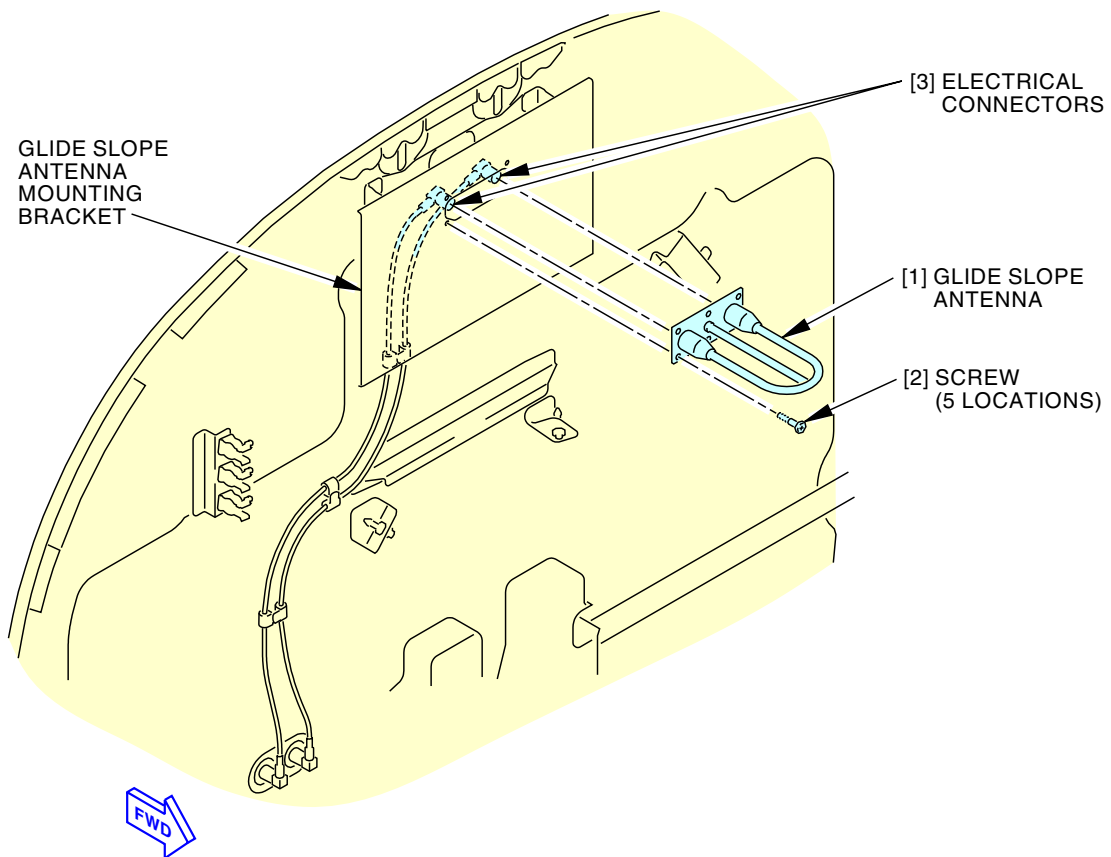
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-21

Page 403
Sep 15/2021

BOEING
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



C

2414842 S00061536198_V1

ILS Glide Slope Antenna Installation
Figure 401/34-31-21-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-21

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-31-21-400-801

3. ILS Glide Slope Antenna Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the ILS glide slope antenna.
- (2) This task has an installation test to make sure that the ILS glide slope antenna operates correctly.

B. References

Reference	Title
20-10-34-110-802	Clean Bare, Clad, or Plated Metal with Solvent (P/B 701)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
53-52-00-400-802	Nose Radome Installation (P/B 401)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-31-21

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C50033	Coating - Chemical Conversion - Bonderite M-CR 1200S Aero (Formerly Alodine 1200)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Glide slope antenna	34-31-21-01-005	SIA ALL

F. Location Zones

Zone	Area
111	Radome
211	Flight Compartment - Left
212	Flight Compartment - Right

G. ILS Glide Slope Antenna Installation

SUBTASK 34-31-21-100-001

- (1) Clean the mating surfaces of the ILS glide slope antenna [1] and the airplane structure (TASK 20-10-34-110-802).
 - (a) Apply solvent, B00083 to the mating surfaces of the ILS glide slope antenna [1] and the airplane structure with a cotton wiper, G00034.
 - (b) Use a cotton wiper, G00034 and clean the mating surfaces again.
 - (c) Do these two steps until the mating surfaces are bright, clean and dry.

SUBTASK 34-31-21-620-001

- (2) If the airplane surface has corrosion or other damage, do these steps to prepare the airplane mating surface:
 - (a) Apply a layer of Bonderite M-CR 1200S Aero coating, C50033, to the airplane mating surface (TASK 51-21-41-370-802).
 - (b) Apply a layer of primer, C00259, to the screw holes.
 - (c) Allow the primer, C00259, to dry before you install the screws [2].

SUBTASK 34-31-21-420-001

- (3) Do these steps to install the ILS glide slope antenna [1]:
 - (a) Apply sealant, A00247 to the threads of the screws [2].

EFFECTIVITY
SIA ALL

34-31-21

D633AM101-SIA

Page 406
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CAUTION

MAKE SURE THAT THE ELECTRICAL CONNECTOR AND RECEPTACLE ARE CLEAN WHEN YOU CONNECT THEM. DIRTY CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



CAUTION

DO NOT USE PLIERS THAT HAVE METAL JAWS TO TIGHTEN THE ELECTRICAL CONNECTOR. DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

- (b) Use the teflon-jawed pliers, STD-664 to connect the electrical connector [3] to the ILS glide slope antenna [1] (TASK 70-00-01-910-803-G00).
 - 1) Remove the protective covers from the electrical receptacle of the ILS glide slope antenna [1] and the electrical connector [3].
 - 2) Connect the electrical connector [3] to the ILS glide slope antenna [1].
 - a) Tighten the connector with the teflon-jawed pliers, STD-664.
- (c) Align the ILS glide slope antenna [1] to the screw holes that hold the ILS glide slope antenna [1] to the airplane structure.
- (d) Install the screws [2] that attach the ILS glide slope antenna [1] to the airplane structure.

SUBTASK 34-31-21-760-001

- (4) Do a check of the resistance between the ILS glide slope antenna [1] and the airplane structure with a intrinsically safe approved bonding meter, COM-1550.
 - (a) Make sure that the resistance is 0.001 ohm or less.

SUBTASK 34-31-21-410-001

- (5) Close the nose radome (TASK 53-52-00-400-802).

SUBTASK 34-31-21-860-006

- (6) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

H. ILS Glide Slope Antenna Installation Test

SUBTASK 34-31-21-710-001

- (1) Do these steps to prepare for the installation test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (c) Set the mode selector on the captain's and the first officer's Electronic Flight Instrument System (EFIS) control panel to the APP position.
 - (d) Set a ILS frequency of 108.1 MHz on the captain's and the first officer's navigation control panels as follows:
 - 1) Push the MODE key (V or reverse V) until "ILS" is displayed in the STBY (lower) window.

EFFECTIVITY
SIA ALL

34-31-21

D633AM101-SIA

Page 407
Jan 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- 2) Push the number "108.10" using the keypad.
- 3) Push the ACT/STBY transfer button.
 - a) Make sure that "ILS 108.10" MHz shows in the ACT (upper) window.
- (e) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned and in NAV mode (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
- (f) Set the captain's and the first officer's course select controls on the Digital Flight Control System (DFCS) mode control panel to the same course as the airplane heading.

SUBTASK 34-31-21-860-007

- (2) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 ft (2 m) from the glide slope antenna [1].

SUBTASK 34-31-21-710-002

- (3) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS glide slope signal to the nose antenna (Table 401).

Table 401/34-31-21-993-801

OUTPUT LEVEL	-60 dBm
DEFLECTION	Down 1 Dot (0.0875 DDM)
FREQUENCY	334.7 MHz

- (a) Make sure that the glide slope deviation pointers on the captain's and the first officer's displays show one dot down.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

34-31-21

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 408
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LOCALIZER ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Localizer antenna removal
 - (2) Localizer antenna installation.
- B. The localizer antenna is in the nose radome.

TASK 34-31-31-000-801

2. Localizer Antenna Removal

(Figure 401)

A. General

- (1) This task gives the instructions to remove the localizer antenna.

B. References

Reference	Title
51-22-00-160-801	Prepare For Sealing (P/B 201)
53-52-00-010-801	Nose Radome Open (P/B 201)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Location Zones

Zone	Area
111	Radome
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Localizer Antenna Removal

SUBTASK 34-31-31-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-31-31-860-002

 WARNING	DO NOT OPERATE THE WEATHER RADAR SYSTEM WHILE YOU REMOVE THE LOCALIZER ANTENNA. IF THE WEATHER RADAR OPERATES, INJURY TO PERSONS CAN OCCUR.

- (2) Open the nose radome to get access to the localizer antenna [1] (TASK 53-52-00-010-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 401
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-31-100-002

- (3) Remove sealant from around the bases of the localizer antenna [1] (TASK 51-22-00-160-801).

SUBTASK 34-31-31-020-001

- (4) Do these steps to remove the localizer antenna [1]
- (a) Remove the screws [2] that attach the localizer antenna [1] to the airplane structure.
 - (b) Pull the localizer antenna [1] away from the airplane structure to get access to the electrical connectors [3].



CAUTION

MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



CAUTION

USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (c) Use a teflon-jawed pliers, STD-664, to disconnect the electrical connectors [3] from the localizer antenna [1] (TASK 70-00-01-910-803-G00).
- 1) Disconnect the electrical connectors [3] from the localizer antenna [1].
- (d) Remove the localizer antenna [1].
- (e) Install the protective covers on the electrical receptacle of the localizer antenna [1] and the electrical connectors [3].

———— **END OF TASK** ————

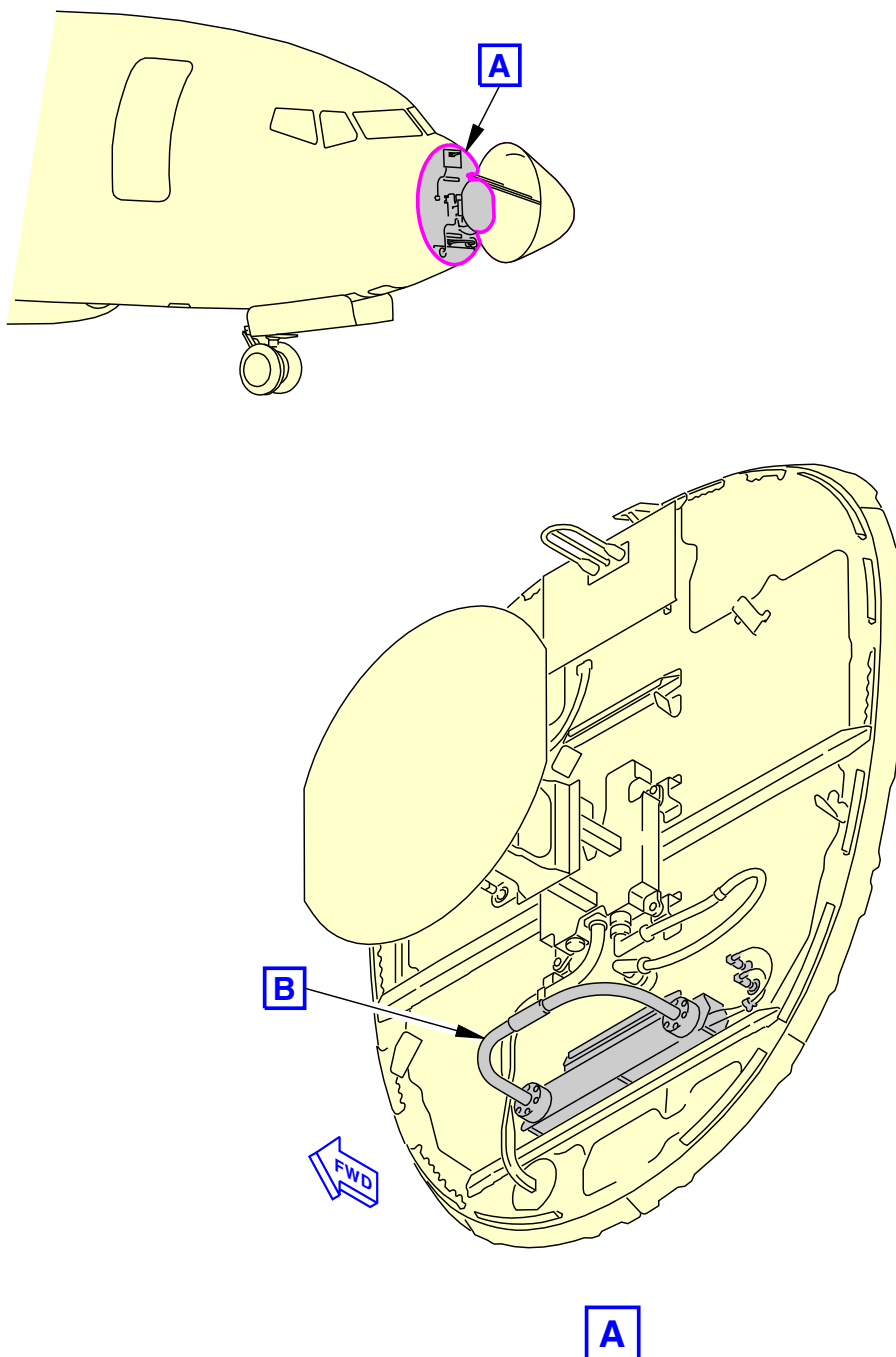
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 402
Sep 15/2023



2414843 S00061536203_V1

Localizer Antenna Installation
Figure 401/34-31-31-990-801 (Sheet 1 of 2)

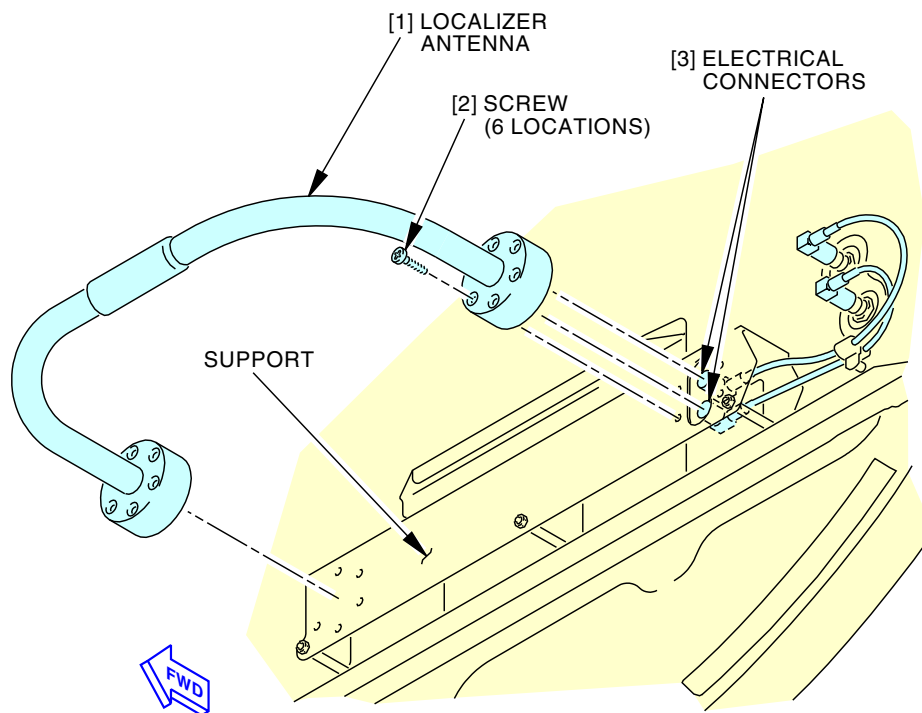
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 403
Sep 15/2021



B

2414844 S00061536204_V1

Localizer Antenna Installation
Figure 401/34-31-31-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 404
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-31-31-400-801

3. Localizer Antenna Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the localizer antenna.
- (2) This task has an installation test to make sure that the localizer antenna operates correctly.

B. References

Reference	Title
20-10-34-110-802	Clean Bare, Clad, or Plated Metal with Solvent (P/B 701)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-806	Fillet Seal Application (P/B 201)
53-52-00-410-801	Nose Radome Close (P/B 201)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 405
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C50033	Coating - Chemical Conversion - Bonderite M-CR 1200S Aero (Formerly Alodine 1200)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Localizer antenna	34-31-31-01-005	SIA ALL

F. Location Zones

Zone	Area
111	Radome
211	Flight Compartment - Left
212	Flight Compartment - Right

G. Localizer Antenna Installation

SUBTASK 34-31-31-100-001

- (1) Clean the mating surfaces between the localizer antenna [1] and the airplane structure (TASK 20-10-34-110-802).
 - (a) Apply solvent, B00083, to the mating surfaces of the localizer antenna [1] and the airplane structure with cotton wiper, G00034.
 - (b) Use a clean cotton wiper, G00034, to clean the mating surfaces again.
 - (c) Repeat the steps above until the mating surfaces are bright, clean, and dry.

SUBTASK 34-31-31-620-001



DO NOT GET ALODINE IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM ALODINE. PUT ON GOGGLES AND GLOVES WHEN YOU USE ALODINE. KEEP ALODINE AWAY FROM SPARKS, FLAME, AND HEAT. ALODINE IS POISONOUS AND FLAMMABLE, AND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) If the finish on the airplane surfaces near the interface with localizer antenna [1] is missing, worn, or damaged, do these steps:
 - (a) Apply Bonderite M-CR 1200S Aero coating, C50033, to the surfaces (TASK 51-21-41-370-802).
 - (b) Apply a layer of primer, C00259, to the holes of the screws [2].
 - (c) Allow primer, C00259, to dry before you install the screws [2].

EFFECTIVITY
SIA ALL

34-31-31

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-31-420-001

- (3) Do these steps to install the localizer antenna [1]:
- (a) Apply sealant, A00247, to the threads of the screws [2].



CAUTION

MAKE SURE THAT THE ELECTRICAL CONNECTOR AND RECEPTACLE ARE CLEAN WHEN YOU CONNECT THEM. DIRTY CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



CAUTION

DO NOT USE PLIERS THAT HAVE METAL JAWS TO TIGHTEN THE ELECTRICAL CONNECTOR. DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

- (b) Use the teflon-jawed pliers, STD-664, to connect the electrical connectors [3] to the localizer antenna [1] (TASK 70-00-01-910-803-G00).
- 1) Remove the protective covers from the electrical receptacle of the localizer antenna [1] and the electrical connectors [3].
- 2) Connect the electrical connectors [3] to the localizer antenna [1].
- a) Tighten the connector with the teflon-jawed pliers, STD-664.
- (c) Align the localizer antenna [1] to its position.
- (d) Install the screws [2] that attach the localizer antenna [1] to the airplane structure.
- (e) Tighten the screws to 80 ±8 in-lb (92 ±9 kg-cm).

SUBTASK 34-31-31-760-001

- (4) Measure the electrical bonding resistance between the localizer antenna [1] and the airplane structure (SWPM 20-20-00).
- (a) Use an intrinsically safe approved bonding meter, COM-1550.
- (b) Make sure that the resistance is 0.001 ohm (1.0 milliohm) or less.

SUBTASK 34-31-31-390-001

- (5) Apply sealant BMS 5-95 (sealant, A00247), around the bases of the localizer antenna [1] to make a corrosion fillet seal (TASK 51-22-00-390-806).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (a) Apply sealant all around the edge of the localizer antenna [1].
- (b) Use a sufficient quantity of sealant to permit you to make the surface smooth.
- (c) Remove all unwanted sealant from the area around the localizer antenna [1].
- (d) Let sealant dry for the correct cure time.

SUBTASK 34-31-31-410-001

- (6) Do this task: Nose Radome Close, TASK 53-52-00-410-801.

SUBTASK 34-31-31-860-005

- (7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

EFFECTIVITY
SIA ALL

34-31-31

D633AM101-SIA

Page 407
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

H. Localizer Antenna Installation Test

SUBTASK 34-31-31-710-001

- (1) Do these steps to prepare for the installation test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (c) Set the mode selector on the captain's and the first officer's Electronic Flight Instrument System (EFIS) control panel to the APP position.
 - (d) Set an ILS frequency of 108.1 MHz on the captain's and the first officer's navigation control panels as follows:
 - 1) Push the MODE key (V or reverse V) until "ILS" is displayed in the STBY (lower) window.
 - 2) Push the number "108.10" using the keypad.
 - 3) Push the ACT/STBY transfer button.
 - a) Make sure that "ILS 108.10" MHz shows in the ACT (upper) window.
 - (e) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned and in NAV mode (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
 - (f) Set the captain's and the first officer's course select controls on the Digital Flight Control System (DFCS) mode control panel to the same course as the airplane heading.

SUBTASK 34-31-31-860-006

- (2) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 ft (2 m) from the localizer antenna.

SUBTASK 34-31-31-860-007

- (3) Set the F/D switches on the DFCS mode control panel to the ON position.

SUBTASK 34-31-31-860-008

- (4) Push the APP switch on the DFCS mode control panel.

SUBTASK 34-31-31-710-002

- (5) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS localizer signal to the localizer antenna (Table 401).

Table 401/34-31-31-993-801

OUTPUT LEVEL	-60 dBm
DEFLECTION	Right 1 Dot (0.0775 DDM)
FREQUENCY	108.1 MHz

- (a) Make sure that the localizer deviation bars on the captain's and the first officer's displays show one dot right.

SUBTASK 34-31-31-860-009

- (6) Set the F/D switches on the DFCS mode control panel to the OFF position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 408
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-31-31-840-001

(7) Remove the NAV/COMM ramp test set, COM-1913.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-31

Page 409
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

MULTI-MODE RECEIVER - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) An installation of the Multi-Mode Receiver (MMR) software with the Onboard Network System (ONS).
- (2) An MMR software configuration check.

TASK 34-31-42-470-801

2. MMR Software Installation with Onboard Network System

A. **General**

- (1) This task gives the steps to install the Operational Program Software (OPS) and the Option Selection Software (OSS) into the Multimode Receiver (MMR), M02104 and M02105.
- (2) Loading the software to the MMR on the airplane is accomplished in the flight deck by using the Portable Software Data Loader (PSDL) or the multifunction display (MFD) to access the Onboard Network System (ONS) load function.
- (3) The aircraft must be on ground before you can install software.
- (4) The Air Data Inertial Reference Unit (ADIRU) System and at least one Flight Management Computer (FMC) are required for software installation.

B. **References**

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
46-13-00-470-801	LRU Software Parts Installation (P/B 201)

C. **Location Zones**

Zone	Area
212	Flight Compartment - Right

D. **Procedure**

SUBTASK 34-31-42-860-018

- (1) Set the FMC source select switch on the P5 panel to the powered FMC (ON L, ON R or NORMAL for both).

SUBTASK 34-31-42-860-019

- (2) Do this task if the inertial system is not aligned: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

NOTE: The inertial system must be aligned before installing software.

SUBTASK 34-31-42-470-004

- (3) Install the required software into the MMR. Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.
 - (a) Install the software in this order:

EFFECTIVITY
SIA 006-999

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-42

Page 201
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) MMR OPS
- 2) MMR OSS.

(b) If the installation of the MMR OPS stops or has a failure, re-install the software.

SUBTASK 34-31-42-860-020

(4) After the software installation, wait at least 1 minute for the MMR to completely reboot.

SUBTASK 34-31-42-860-021

(5) After reboot, cycle power to the MMR circuit breaker.

SUBTASK 34-31-42-750-003

(6) Do this task to make sure that the software loaded correctly: MMR Configuration Check, TASK 34-31-42-750-801.

————— **END OF TASK** —————

TASK 34-31-42-750-801

3. MMR Configuration Check

A. General

(1) This procedure gives the steps to verify the Operational Program Software (OPS) and Option Selection Software (OSS) software installed in the MMR.

B. References

Reference	Title
46-13-00-710-802	System Configuration Check (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-31-42-710-004

(1) Do a check of the MMR software. Do this task: System Configuration Check, TASK 46-13-00-710-802.

(a) Record and verify the software part number is correct.

- 1) If software part number is not correct, software installation is required. Do this task: MMR Software Installation with Onboard Network System, TASK 34-31-42-470-801.
- 2) If software part number is correct, then continue.

————— **END OF TASK** —————



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

MULTI-MODE RECEIVER - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the Multi-Mode Receiver (MMR).
 - (2) An installation and an installation test of the MMR.
- B. The receiver for ILS is the multi-mode receiver.
- C. The multi-mode receivers are in the main equipment center. The No. 1 receiver is on the E1 electronics equipment rack, shelf No. 2. The No. 2 receiver is on the E1 electronics equipment rack, shelf No. 4.

TASK 34-31-42-000-801

2. Multi-Mode Receiver - Removal

(Figure 401)

A. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

D. **Multi-Mode Receiver Removal**

SUBTASK 34-31-42-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-31-42-010-001

- (2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-42

Page 401
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-31-42-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE MULTI-MODE RECEIVER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE MULTI-MODE RECEIVER.

- (3) To remove the No. 1 or No. 2 multi-mode receiver [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

———— **END OF TASK** ————

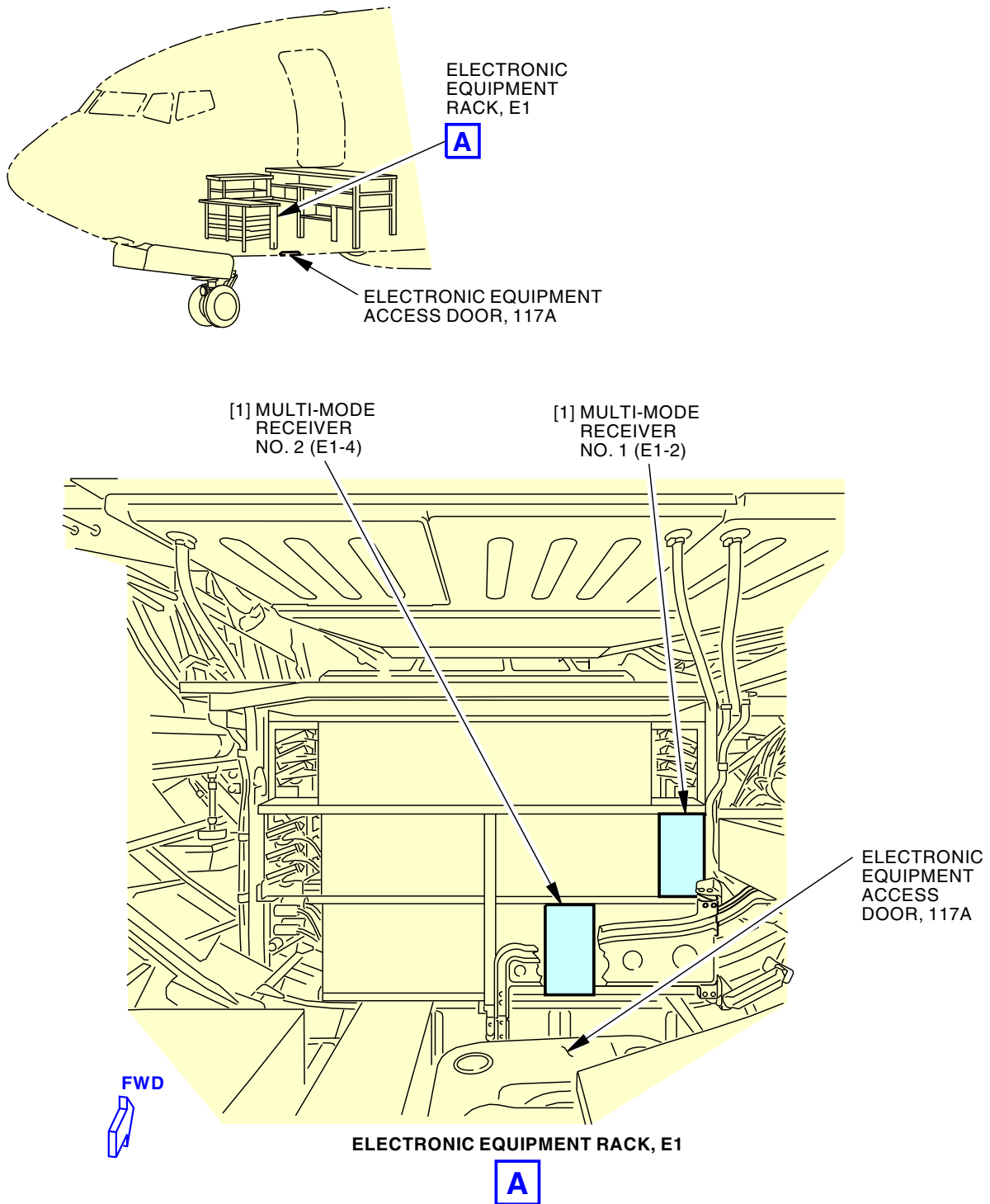
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-42

Page 402
Sep 15/2021



2414845 S00061536209_V3

**Multi-Mode Receiver Installation
Figure 401/34-31-42-990-801**

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-42

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-31-42-400-801

3. **Multi-Mode Receiver - Installation**

(Figure 401)

A. **References**

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
34-31-42-750-801	MMR Configuration Check (P/B 201)
34-32-00-730-801	Marker Beacon System - System Test (P/B 501)
34-51-00-730-801	VOR System - System Test (P/B 501)
34-58-00-710-801	Global Positioning System - Operational Test (P/B 501)

B. **Expendables/Parts**

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Multi-mode receiver	34-31-42-02-006	SIA ALL

C. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Multi-Mode Receiver Installation**

SUBTASK 34-31-42-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

EFFECTIVITY
SIA ALL

34-31-42

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-31-42-420-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE MULTI-MODE RECEIVER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE MULTI-MODE RECEIVER.

- (2) To install the multi-mode receiver [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-31-42-860-003

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-31-42-410-001

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

F. Multi-Mode Receiver Installation Test

SIA 006-999

SUBTASK 34-31-42-750-002

- (1) Do this task: MMR Configuration Check, TASK 34-31-42-750-801.
- (a) Make sure that the Multi-Mode Receiver (MMR) software configuration is installed.
- 1) Make sure that the correct Option Selection Software (OSS) is installed.
- NOTE: Incorrect OSS can cause unsuccessful configurations check.

SIA ALL

SUBTASK 34-31-42-710-001

- (2) Do these steps to prepare for the installation test:
- (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
- (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
- (c) Set the mode selector on the captain's and the first officer's Electronic Flight Instrument System (EFIS) control panel to the APP position.
- (d) Push the approach mode selector (APP) button on the Integrated Standby Flight Display (ISFD) until APP is displayed on the ISFD screen.
- (e) Set a ILS frequency of 108.1 MHz on the captain's and the first officer's navigation control panels as follows:
- 1) Push the MODE key (V or reverse V) until "ILS" is displayed in the STBY (lower) window.
- 2) Push the number "108.10" using the keypad.
- 3) Push the ACT/STBY transfer button.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-42

Page 405
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- a) Make sure that "ILS 108.10" MHz shows in the ACT (upper) window.
- (f) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned and in NAV mode (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
- (g) Set the captain's and the first officer's course knob on the Digital Flight Control System (DFCS) mode control panel to the same course as the airplane heading.

SUBTASK 34-31-42-710-002

- (3) Do these steps to do an installation test of the No. 1 (captain's) MMR:
 - (a) Push and release the TEST button on the captain's navigation control panel.
 - 1) Make sure that these indications show on the captain's display:
NOTE: It takes approximately 16 to 44 seconds for the test sequence to complete.
 - a) The LOC and G/S flags show momentarily.
 - b) The glideslope deviation pointer shows one dot up and the localizer deviation bar shows one dot left.
 - c) The glideslope deviation pointer shows one dot down and the localizer deviation bar shows one dot right.

SUBTASK 34-31-42-710-003

- (4) Do these steps to do an installation test of the No. 2 (first officer's) MMR:
 - (a) Push and release the TEST button on the first officer's navigation control panel.
 - 1) Make sure that these indications show on the first officer's display:
NOTE: It takes approximately 16 to 44 seconds for the test sequence to complete.
 - a) The LOC and G/S flags show momentarily.
 - b) The glideslope deviation pointer shows one dot up and the localizer deviation bar shows one dot left.
 - c) The glideslope deviation pointer shows one dot down and the localizer deviation bar shows one dot right.

SIA 006-999

SUBTASK 34-31-42-730-001

- (5) Do this task: Marker Beacon System - System Test, TASK 34-32-00-730-801.

SUBTASK 34-31-42-730-002

- (6) Do this task: VOR System - System Test, TASK 34-51-00-730-801.

SIA ALL

SUBTASK 34-31-42-860-006

- (7) Do this task: Global Positioning System - Operational Test, TASK 34-58-00-710-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-42

Page 406
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

NAVIGATION CONTROL PANEL - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the navigation control panel.
 - (2) An installation of the navigation control panel.
- B. The captain's and first officer's navigation control panels are on the aft electronics panel, P8, in the flight compartment.

TASK 34-31-52-000-801

2. Navigation Control Panel Removal

(Figure 401)

A. **Location Zones**

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left
212	Flight Compartment - Right

B. **Removal Procedure**

SUBTASK 34-31-52-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

SUBTASK 34-31-52-860-002

- (2) On the aft electronics panel, P8, turn the knob of the PANEL control to the OFF position.

SUBTASK 34-31-52-020-001

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE NAVIGATION CONTROL PANEL. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE NAVIGATION CONTROL PANEL.

- (3) Remove the NAVIGATION CONTROL PANEL [1]:
- (a) Loosen the four quarter-turn fasteners [2].
 - (b) Carefully lift the NAVIGATION CONTROL PANEL [1] from the aft electronics panel, P8, to get access to the electrical connectors [3].
 - (c) Disconnect the electrical connectors [3].
 - (d) Put protective covers on the electrical connectors [3].

———— **END OF TASK** ————

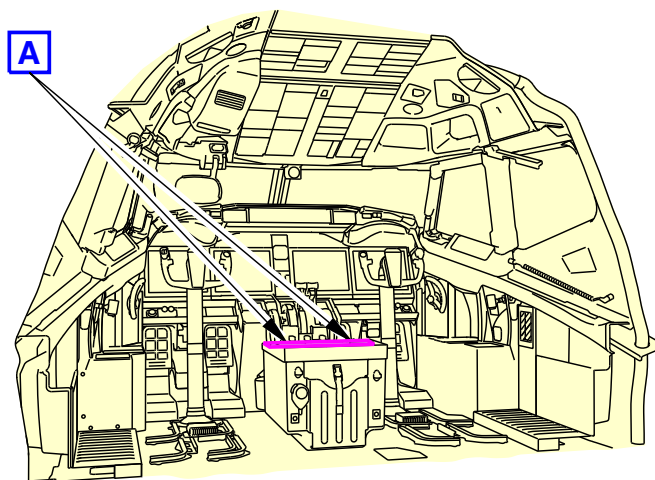
EFFECTIVITY
SIA ALL

34-31-52

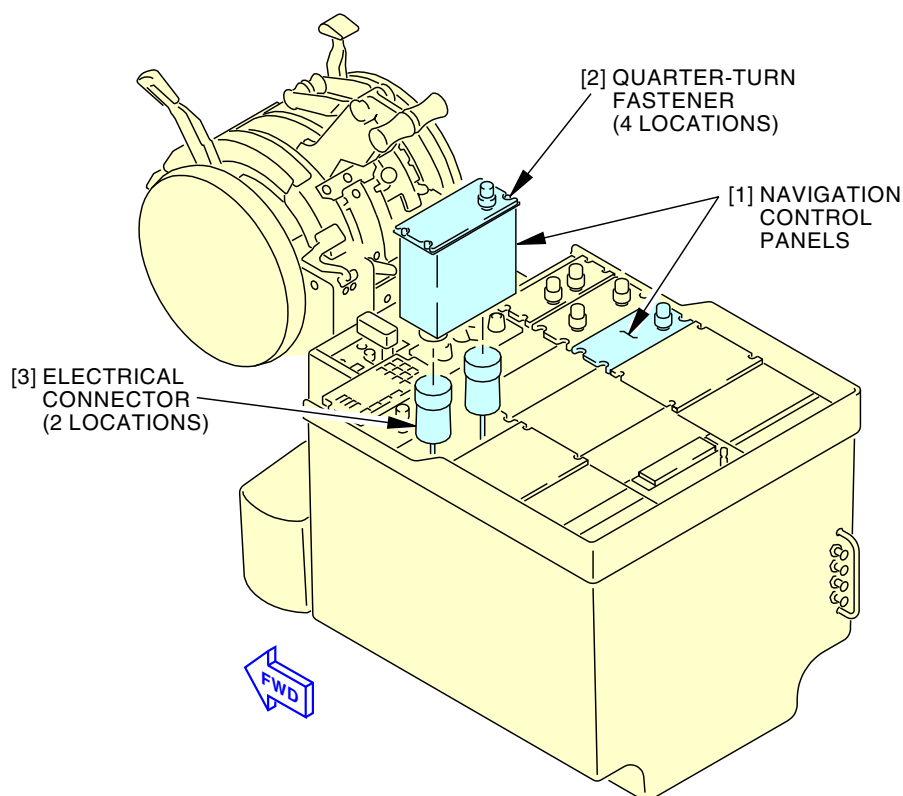
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



FLIGHT COMPARTMENT



AISLE STAND

A

2414846 S00061536214_V1

Navigation Control Panel Installation
Figure 401/34-31-52-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-52

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-31-52-400-801

3. Navigation Control Panel Installation

(Figure 401)

A. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	NAVIGATION CONTROL PANEL	31-11-91-01E-305	SIA ALL
		34-31-52-02-010	SIA ALL

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Installation Procedure

SUBTASK 34-31-52-420-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE NAVIGATION CONTROL PANEL. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE NAVIGATION CONTROL PANEL.

- (1) Install the NAVIGATION CONTROL PANEL [1]:
 - (a) Remove the protective covers from the electrical connectors [3].
 - (b) Examine the electrical connectors [3] for bent or broken pins, dirt, and damage.
 - (c) Connect the electrical connectors [3].
 - (d) Put the NAVIGATION CONTROL PANEL [1] in its position on the aft electronics panel, P8.
 - (e) Tighten the four quarter-turn fasteners [2].

SUBTASK 34-31-52-860-004

- (2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

D. Installation Test

SUBTASK 34-31-52-860-006

- (1) Set the VHF NAV switch on the instrument switching module to the NORMAL position.

SUBTASK 34-31-52-860-007

- (2) Set the mode selector on the captain's and the first officer's EFIS control panels to the VOR position.

EFFECTIVITY
SIA ALL

34-31-52

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 403
Sep 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-31-52-710-003

- (3) Set a VOR frequency of 108.00 MHz on the captain's and the first officer's NAVIGATION CONTROL PANEL [1]:
- (a) Push the MODE key (V or reverse V) until "VOR" is displayed in the STBY (lower) window.
 - (b) Push the number "108.00" using the keypad.
 - (c) Push the ACT/STBY transfer button.
 - 1) Make sure that "VOR 108.00" MHz shows in the ACT (upper) window.

SUBTASK 34-31-52-710-002

- (4) Set a frequency of 115.00 MHz on the captain's and the first officer's NAVIGATION CONTROL PANELS [1].
- (a) Make sure that 115.00 MHz shows on the displays.

SUBTASK 34-31-52-860-008

- (5) Put the airplane back to its usual condition.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-52

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

RF POWER DIVIDER - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of a RF power divider.
 - (2) An installation of a RF power divider.
- B. The No. 1 and No. 2 RF power dividers are on the E1 electronic equipment rack in the main equipment center.

TASK 34-31-62-000-801

2. RF Power Divider Removal

(Figure 401)

A. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

B. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

C. **Removal Procedure**

SUBTASK 34-31-62-010-001

- (1) To get access to the RF power divider [3], open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

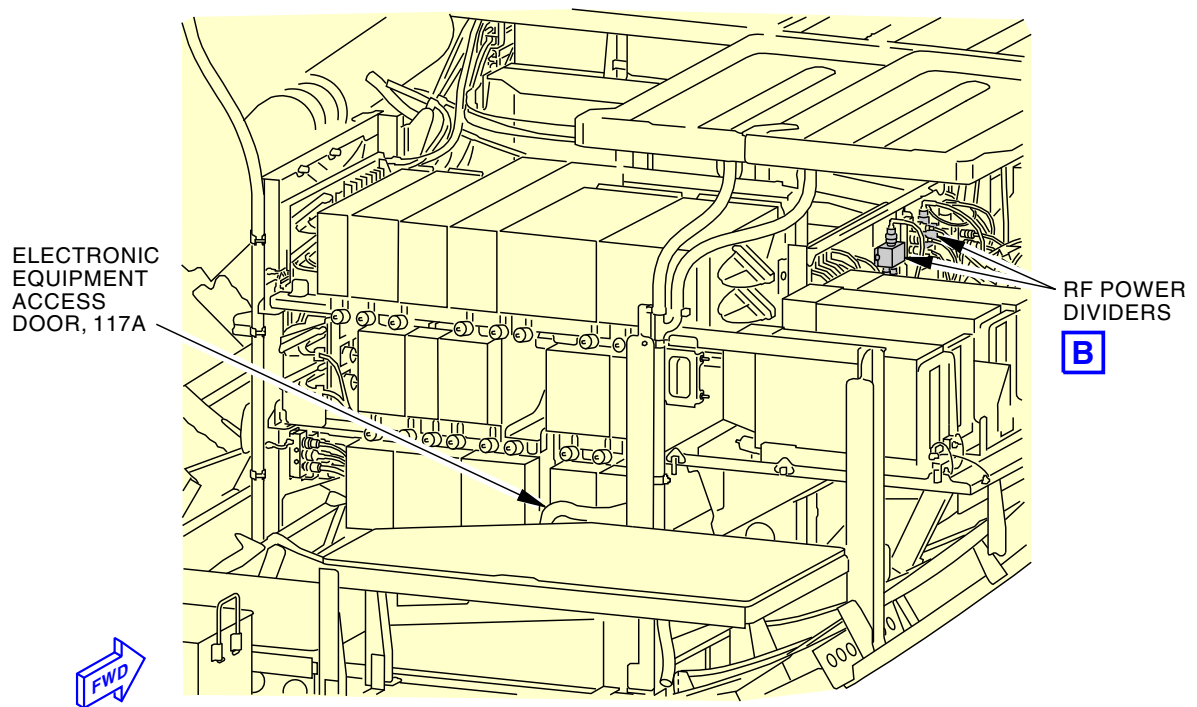
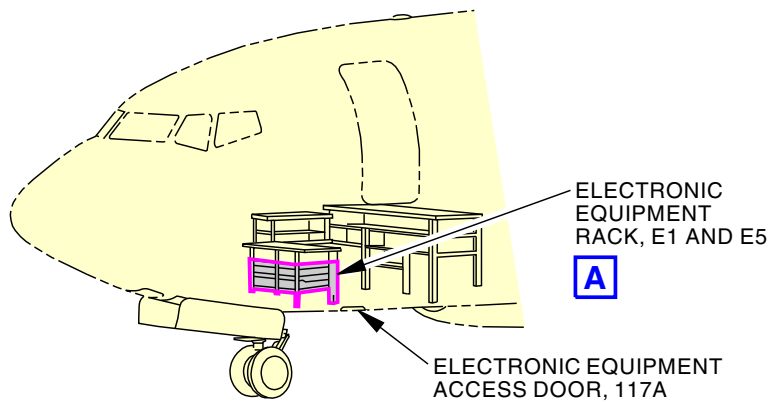
SUBTASK 34-31-62-020-001

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE RF POWER DIVIDER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE RF POWER DIVIDER.

- (2) Remove the RF power divider [1]:
- (a) Disconnect the coaxial connectors [4].
 - (b) Remove the screws [3] and washers [2] that attach the RF power divider [1] to the electronic equipment rack.
 - (c) Remove the RF power divider [1] from the electronic equipment rack.

———— **END OF TASK** ————

**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**



ELECTRONIC EQUIPMENT RACKS, E1 AND E5

A

2414847 S00061536219_V1

**RF Power Divider Installation
Figure 401/34-31-62-990-801 (Sheet 1 of 2)**

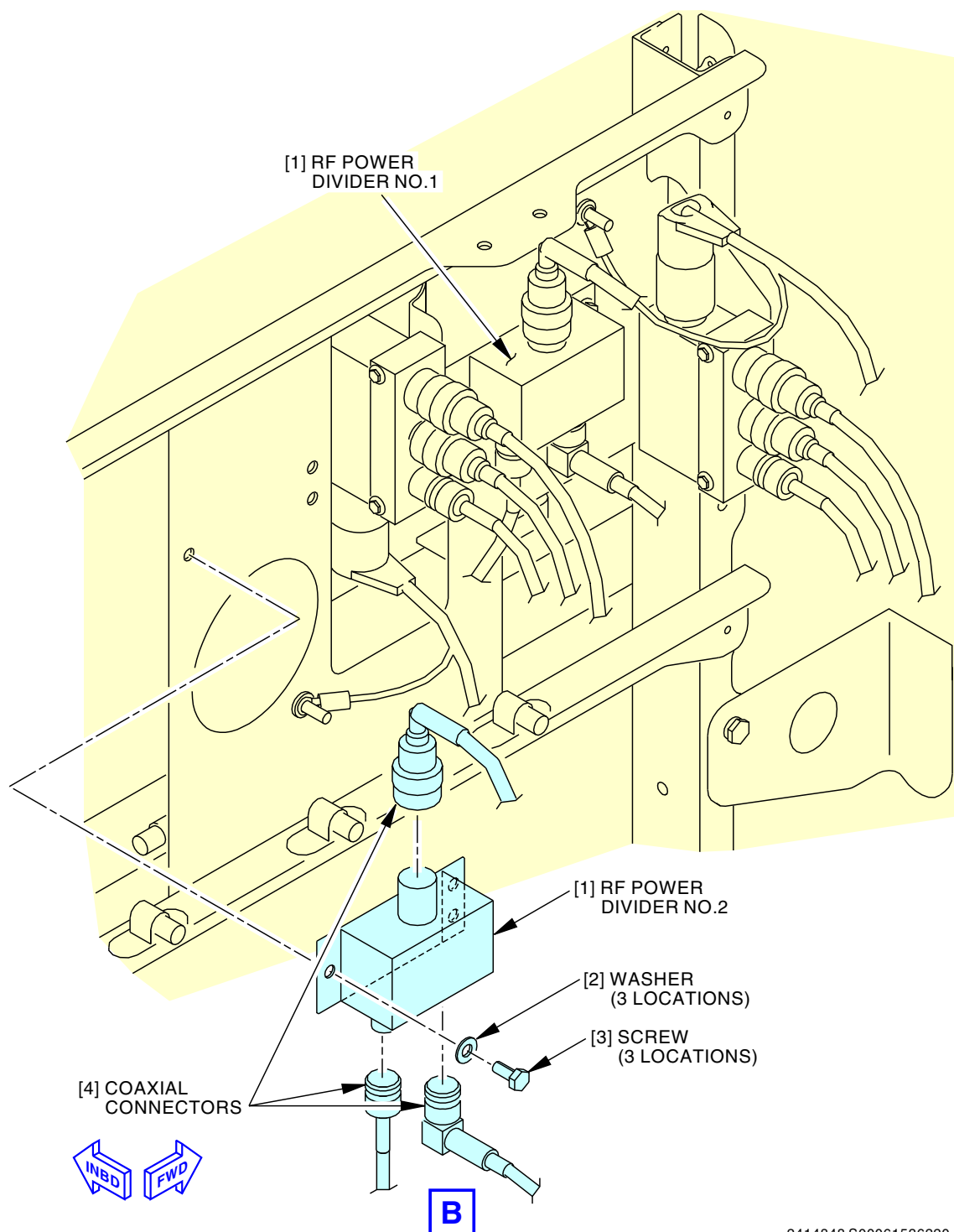
EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-62

Page 402
Sep 15/2021



2414848 S00061536220_V1

RF Power Divider Installation
Figure 401/34-31-62-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-62

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-31-62-400-801

3. **RF Power Divider Installation**

(Figure 401)

A. References

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Divider	34-31-62-01-040	SIA 005
		34-31-62-02-005	SIA 001-004

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA 001-005

34-31-62

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

F. RF Power Divider Installation

SUBTASK 34-31-62-420-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE RF POWER DIVIDER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE RF POWER DIVIDER.

- (1) Install the RF power divider [1] as follows:
 - (a) Align the RF power divider [1] to the holes in the electronic equipment rack.
 - (b) Install the washers [2] and screws [3] that attach the RF power divider [1] to the electronic equipment rack.
 - (c) Connect the coaxial connectors [4] to the RF power divider [1].

SUBTASK 34-31-62-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

G. RF Power Divider Installation Test

SUBTASK 34-31-62-860-002

- (1) Do these steps to prepare for the installation test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (c) Set the mode selector on the captain's and first officer's Electronic Flight Instrument System (EFIS) control panels to the APP position.
 - (d) Set a ILS frequency of 108.1 MHz on the captain's and the first officer's navigation control panels:
 - 1) Push the MODE key (V or reverse V) until "ILS" is displayed in the STBY (lower) window.
 - 2) Push the number "108.10" using the keypad.
 - 3) Push the ACT/STBY transfer button.
 - a) Make sure that "ILS 108.10" MHz shows in the ACT (upper) window.
 - (e) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned and in NAV mode (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
 - (f) Set the captain's and first officer's course select controls on the Digital Flight Control System (DFCS) mode control panel to the same course as the airplane heading.

SUBTASK 34-31-62-710-001

- (2) Do these steps to do an installation test of the No. 1 (captain's) RF power divider:
 - (a) Make sure that the F/D switches on the DFCS mode control panel are in the OFF position.
 - (b) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 ft (2 m) from the forward localizer antenna.
 - (c) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS localizer signal to the tail (VOR) antenna (Table 401).

EFFECTIVITY
SIA 001-005

D633AM101-SIA

34-31-62

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 401/34-31-62-993-801

OUTPUT LEVEL	-15 dBm
DEFLECTION	Right 1 Dot (0.0775 DDM)
FREQUENCY	108.1 MHz

- 1) Make sure that the localizer deviation bar on the captain's display is one dot right.
- (d) Set the mode selector on the captain's EFIS control panel to the VOR position.
- (e) Set a frequency of 108.0 MHz on the captain's navigation control panel.
- (f) Use the NAV/COMM ramp test set, COM-1913, to supply a VOR signal to the tail (VOR) antenna (Table 402).

Table 402/34-31-62-993-802

OUTPUT LEVEL	-60 dBm
BEARING	50 degrees
TO/FROM	TO
FREQUENCY	108.0 MHz

- (g) Make sure that the No. 1 bearing pointer on the captain's and the first officer's RDMI shows 50 degrees.

SUBTASK 34-31-62-710-002

- (3) Do these steps to do an installation test of the No. 2 (first officer's) RF power divider:
 - (a) Make sure that the F/D switches on the DFCS mode control panel are in the OFF position.
 - (b) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 ft (2 m) from the forward localizer antenna.
 - (c) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS localizer signal to the tail (VOR) antenna (Table 403).

Table 403/34-31-62-993-803

OUTPUT LEVEL	-15 dBm
DEFLECTION	Right 1 Dot (0.0775 DDM)
FREQUENCY	108.1 MHz

- 1) Make sure that the localizer deviation bar on the captain's display is one dot right.
- (d) Set the mode selector on the first officer's EFIS control panel to the VOR position.
- (e) Set a frequency of 108.0 MHz on the first officer's navigation control panel.
- (f) Use the NAV/COMM ramp test set, COM-1913, to supply a VOR signal to the tail (VOR) antenna (Table 404).

Table 404/34-31-62-993-804

OUTPUT LEVEL	-60 dBm
BEARING	50 degrees
TO/FROM	TO
FREQUENCY	108.0 MHz

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-62

Page 406
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (g) Make sure that the No. 2 bearing pointer on the captain's and the first officer's RDMI shows 50 degrees.

————— **END OF TASK** —————

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-62

Page 407
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LOCALIZER ANTENNA SWITCH - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of a localizer antenna switch.
- (2) An installation of a localizer antenna switch.

B. The No. 1 and No. 2 localizer antenna switches are on the E1 electronic equipment rack in the main equipment center.

TASK 34-31-72-000-801

2. Localizer Antenna Switch Removal

(Figure 401)

A. **Location Zones**

<u>Zone</u>	<u>Area</u>
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

B. **Access Panels**

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

C. **Removal Procedure**

SUBTASK 34-31-72-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2

SUBTASK 34-31-72-010-001

- (2) To get access to the localizer antenna switch [3], open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-31-72-020-001

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE LOCALIZER ANTENNA SWITCH. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LOCALIZER ANTENNA SWITCH.

- (3) Remove the localizer antenna switch [1]:

- (a) Disconnect the coaxial connectors [2].
- (b) Remove the screws [4] and washers [3] that attach the localizer antenna switch [1] to the electronic equipment rack.

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-72

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Remove the localizer antenna switch [1] from the electronic equipment rack.

———— **END OF TASK** ————

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-72

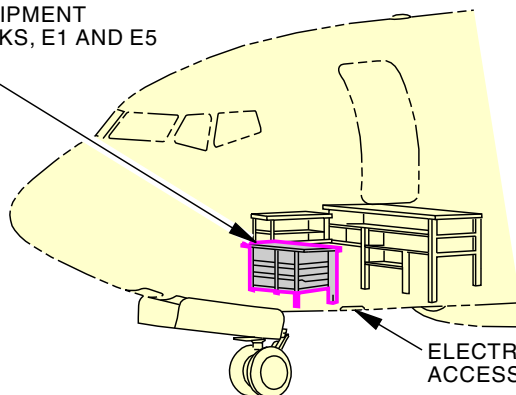
Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

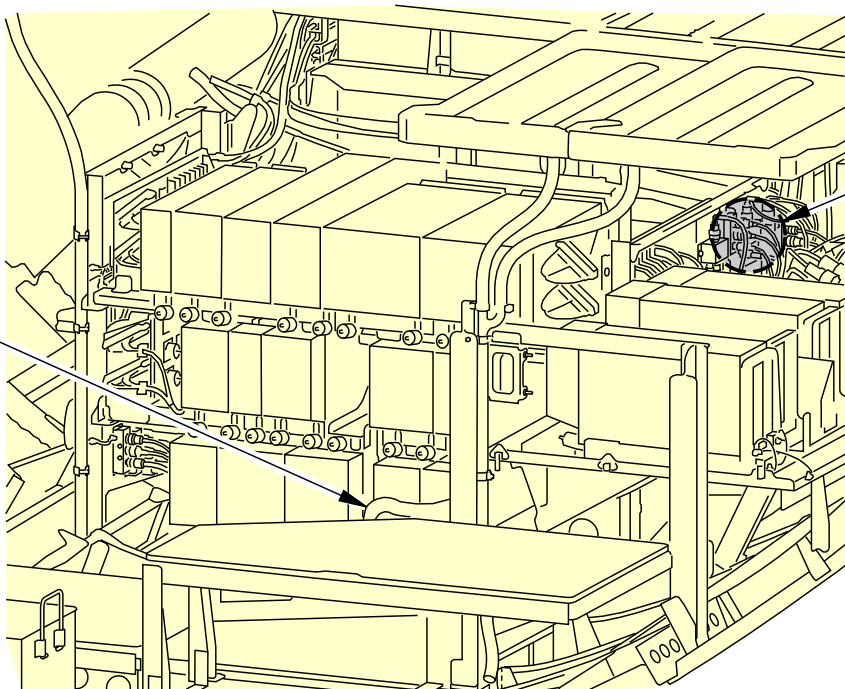
ELECTRONIC
EQUIPMENT
RACKS, E1 AND E5

A



ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

ELECTRONIC
EQUIPMENT
ACCESS
DOOR, 117A



LOCALIZER
ANTENNA
SWITCH

B

ELECTRONIC EQUIPMENT RACKS, E1 AND E5

A

2414849 S00061536225_V1

Localizer Antenna Switch Installation
Figure 401/34-31-72-990-801 (Sheet 1 of 2)

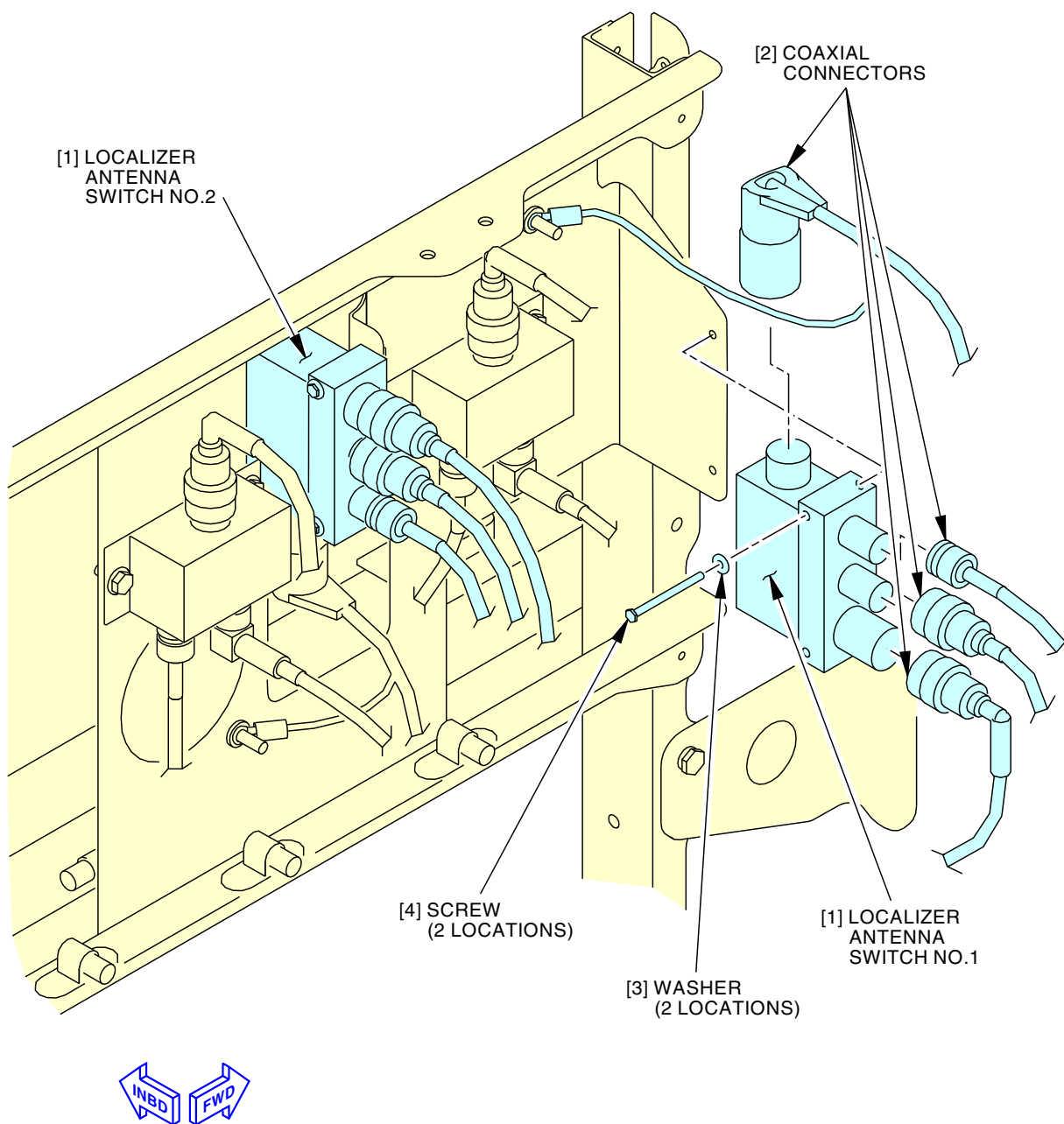
EFFECTIVITY
SIA 001-005

34-31-72

D633AM101-SIA

Page 403
Sep 15/2021

ECCN 9E991 BOEING PROPRIETARY - See title page for details



B

2414850 S00061536226_V1

Localizer Antenna Switch Installation
Figure 401/34-31-72-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA 001-005

34-31-72

D633AM101-SIA

Page 404
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-31-72-400-801

3. Localizer Antenna Switch Installation

(Figure 401)

A. References

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Switch	34-31-72-01-005	SIA 001-004
		34-31-72-02-010	SIA 005

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Localizer Antenna Switch Installation

SUBTASK 34-31-72-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

EFFECTIVITY
SIA 001-005

34-31-72

D633AM101-SIA

Page 405
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2

SUBTASK 34-31-72-420-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE LOCALIZER ANTENNA SWITCH. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE LOCALIZER ANTENNA SWITCH.

- (2) Install the localizer antenna switch [1] as follows:
- (a) Align the localizer antenna switch [1] to the holes in the electronic equipment rack.
 - (b) Install the screws [4] and washers [3] that attach the localizer antenna switch [1] to the electronic equipment rack.
 - (c) Connect the coaxial connectors [2] to the localizer antenna switch [1].

SUBTASK 34-31-72-860-003

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2

SUBTASK 34-31-72-410-001

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

G. Localizer Antenna Switch Installation Test

SUBTASK 34-31-72-860-005

- (1) Do these steps to prepare for the installation test:
- (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (c) Set the mode selector on the captain's and first officer's Electronic Flight Instrument System (EFIS) control panels to the APP position.
 - (d) Set a ILS frequency of 108.1 MHz on the captain's and the first officer's navigation control panels:
 - 1) Push the MODE key (V or reverse V) until "ILS" is displayed in the STBY (lower) window.
 - 2) Push the number "108.10" using the keypad.
 - 3) Push the ACT/STBY transfer button.
 - a) Make sure that "ILS 108.10" MHz shows in the ACT (upper) window.
 - (e) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned and in NAV mode (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).

EFFECTIVITY
SIA 001-005

34-31-72

D633AM101-SIA

Page 406
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (f) Set the captain's and first officer's course select controls on the Digital Flight Control System (DFCS) mode control panel to the same course as the airplane heading.

SUBTASK 34-31-72-710-001

- (2) Do these steps to do an installation test of the No. 1 (captain's) localizer antenna switch:
- (a) Make sure that the F/D switches on the DFCS mode control panel are in the OFF position.
 - (b) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 ft (2 m) from the forward localizer antenna.
 - (c) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS localizer signal to the tail (VOR) antenna (Table 401).

Table 401/34-31-72-993-801

OUTPUT LEVEL	-15 dBm
DEFLECTION	Right 1 Dot (0.0775 DDM)
FREQUENCY	108.1 MHz

- 1) Make sure that the localizer deviation bar on the captain's display is one dot right.
- (d) Slowly decrease the RF level on the NAV/COMM ramp test set, COM-1913, until the localizer deviation bar on the captain's display does not show.
- (e) Set the F/D switches on the DFCS mode control panel to the ON position.
- (f) Push the APP switch on the DFCS mode control panel.
 - 1) Make sure that the localizer deviation bar on the captain's display is one dot right.
- (g) Set the F/D switches on the DFCS mode control panel to the OFF position.

SUBTASK 34-31-72-710-002

- (3) Do these steps to do an installation test of the No. 2 (first officer's) localizer antenna switch:
- (a) Make sure that the F/D switches on the DFCS mode control panel are in the OFF position.
 - (b) Put the NAV/COMM ramp test set, COM-1913, near the front of the airplane and a minimum of 6 ft (2 m) from the forward localizer antenna.
 - (c) Use the NAV/COMM ramp test set, COM-1913, to supply an ILS localizer signal to the tail (VOR) antenna (Table 402).

Table 402/34-31-72-993-802

OUTPUT LEVEL	-15 dBm
DEFLECTION	Right 1 Dot (0.0775 DDM)
FREQUENCY	108.1 MHz

- 1) Make sure that the localizer deviation bar on the first officer's display is one dot right.
- (d) Slowly decrease the RF level on the NAV/COMM ramp test set, COM-1913, until the localizer deviation bar on the first officer's display does not show.
- (e) Set the F/D switches on the DFCS mode control panel to the ON position.
- (f) Push the APP switch on the DFCS mode control panel.
 - 1) Make sure that the localizer deviation bar on the first officer's display is one dot right.

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-72

Page 407
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (g) Set the F/D switches on the DFCS mode control panel to the OFF position.

———— **END OF TASK** ————

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-31-72

Page 408
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

MARKER BEACON SYSTEM - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) Marker Beacon System Deactivation.
 - (2) Marker Beacon System Activation.

TASK 34-32-00-040-801

2. Marker Beacon System - Deactivation

A. **General**

- (1) This procedure removes electrical power to the Marker Beacon system.

B. **Location Zones**

Zone	Area
100	Lower Half of Fuselage
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Procedure**

SUBTASK 34-32-00-860-001

- (1) Open this circuit breaker and install safety tag:

SIA 001-005

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

Open this circuit breaker and install safety tag:

SIA 006-999

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

SIA ALL

Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-00

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Marker Beacon System - Tryout

NOTE: This tryout is to make sure that the Marker Beacon system is in a zero energy state.

SUBTASK 34-32-00-710-001

- (1) Push and release the TEST button on the captain's navigation control panel.
 - (a) Make sure that the marker beacon indication on the captain's and the first officer's displays are blank.

————— END OF TASK —————

TASK 34-32-00-440-801

3. Marker Beacon System - Activation

A. General

- (1) This procedure adds electrical power to the Marker Beacon system.

B. Location Zones

<u>Zone</u>	<u>Area</u>
100	Lower Half of Fuselage
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-32-00-860-003

- (1) Remove the safety tag and close this circuit breaker:

SIA 001-005

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

Remove the safety tag and close this circuit breaker:

SIA 006-999

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

SIA ALL

Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2

EFFECTIVITY
SIA ALL

34-32-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

MARKER BEACON SYSTEM - ADJUSTMENT/TEST

1. General

- A. This procedure has these tasks:
- (1) An operational test of the marker beacon system.
 - (2) A system test of the marker beacon system.

TASK 34-32-00-710-801

2. Marker Beacon System - Operational Test

A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

B. Prepare for the Operational Test

SUBTASK 34-32-00-860-005

- (1) Do these steps to prepare for the operational test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the mode selector on the captain's and the first officer's EFIS control panel to the VOR position.
 - (c) Set the SOURCE switch on the instrument switching module to the AUTO position.

C. Marker Beacon Receiver Self Test

SUBTASK 34-32-00-860-006

- (1) Set a VOR frequency of 108.00 MHz on the captain's and the first officer's Navigation Control Panel (NCP):
 - (a) Push the MODE key (V or reverse V) until "VOR" shows in the STBY (lower) window of the NCP.
 - (b) Push the number "108.00" using the NCP keypad.
 - (c) Push the ACT/STBY transfer button.
 - 1) Make sure that "VOR 108.00" MHz shows in the ACT (upper) window on the NCP.

SUBTASK 34-32-00-710-002

- (2) Push and release the TEST button on the captain's Navigation Control Panel.
 - (a) Make sure that in approximately "X" seconds, the marker beacon indication on the captain's and the first officer's displays shows "FT" (Table 501).
 - (b) Make sure that in approximately "Y" seconds, the "FT" indication does not show (Table 501).

Table 501/34-32-00-993-801

LRU	IMMR	GLU-2100	Other VOR/MB Receiver
"X" - Time for "FT" to appear	5±3 seconds	5±3 seconds	3±2 seconds
"Y" - Time until "FT" disappears	36±5 seconds	22±5 seconds	5±2 seconds

SUBTASK 34-32-00-860-007

- (3) Put the airplane back to its usual condition.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-32-00

Page 501
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-32-00-730-801

3. **Marker Beacon System - System Test**

A. **Tools/Equipment**

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Prepare for the System Test**

SUBTASK 34-32-00-860-010

- (1) Do these steps to prepare for the system test:
 - (a) Set the VHF NAV switch on the instrument switching module to the NORMAL position.
 - (b) Set the mode selector on the captains and the first officer's Electronic Flight Instrument System (EFIS) control panels to the VOR position.
 - (c) Set the ADF/VOR 1 and ADF/VOR 2 switches on the captain's and the first officer's EFIS control panels to VOR 1 and VOR 2 position.
 - (d) Push the CTR button on the captain's and the first officer's EFIS control panels until full VOR display is present on the captain's and first officer's Navigation Display (ND).
 - (e) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (f) Set the captain's and first officer's PFD/MFD switches on the P1 and P3 panels to NORM.

SUBTASK 34-32-00-710-003

- (2) Do this task: Marker Beacon System - Operational Test, TASK 34-32-00-710-801.

D. **Marker Beacon System Test**

SUBTASK 34-32-00-860-011

- (1) Push the receiver volume controls for marker beacon, MKR, on each audio selector panel to set the volume to off.

SUBTASK 34-32-00-480-001

- (2) Put the NAV/COMM ramp test set, COM-1913 or the equivalent test set, directly below the marker beacon antenna.
 - (a) Put the test set on a non-metal surface.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-00

Page 502
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Make sure that the test set antenna is 36 ±2 in. (91 ±5 cm) below the marker beacon antenna.
- (c) Make sure that the test set faces the nose landing gear.

SUBTASK 34-32-00-730-001

- (3) Set the NAV/COMM ramp test set, COM-1913, to supply a marker beacon signal of 75 MHz with a 400 Hz modulation.

NOTE: If the antenna on the test set is not a marker beacon test antenna tuned at 75 MHz, it is not easy to get the test results.

SUBTASK 34-32-00-700-001

- (4) Make sure that power setting indication starts at -19 dBm minimum and adjusts by 1 dBm increments to a maximum of -15 dBm.
- (5) Make sure that the outer marker indication, OM, shows in cyan on the captain's and the first officer's Primary Flight Display (PFD).

SUBTASK 34-32-00-860-012

- (6) Push the receiver volume control for marker beacon, MKR, on the captains audio control panel to set the volume to on.

SUBTASK 34-32-00-730-002

- (7) Turn the receiver volume control clockwise for marker beacon, MKR, on the captains audio control panel.
 - (a) Make sure that you can hear a tone through the interphone system.
 - (b) Make sure that you can hear a tone at the captains audio selector panel with a headset.

SUBTASK 34-32-00-860-013

- (8) Push the receiver volume control for marker beacon, MKR, on the captains audio selector panel to set the volume to off.

SUBTASK 34-32-00-860-014

- (9) Push the receiver volume control for marker beacon, MKR, on the first officer's audio control panel to set the volume to on.

SUBTASK 34-32-00-730-003

- (10) Turn the receiver volume control clockwise for marker beacon, MKR, on the first officer's audio control panel.
 - (a) Make sure that you can hear a tone through the interphone system.
 - (b) Make sure that you can hear a tone at the first officer's audio selector panel with a headset.

SUBTASK 34-32-00-860-015

- (11) Push the receiver volume control for marker beacon, MKR, on the first officer's audio selector panel to set the volume to off.

SUBTASK 34-32-00-730-004

- (12) Set the NAV/COMM ramp test set, COM-1913, to supply a marker beacon signal of 75 MHz with a 1300 Hz modulation.
 - (a) Make sure that power setting indication starts at -19 dBm minimum and adjusts by 1 dBm increments to a maximum of -15 dBm.
 - (b) Make sure that the middle marker indication, MM, shows in amber on the captain's and the first officer's PFD.

EFFECTIVITY
SIA ALL

34-32-00

D633AM101-SIA

Page 503
Jan 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-32-00-730-005

- (13) Set the NAV/COMM ramp test set, COM-1913, to supply a marker beacon signal of 75 MHz with a 3000 Hz modulation.
- (a) Make sure that power setting indication starts at -19 dBm minimum and adjusts by 1 dBm increments to a maximum of -15 dBm.
 - (b) Make sure the that inner marker indication, IM, shows in white on the captain's and the first officer's PFD.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-32-00-080-001

- (1) Remove the NAV/COMM ramp test set, COM-1913.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-00

Page 504
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

MARKER BEACON ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the marker beacon antenna
 - (2) An installation of the marker beacon antenna

TASK 34-32-11-000-801

2. Marker Beacon Antenna Removal

(Figure 401)

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements)
	Part #: 1-6390-A Supplier: 63318
	Part #: 10810 Supplier: \$0855
	Part #: 10811 Supplier: \$0855
	Part #: 10812 Supplier: \$0855
	Part #: 234350 Supplier: 5HCF1
	Part #: 235072 Supplier: 5HCF1
	Part #: 235073 Supplier: 5HCF1
	Part #: 235074 Supplier: 5HCF1
	Part #: 235075 Supplier: 5HCF1
	Part #: 235076 Supplier: 5HCF1
	Part #: 311/03 Supplier: F6892
	Part #: 311/14 Supplier: F6892
	Part #: 311/25 Supplier: F6892
	Part #: 311/37 Supplier: F6892
	Part #: AS1 Supplier: \$1351
	Part #: AS2 Supplier: \$1351
	Part #: AS3 Supplier: \$1351
	Part #: DAD5013 Supplier: 7RKH2
	Part #: DFD5019 Supplier: 7RKH2
	Part #: JNT411B60 Supplier: 3DN12
	Part #: JNT411B90 Supplier: 3DN12
	Part #: SCD5019 Supplier: 7RKH2
	Part #: ST982LF-9 Supplier: 81205
	Part #: TS1275-4 Supplier: 22975

B. Location Zones

Zone	Area
100	Lower Half of Fuselage

C. Removal Procedure

SUBTASK 34-32-11-020-001

- (1) Remove the marker beacon antenna [1]:
 - (a) Remove the six screws [2] from the antenna base.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-11

Page 401
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**



CAUTION

BE CAREFUL WHEN YOU USE THE SEALANT REMOVAL TOOL TO BREAK THE SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRPLANE SKIN, AND OTHER COMPONENTS.

- (b) Use force around the marker beacon antenna [1] with the sealant removal tool, COM-2481 until the seal is fully broken.



CAUTION

LOWER THE ANTENNA ONLY AS FAR AS REQUIRED TO DISCONNECT THE COAXIAL CONNECTOR. DAMAGE TO THE CABLE CAN OCCUR IF YOU PULL THE CABLE.

- (c) Lower the marker beacon antenna [1] until you can get access to the coaxial connector [3].
- (d) Disconnect the coaxial connector [3] from the marker beacon antenna [1].
- (e) Remove the marker beacon antenna [1].

———— **END OF TASK** ————

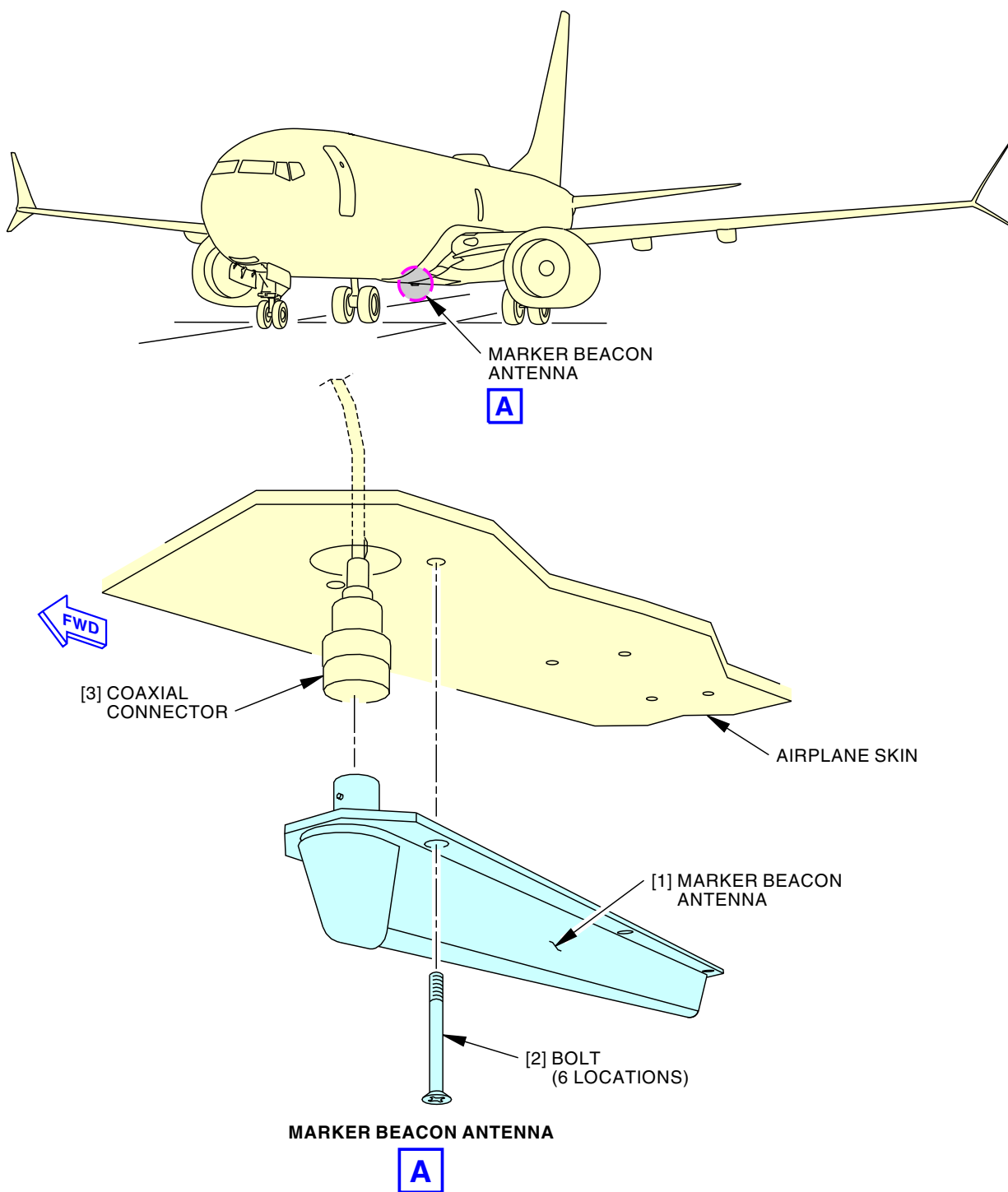
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-11

Page 402
Sep 15/2021



2414852 S00061536240_V1

Marker Beacon Antenna Installation
Figure 401/34-32-11-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-11

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-32-11-400-801

3. **Marker Beacon Antenna Installation**

(Figure 401)

A. References

Reference	Title
51-21-31-350-806	Removal and Control of Corrosion for Plated or Phosphated Surfaces (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606
STD-810	Spatula - Fillet Smoothing, Hardwood or Plastic

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00062	Solvent - Acetone (99.5% Grade)	ASTM D 329 (Supersedes O-A-51)
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-32-11

Page 404
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Marker beacon antenna	34-32-11-01-010	SIA ALL

E. Location Zones

Zone	Area
130	Subzone - Body Station 540.00 to Body Station 727.00
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Marker Beacon Antenna Installation

SUBTASK 34-32-11-100-001

- (1) Clean the airplane mating surface.



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (a) Clean the airplane mating surface with cotton wiper, G00034, moistened with solvent, B00062, or solvent, B00184.
- (b) Use a clean cotton wiper, G00034, and clean the airplane mating surface again.
- (c) Do these two steps above until the airplane mating surface is clean and dry.

SUBTASK 34-32-11-100-002

- (2) If the airplane surface has corrosion or other damage, do these steps to prepare the airplane mating surface:
- (a) Remove the corrosion from the airplane mating surface (TASK 51-21-31-350-806).
 - (b) Apply a layer of coating, C00064, to the airplane mating surface (TASK 51-21-41-370-802).

SUBTASK 34-32-11-420-001

- (3) Install the marker beacon antenna [1].
- (a) Connect the coaxial connector [3] to the marker beacon antenna [1].
 - (b) Put the marker beacon antenna [1] in the correct position on the airplane surface.
 - (c) Install five of the six screws [2] in the base of the marker beacon antenna [1].
 - (d) Manually tighten the screws [2] to 25 in-lb (3 N·m).
 - (e) Measure the resistance between the baseplate of the marker beacon antenna [1] and airplane skin with an intrinsically safe approved bonding meter, COM-1550.
NOTE: Use the empty bolt hole to get access to the antenna baseplate.
 - 1) Make sure that the resistance is less than 0.0025 ohm (2.5 milliohms).
 - (f) Install the last screw [2], and manually tighten the screw [2] to 25 in-lb (3 N·m).

EFFECTIVITY
SIA ALL

34-32-11

D633AM101-SIA

Page 405
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-32-11-390-001

(4) Apply aerodynamic sealant.

- (a) Apply an aerodynamic fillet seal around the base of the marker beacon antenna [1] with sealant, A00247 (TASK 51-22-00-390-809).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (b) Use the hardwood or plastic fillet smoothing spatula, STD-810, to make a smooth 45-degree fillet.

- (c) Apply sealant, A00247, to the heads of the bolts (TASK 51-22-00-390-809).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (d) Let sealant dry for the correct cure time.

G. Marker Beacon Antenna Installation Test

SUBTASK 34-32-11-730-001

(1) Test the marker beacon antenna [1].

- (a) Make sure that the MKR controls on all the audio selector panels are off.

- (b) Put the NAV/COMM ramp test set, COM-1913, or equivalent test set directly below the marker beacon antenna.

1) Put the test set on a non-metal surface.

2) Make sure that the test set antenna is 36 ± 2 in. (91 ± 5 cm) below the marker beacon antenna.

3) Make sure that the test set faces to the nose landing gear.

- (c) Set the NAV/COMM ramp test set, COM-1913, or equivalent test set, to supply a marker beacon signal of 75 MHz with a 400 Hz modulation.

NOTE: If the antenna on the test set is not a marker beacon test antenna tuned at 75 MHz, it is not easy to get the test results.

- (d) Make sure that power setting indication starts at -19 dBm minimum and adjusts by 1 dBm increments to a maximum of -15 dBm.

- (e) Make sure that the OUTER (blue) Marker Beacon indication of "OM" on the Captain's and First Officer's PFD comes into view.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-32-11-080-001

(1) Remove the NAV/COMM ramp test set, COM-1913, or equivalent test set.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-32-11

D633AM101-SIA

Page 406
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LOW RANGE RADIO ALTIMETER (LRRRA) SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) Low Range Radio Altimeter (LRRRA) System Deactivation.
- (2) Low Range Radio Altimeter (LRRRA) System Activation.
- (3) A simulation test of radio altitude.

TASK 34-33-00-040-801

2. Low Range Radio Altimeter System - Deactivation

(Figure 201)

A. General

- (1) This procedure removes electrical power to the Low Range Radio Altimeter (LRRRA) System.

NOTE: There are four LRRRA antennas installed on the bottom of the airplane. The No. 1 (M1737) and No. 2 (M1738) transmit antennas are the outer antennas. The No. 1 (M1739) and the No. 2 (M1740) receive antennas are the inner antennas.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Low Range Radio Altimeter System Deactivation

NOTE: For airplanes with predictive wind shear weather radar systems, open the Weather Radar (WXR) transceiver circuit breaker to make sure that the WXR system does not come on. The radio altimeter supplies radio altitude data to the WXR transceiver. The WXR transceiver uses the radio altitude data to turn the WXR system on and off.

SUBTASK 34-33-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

Page 201
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Low Range Radio Altimeter System - Tryout

NOTE: This tryout is to make sure that the LRRRA system is in a zero energy state.

SUBTASK 34-33-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-33-00-710-001

- (2) Set the SOURCE switch, on the instrument switching module, to the AUTO position.

- (a) Make sure that the captain's and first officer's EFIS displays are blank.

SUBTASK 34-33-00-710-002

- (3) Set the SOURCE switch, on the instrument switching module, to the ALL ON 1 position.

- (a) Make sure that the captain's and first officer's EFIS displays are blank.

SUBTASK 34-33-00-710-003

- (4) Set the SOURCE switch, on the instrument switching module, to the ALL ON 2 position.

- (a) Make sure that the captain's and first officer's EFIS displays are blank.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

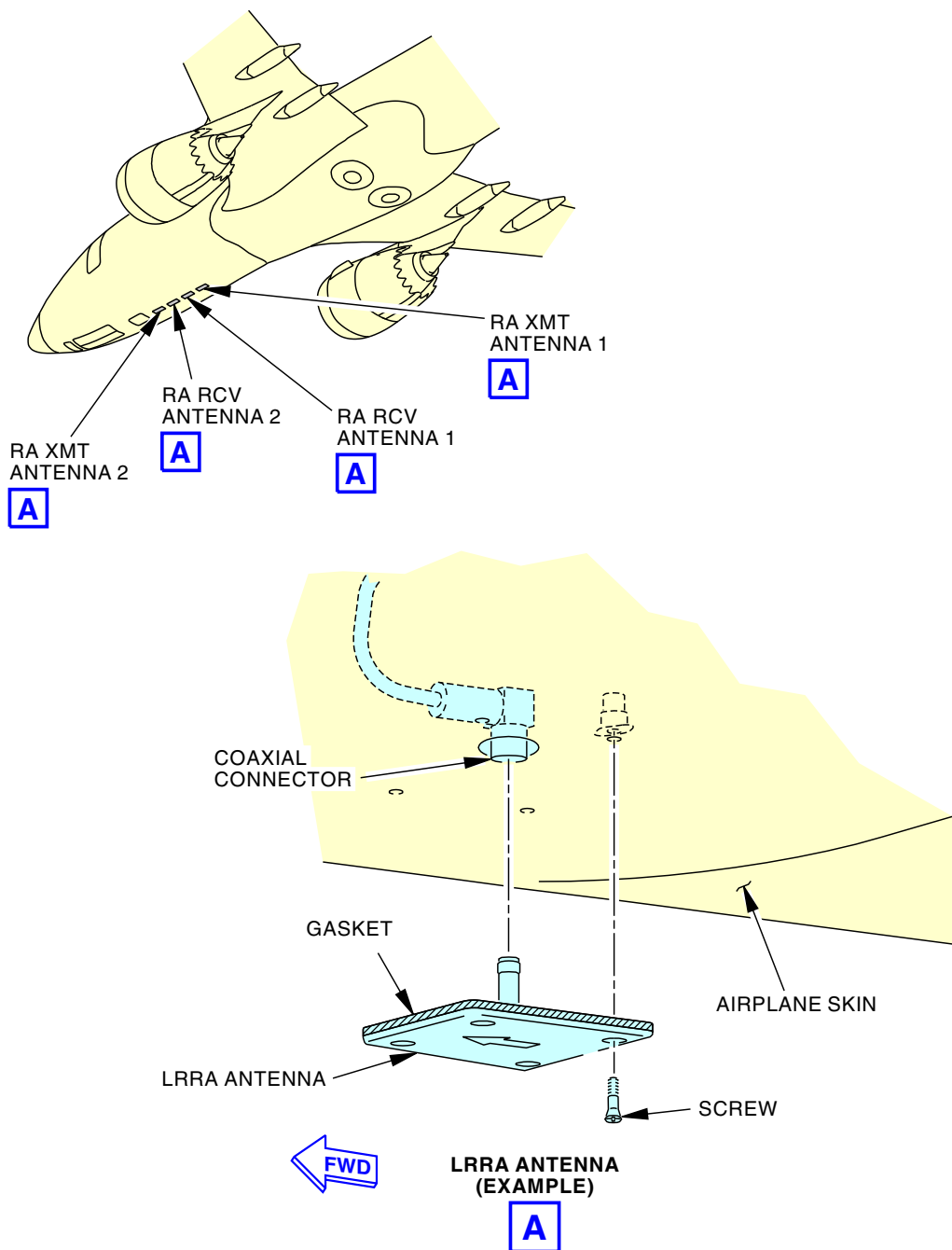
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 202
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414854 S00061536249_V1

Low Range Radio Altimeter
Figure 201/34-33-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-33-00-440-801

3. Low Range Radio Altimeter System - Activation

(Figure 201)

A. General

- (1) This procedure adds electrical power to the Low Range Radio Altimeter (LRRA) System.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Low Range Radio Altimeter System Activation

SUBTASK 34-33-00-860-003



WARNING

KEEP ALL PERSONNEL AT A SAFE DISTANCE FROM THE ANTENNA. RF ENERGY CAN CAUSE INJURIES TO PERSONNEL.

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

————— END OF TASK —————

TASK 34-33-00-700-801

4. Radio Altitude Simulation Test

A. General

- (1) This Task has these procedures:
- (a) Prepare for the Test (Using the Radio Altimeter Receiver Transmitter Extender Box)
 - (b) Prepare for the Test (Using the Direct Connect Test Cable)
 - (c) Prepare for the Test (Using the Aeroflex ALT-8000 Test Set)
 - (d) Radio Altitude Simulation Test (Using the Atlantis DRA707 Test Set)
 - (e) Radio Altitude Simulation Test (Using the Aeroflex ALT-8000 Test Set)

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 204
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (f) Put the Airplane Back to Its Usual Condition (Using the Radio Altimeter Receiver Transmitter Extender Box)
 - (g) Put the Airplane Back to Its Usual Condition (Using the Direct Connect Test Cable)
 - (h) Put the Airplane Back to Its Usual Condition (Using the Aeroflex ALT-8000 Test Set).
- (2) This task uses an Atlantis DRA707 Radio Altimeter (RA) test set or Aeroflex ALT-8000 test set to do a simulation test of radio altitude.
- (3) You must open the Weather Radar (WXR) transceiver circuit breaker to make sure that the WXR system does not come on. The radio altimeter supplies radio altitude data to the WXR transceiver. The WXR transceiver uses the radio altitude data to turn the WXR system on and off.

B. References

Reference	Title
34-33-00-710-801	Low Range Radio Altimeter (LRRA) System - Operational Test (P/B 501)
34-33-21-000-801	Low Range Radio Altimeter (LRRA) Receiver/Transmitter (R/T) Removal (P/B 401)
34-33-21-400-801	Low Range Radio Altimeter (LRRA) Receiver/Transmitter (R/T) Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1922	Test Set - Radio Altimeter Part #: 110-0430-100-02 Supplier: L04V3 Part #: 110-0460-105 Supplier: L04V3 Part #: 9599-607-15902 Supplier: F0052 Opt Part #: 110-0430-100 Supplier: L04V3
COM-1929	Test Cable - Radio Altimeter Part #: 4678322A Supplier: F0052 Part #: AY969-00666-001 Supplier: L04V3 Part #: AY969-00667-001 Supplier: L04V3 Part #: AY969-00668-001 Supplier: L04V3
COM-14227	Test Set - Radio Altimeter (ALA-52A) Part #: ALT-8000 Supplier: 51190 Opt Part #: 2041595-5202 Supplier: 41364
SPL-1928	Box - Extender, Radio Altimeter Receiver Transmitter Part #: C34005-16 Supplier: 81205 Opt Part #: C34005-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 205
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Access Panels

Number	Name/Location

117A	Electronic Equipment Access Door

F. Prepare for the Test (Using the Radio Altimeter Receiver Transmitter Extender Box)

SUBTASK 34-33-00-710-010

- (1) Do this task: Low Range Radio Altimeter (LRRRA) System - Operational Test, TASK 34-33-00-710-801.

SUBTASK 34-33-00-800-001

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-33-00-010-001

- (3) To get access to the main equipment center, open this access panel:

Number	Name/Location

117A	Electronic Equipment Access Door

SUBTASK 34-33-00-080-001

- (4) Remove the applicable RA receiver/transmitter (TASK 34-33-21-000-801).

NOTE: You can do simulation test of each RA (No.1 or No.2) separately, or all together. Two radio altimeter receiver transmitter extender box, SPL-1928, are required to do a simultaneous simulation with LRRRA #1 and LRRRA #2.

SUBTASK 34-33-00-420-001

- (5) Install the radio altimeter receiver transmitter extender box, SPL-1928.

SUBTASK 34-33-00-480-001

- (6) Connect the Radio Altimeter test cable, COM-1929, to the radio altimeter test set, COM-1922.
- (a) Set the POWER switch on the radio altimeter test set, COM-1922, to OFF position.
 - (b) Connect the Radio Altimeter test cable, COM-1929, to the radio altimeter receiver transmitter extender box, SPL-1928.
 - (c) Connect the power cable to the correct primary power source shown on the front panel of the radio altimeter test set, COM-1922.

NOTE: If the batteries in the radio altimeter test set, COM-1922, have the correct charge, the connection to a primary power source is not necessary.

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 206
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Prepare for the Test (Using the Direct Connect Test Cable)

SUBTASK 34-33-00-710-009

- (1) Do this task: Low Range Radio Altimeter (LRRRA) System - Operational Test, TASK 34-33-00-710-801.

SUBTASK 34-33-00-860-021

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-33-00-010-002

- (3) To get access to the main equipment center, open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-33-00-480-002

- (4) Install the radio altimeter test set, COM-1922.

- (a) Set the POWER switch on the radio altimeter test set, COM-1922, to OFF position.
- (b) Connect the correct test cable(s) Radio Altimeter test cable, COM-1929, between the TEST connector on the radio altimeter test set, COM-1922, and TEST connector on the transceiver(s).

NOTE: You can do a test of each RA (No. 1 or No. 2) separately, or all together, with these test cables in the radio altimeter test set, COM-1922:

Test cable ATLANTIS P/N AY969-00666-001 use with Rockwell Collins LRA-900.

Test cable ATLANTIS P/N AY969-00668-001 use with Honeywell Radio Altimeters.

Test cable ATLANTIS P/N AY969-00667-001 use with ERT-550 digital output radio altimeters.

- (c) Connect the power cable to the correct primary power source shown on the front panel of the radio altimeter test set, COM-1922.

NOTE: If the batteries in the radio altimeter test set, COM-1922, have the correct charge, the connection to a primary power source is not necessary.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 207
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-00-860-022

- (5) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

H. Prepare for the Test (Using the Aeroflex ALT-8000 Test Set)

SUBTASK 34-33-00-710-011

- (1) Do this task: Low Range Radio Altimeter (LRRRA) System - Operational Test, TASK 34-33-00-710-801.

SUBTASK 34-33-00-710-012

- (2) Make sure that the captain's and first officer's Electronic Flight Instrument System (EFIS) display radio altitude show -6 ± 2 ft (-2 ± 1 m).

SUBTASK 34-33-00-800-003

- (3) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-33-00-010-004

- (4) To get access to the main equipment center, open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-33-00-480-003

- (5) Install the Aeroflex ALT-8000 test set (Radio Altimeter (ALA-52A) Test Set, COM-14227).

NOTE: Refer to the ALT-8000 Radio Altimeter Test Set operation manual for detailed information.

- (a) Place the test set no more than 10 ft (3 m) from the radio altimeter antennas.
- (b) Connect the 20 ft (6 m) Low Loss RF Coax Cables to the color coded test set TX/RX TNC connectors.
- (c) Push the power ON/OFF switch for a minimum of 1 second to power the test set.

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 208
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) The power up screen and load progress bar are shown.

NOTE: The test set user interface is a touch screen control panel. The Launch Bar is a vertical scrolling menu shown on the left side of the touch screen that provides access to the function icons.

- (e) Touch the light gray bar to open the Launch Bar.

- (f) Touch Test Setup to show the Test Setup window.

NOTE: This window is used to configure the test set operational parameters.

- (g) Touch the light gray bar to close the Launch Bar.

- (h) Make sure that these RF Port Settings, UUT Settings, and RF Settings are correct on the General tab:

- 1) Connection Type - Coupler
- 2) UUT Detect Mode - Auto
- 3) Level Mode - Auto.

- (i) Make sure that these RF Port Settings and RF Settings are correct on the Loss tab:

- 1) TX Cable Loss - See cable for value in dBs
- 2) RX Cable Loss - See cable for value in dBs
- 3) TX Coupler Loss - See TX Antenna Coupler for value in dBs
- 4) RX Coupler Loss - See RX Antenna Coupler for value in dBs.

- (j) Touch Delay Calibration to show the Delay Calibration screen.

NOTE: This screen starts the calibration procedure for the test set RF coaxial cable delay.

- 1) Connect the ends of the TX and RX cables together with the supplied TNC connector.
- 2) Touch Start to start delay calibration.

NOTE: Delay calibration can not be aborted once started. The calibration process is automatic and Test Setup screen is shown when calibration is completed.

- 3) Disconnect the TNC connector from the TX and RX cables.

SUBTASK 34-33-00-480-004

- (6) Do these steps to install the antenna couplers:

NOTE: The Aeroflex ALT-8000 test set will not function correctly if the antenna couplers are placed over the wrong aircraft antennas. You do not see any TX power from the UUT and test would not work.

- (a) Select and assemble the sectional pole lengths to support the antenna couplers.
- (b) Mount the antenna coupler to the end of each assembled pole.
- (c) Push down on each pole assembly until the gas shock compresses and locks the retaining clamp.
- (d) Raise the TX pole assembly and place the antenna coupler over the applicable radio altimeter transmit antenna.
 - 1) When the pole is vertical, release the gas shock retaining clamp to apply upward pressure on the antenna coupler.
- (e) Raise the RX pole assembly and place the antenna coupler over the applicable radio altimeter receive antenna.



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) When the pole is vertical, release the gas shock retaining clamp to apply upward pressure on the antenna coupler.
- (f) Connect the TX and RX coax cables to the TX and RX antenna couplers TNC connector.

SUBTASK 34-33-00-860-028

- (7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

I. Radio Altitude Simulation Test (Using the Atlantis DRA707 Test Set)

SUBTASK 34-33-00-860-005

- (1) Prepare the radio altimeter test set, COM-1922, for the altitude simulation, do these steps:
 - (a) Set the power ON/OFF switch to the ON position.
 - 1) Make sure that the 5 VDC and HOLDING lights come on.
 - (b) Set the NO COMPUTED DATA switches to the NORMAL position.
 - (c) Push and release the PRES ALT key.
 - 1) Make sure that PRES ALT shows on the LEDs.
 - (d) Use the keypad to put in a value of +4000 feet.
 - (e) Push and release the ENTER key.
 - 1) Make sure that the radio altitude value shown on the EFIS displays is blank.

SUBTASK 34-33-00-860-006

- (2) Prepare the captain's and the first officer's EFIS control panels for the simulation.
 - (a) Push and release the RST (reset) button.
 - (b) Turn the DH control to show DH 450 at the captain's EFIS display.
 - (c) Turn the DH control to show DH 400 at the first officer's EFIS display.

SUBTASK 34-33-00-860-007

- (3) Set these controls on the radio altimeter test set, COM-1922:
 - (a) Push and release the START ALT key.
 - 1) Make sure that START ALT shown on the LEDs.
 - (b) Use the keypad to put in a value of +4000 feet.
 - (c) Push and release the ENTER key.
 - 1) Make sure that the LEDs show START ALT +4000.
 - (d) Push and release the STOP ALT key.
 - 1) Make sure that the LEDs show STOP ALT.
 - (e) Use the keypad to put in a value of -20 feet.
 - (f) Push and release the ENTER key.
 - 1) Make sure that the LEDs show STOP ALT -20.
 - (g) Push and release the VERT SPD key.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 210
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the LEDs show VERT SPD.
- (h) Use the keypad to put in a value of -4000 (feet per minute).
- (i) Push and release the ENTER key.
 - 1) Make sure that the LEDs show VERT SPD -4000.

SUBTASK 34-33-00-730-001

- (4) Do the altitude ramp-down test (typical).
 - (a) Push the RAMP/HOLD key on the radio altimeter test set, COM-1922.
 - 1) Make sure that the RAMPING light comes on.
 - (b) Look for these indications on the captain's and the first officer's EFIS displays.
 - 1) The radio altitude goes out of view for approximately 22.5 seconds while the altitude on the radio altimeter test set, COM-1922, decreases from 4000 to 2500 feet.
 - (c) After the time-out of 22.5 seconds (previous step), a radio altitude of 2500 feet comes into view on the EFIS displays and decreases to zero.

NOTE: The EFIS displays show the radio altitude set on the radio altimeter test set, COM-1922, within the limit of 2500 feet to -20 feet.
 - (d) Look for these indications on the captain's EFIS display when the radio altitude decreases to 450 feet:
 - 1) The DH value changes to a yellow color and flashes for 3 seconds.
 - 2) The radio altitude continues to decrease to zero.
 - (e) Look for these indications on the first officer's EFIS display when the radio altitude decreases to 400 feet:
 - 1) The DH value changes to a yellow color and flashes for 3 seconds.
 - 2) The DH value flashes for approximately 3 seconds.
 - 3) The radio altitude continues to decrease toward zero.
 - (f) Look for these indications on the EFIS displays while the radio altitude decreases to zero feet:
 - 1) The radio altitude value changes to a white color.
 - 2) The DH value changes to the numbers set at the captain's and the first officer's EFIS control panels.

J. Radio Altitude Simulation Test (Using the Aeroflex ALT-8000 Test Set)

SUBTASK 34-33-00-860-029

- (1) Prepare the Aeroflex ALT-8000 test set (Radio Altimeter (ALA-52A) Test Set, COM-14227) for the altitude simulation:
 - (a) Touch Alt. Ind. Zero to show the Altitude Indicator Zero screen.

NOTE: The test set is now simulating 0 ft (0 m) at the end of the ALT-8000 RF coax cables.

SUBTASK 34-33-00-860-030

- (2) Prepare the captain's and the first officer's EFIS control panels for the simulation.
 - (a) Push and release the RST (reset) button.
 - (b) Turn the DH control to show DH 450 at the captain's EFIS display.
 - (c) Turn the DH control to show DH 400 at the first officer's EFIS display.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 211
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-00-730-009

(3) Do the altitude ramp-down test:

- (a) Touch the light gray bar to open the Launch Bar.
- (b) Touch Simulation to show the Simulation window.

NOTE: The Simulation window is the main test screen and provides visual access to control parameters and test data.

- (c) Touch the light gray bar to close the Launch Bar.
- (d) Set these values in the Control area of the Simulation window:

NOTE: When a numeric data field is touched for editing, a data entry pop-up window is shown. A numeric keypad, data slew bar or rotary knob pop-up window can be used to enter a value.

- 1) Start Altitude = 3000 ft (914 m)
- 2) Stop Altitude = 0 ft (0 m)
- 3) Altitude Rate = 100 ft/min (0.508 m/s).

NOTE: DH trips should be completed with an altitude ramp-down and descent rate of 100 ft/min or less, to let the DH indicator and any audible warning operate correctly.

- (e) Touch Run to start simulation.

NOTE: Altitude Pause is shown.

NOTE: To pause simulation at any point, touch Altitude Pause. The Current Altitude can be changed and the simulation is started again with a touch of Altitude Resume.

- 1) The test set Current Altitude shows 3000 ft (914 m) and starts to decrease toward 0 ft (0 m).
- (f) Make sure the captain's and first officers EFIS display show these values:
 - 1) No radio altitude shows until the Current Altitude reaches 2500 ft (762 m).
 - 2) When the Current Altitude reaches 450 ft (137 m), the decision height indications on the captain's EFIS display change.
 - 3) When the Current Altitude reaches 400 ft (122 m), the decision height indications on the first officers EFIS display change.
 - 4) The Current Altitude on the test set and the radio altitude on the EFIS display continue to decrease to 0 ft (0 m).
- (g) Touch Stop to end the simulation.

SUBTASK 34-33-00-710-014

- (4) If it is necessary, use the test set to do altitude simulations to test other airplane systems.

K. Put the Airplane Back to Its Usual Condition (Using the Radio Altimeter Receiver Transmitter Extender Box)

SUBTASK 34-33-00-080-002

- (1) Remove the radio altimeter test set, COM-1922.
 - (a) Set the POWER ON/OFF switch on the radio altimeter test set, COM-1922, to the OFF position.
 - (b) Disconnect the power cable for the radio altimeter test set, COM-1922, from the primary power source (if the power cable was used).
 - (c) Disconnect the test cable(s) from the radio altimeter test set, COM-1922.

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

Page 212
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Put the test cables in the box for the radio altimeter test set, COM-1922.

SUBTASK 34-33-00-020-001

- (2) Remove the radio altimeter receiver transmitter extender box, SPL-1928.

SUBTASK 34-33-00-400-001

- (3) Install the applicable RA receiver/transmitter (TASK 34-33-21-400-801).

SUBTASK 34-33-00-860-008

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-33-00-410-001

- (5) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

L. Put the Airplane Back to Its Usual Condition (Using the Direct Connect Test Cable)

SUBTASK 34-33-00-860-023

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-080-003

- (2) Remove the radio altimeter test set, COM-1922.

- (a) Set the POWER ON/OFF switch on the radio altimeter test set, COM-1922, to the OFF position.
- (b) Disconnect the power cable for the radio altimeter test set, COM-1922, from the primary power source (if the power cable was used).
- (c) Disconnect the test cable(s) from the radio altimeter test set, COM-1922.
- (d) Put the test cables in the box for the radio altimeter test set, COM-1922.

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 213
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-00-860-024

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-33-00-410-002

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

M. Put the Airplane Back to Its Usual Condition (Using the Aeroflex ALT-8000 Test Set)

SUBTASK 34-33-00-080-004

- (1) Push the power ON/OFF switch for a minimum of 1 second to remove test set power.

SUBTASK 34-33-00-860-031

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-080-005

- (3) Disconnect the 20 ft (6 m) Low Loss RF Coax Cables from the test set TX/RX TNC connectors and the antenna couplers.

SUBTASK 34-33-00-020-004

- (4) Remove the TX and RX antenna coupler assemblies.

SUBTASK 34-33-00-860-032

- (5) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 214
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-710-013

- (6) Make sure the captain's and first officer's EFIS display radio altitude show -6 ± 2 ft (-2 ± 1 m).

SUBTASK 34-33-00-860-033

- (7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 215
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LOW RANGE RADIO ALTIMETER (LRR) SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) An operational test of the low range radio altimeter (LRR) system.
- (2) A system test of the LRR system.
- (3) A health check of the LRR system.
- (4) A BITE test of the LRR system.

TASK 34-33-00-710-801

2. Low Range Radio Altimeter (LRR) System - Operational Test

A. **General**

- (1) The operational test includes a LRR Interface To Display Processing Computer test.
- (2) The operational test makes sure the interface between the transceiver and the displays is ok.
- (3) The operational test does not include a check of the LRR antennas.
- (4) This test will make sure the that the radio altimeter operates correctly after a suspected 5G interference.
 - (a) There can be 5G interference to the radio altimeter signals because of the frequency spectrum (3.4 GHz - 4.2 GHz, 4.4 GHz - 4.9 GHz), antenna type, and power levels used by the 5G technology. The radio altimeters can become inoperative or can supply erroneous data, which can affect other systems on the airplane that use radio altimeter data.
 - 1) Follow your airline policy for reporting the specific event.
 - 2) For more information refer to 737MAX-FTD-34-21001.

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Low Range Radio Altimeter (LRR) System Operational Test**

SUBTASK 34-33-00-710-004

- (1) Set the SOURCE switch on the instrument switching module to the AUTO position.
 - (a) Make sure that -4 ± 2 ft (-1.2 ± 0.6 m) radio altitude shows on the captain's and first officer's outboard display units..

SUBTASK 34-33-00-710-005

- (2) Set the SOURCE switch on the instrument switching module to the ALL ON 1 position.
 - (a) Make sure that -4 ± 2 ft (-1.2 ± 0.6 m) radio altitude shows on the captain's and first officer's outboard display units.

SUBTASK 34-33-00-710-006

- (3) Set the SOURCE switch on the instrument switching module to the ALL ON 2 position.
 - (a) Make sure that -4 ± 2 feet radio altitude shows on the captain's and first officer's outboard display units..

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

Page 501
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-00-860-010

- (4) Set the SOURCE switch on the instrument switching module to the AUTO position.

————— END OF TASK —————

TASK 34-33-00-730-801

3. Low Range Radio Altimeter (LRR) System - System Test

A. General

- (1) The system test makes sure the interface between the Air/Ground relays is OK and the transmit and receive antennas operate correctly.
- (2) The system test includes these tests:
 - (a) The LRR Air/Ground Discrete Input Test
 - (b) The LRR Antenna Coaxial Cable Test.
 - 1) Interface from LRR equipment rack connector to antenna connector.
 - 2) Interface from LRR R/T to antenna connector.

B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34-33-21-000-801	Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal (P/B 401)
34-33-21-400-801	Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1047	Material - RF Absorbent, Eccosorb AN74 Emerson Cumming or Equivalent Part #: 78084099 Supplier: 30817 Opt Part #: AN74 Supplier: 30817

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 502
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
STD-4050	Detector Kit - Crystal (Generic 1N23 or p/n HPX421A, HPX421B, 1N23WE, 423B use with front end adapter p/n 8817A or equivalent).

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. LRR Air/Ground Discrete Input Test

SUBTASK 34-33-00-860-013

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-020-002

- (2) For the No. 1 LRR system, remove the No. 1 LRR R/T (TASK 34-33-21-000-801).

SUBTASK 34-33-00-020-003

- (3) For the No. 2 LRR, remove the No. 2 LRR R/T (TASK 34-33-21-000-801).

SUBTASK 34-33-00-730-002

- (4) For the No. 1 LRR system, do these steps:
- (a) Use a digital/analog multimeter, COM-1793, to measure the resistance between the AIR/GROUND DISCRETE, pin F4, and the IND 2 STATUS, pin F6, in connector D13993B for the No. 1 radio altimeter system.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-33-00

Page 503
May 15/2022

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the digital/analog multimeter, COM-1793, shows 10 KOhms or more than 10 KOhms.



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF CONTROL SURFACES AND LANDING GEAR DOOR AREAS BEFORE YOU SIMULATE THE AIRPLANE TO THE AIR MODE. THE SIMULATED AIR MODE CAN CAUSE MOVEMENT TO CONTROL SURFACES, LANDING GEAR, AND LANDING GEAR DOORS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (b) Set the PSEU SYS 1 to AIR mode (TASK 32-09-00-860-801).
 - 1) Make sure that the digital/analog multimeter, COM-1793, shows 100 Ohms or less.
- (c) Set the PSEU SYS 1 to GROUND mode (TASK 32-09-00-860-802).

SUBTASK 34-33-00-730-003

- (5) For the No. 2 LRRA system, do these steps:
 - (a) Use a digital/analog multimeter, COM-1793, to measure the resistance between the AIR/GROUND DISCRETE, pin F4, and the IND 2 STATUS, pin F6, in connector D13995B for the No. 2 radio altimeter system.
 - 1) Make sure that the digital/analog multimeter, COM-1793, shows 10 KOhms or more than 10 KOhms.



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF CONTROL SURFACES AND LANDING GEAR DOOR AREAS BEFORE YOU SIMULATE THE AIRPLANE TO THE AIR MODE. THE SIMULATED AIR MODE CAN CAUSE MOVEMENT TO CONTROL SURFACES, LANDING GEAR, AND LANDING GEAR DOORS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (b) Set the PSEU SYS 2 to AIR mode (TASK 32-09-00-860-801).
 - 1) Make sure that the digital/analog multimeter, COM-1793, shows 100 Ohms or less.
- (c) Set the PSEU SYS 2 to GROUND mode (TASK 32-09-00-860-802).

SUBTASK 34-33-00-420-002

- (6) For the No. 1 LRRA system, install the No. 1 LRRA R/T (TASK 34-33-21-400-801).

SUBTASK 34-33-00-420-003

- (7) For the No. 2 LRRA system, install the No. 2 LRRA R/T (TASK 34-33-21-400-801).

F. Operational Test

SUBTASK 34-33-00-860-014

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

Page 504
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-00-710-007

- (2) Do this task: Low Range Radio Altimeter (LRRR) System - Operational Test, TASK 34-33-00-710-801.

G. LRRR Antenna Coaxial Cable Test

SUBTASK 34-33-00-860-015

- (1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-860-016

- (2) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

SUBTASK 34-33-00-730-005

- (3) Do one of these two methods to do a LRRR coaxial cable test for LRRR 1 System:

- (a) For the crystal detector kit, STD-4050, do these steps:

- 1) Connect the crystal detector to a digital/analog multimeter, COM-1793, and hold the crystal detector up to the LRRR 1 System transmit antenna.
- 2) Make sure that the digital/analog multimeter, COM-1793, shows 1.5 mVDC or more.

- (b) For the Generic 1N23 Crystal diode, do these steps:

- 1) Hold the generic 1N23 crystal diode on the LRRR 1 System transmit antenna coaxial cable.
- 2) Make sure that the digital/analog multimeter, COM-1793, shows 30 mVDC or more.

SUBTASK 34-33-00-730-006

- (4) Cover the LRRR 1 System receive antenna with RF absorbent material, COM-1047, or equivalent absorbent material.

- (a) Make sure that the radio altitude display on the captain's EFIS display is blank.

SUBTASK 34-33-00-860-017

- (5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-860-018

- (6) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

SUBTASK 34-33-00-730-007

- (7) Do one of these two methods to do the LRRR coaxial cable test for LRRR 2 System:

- (a) For the crystal detector kit, STD-4050, do these steps:

EFFECTIVITY
SIA ALL

34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 505
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Connect the crystal detector to a digital/analog multimeter, COM-1793, and hold the crystal detector up to the LRRRA 2 System transmit antenna.
- 2) Make sure that the digital/analog multimeter, COM-1793, shows 1.5 mVDC or more.
- (b) For the Generic 1N23 Crystal diode, do these steps:
 - 1) Hold the generic 1N23 crystal diode on the LRRRA 2 System transmit antenna coaxial cable.
 - 2) Make sure that the digital/analog multimeter, COM-1793, shows 30 mVDC or more.

SUBTASK 34-33-00-730-008

- (8) Cover the LRRRA 2 System receive antenna with RF absorbent material, COM-1047, or equivalent absorbent material.
 - (a) Make sure that the radio altitude display on the first officer's EFIS display is blank.

SUBTASK 34-33-00-860-019

- (9) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

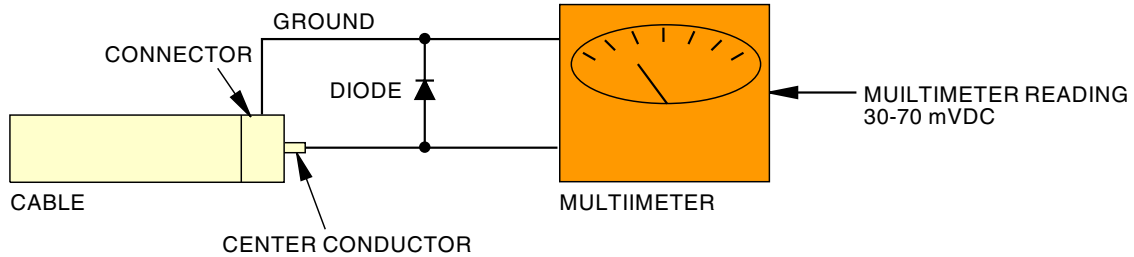
34-33-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
May 15/2022

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414855 S00061536255_V1

LRRA SYSTEM - Generic 1N23 diode connection
Figure 501/34-33-00-990-802

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 507
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-33-00-700-802

4. Low Range Radio Altimeter (LRRRA) System - Health Check

A. General

- (1) This task gives the steps to do a health check of the Low Range Radio Altimeter (LRRRA) system.
- (2) The health check does an inspection of these components:
 - (a) LRRRA antenna connectors
 - (b) LRRRA Receiver-Transmitter (RT) connectors
 - (c) LRRRA RT tray connectors
 - (d) LRRRA system coaxial cables and connectors.

B. References

Reference	Title
20-10-72-211-801	Coaxial Cable and Antenna System Inspection with a Frequency Domain Reflectometer (P/B 201)
24-31-11-000-801-002	Battery Removal (P/B 401)
24-31-11-400-801-002	Battery Installation (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
34-33-11-000-801	Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal (P/B 401)
34-33-11-400-801	Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation (P/B 401)
50-10-04-000-801	Cargo Compartment Floor Panel Removal (P/B 401)
50-10-04-400-801	Cargo Compartment Floor Panel Installation (P/B 401)
50-11-01-000-801	Forward Cargo Compartment Forward Bulkhead Liner Removal (P/B 401)
50-11-01-400-801	Forward Cargo Compartment Forward Bulkhead Liner Installation (P/B 401)
SWPM 20-51-00	Standard Wiring Practices Manual
SWPM 20-60-01	Cleaning of Electrical Connectors

C. Consumable Materials

Reference	Description	Specification
A50453	Compound - Electrical Insulating Coating	BMS5-37 Type I Class A

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door
821	Forward Cargo Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 508
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Prepare for the LRRR Health Check

SUBTASK 34-33-00-860-025

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-010-003

- (2) Open these access doors:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door
821	Forward Cargo Door

G. LRRR Health Check

SUBTASK 34-33-00-720-001

- (1) Do this task for the LRRR antennas and coaxial cables: Coaxial Cable and Antenna System Inspection with a Frequency Domain Reflectometer, TASK 20-10-72-211-801.
- (a) Do not re-install the LRRR RT.

SUBTASK 34-33-00-210-001

- (2) Do an inspection of the connectors on the LRRR RT unit and front of the LRRR RT tray:
- (a) Examine the connectors for bent or broken pins, pushed back sockets, damage and unwanted material.
- (b) If it is necessary, clean or repair the connectors (SWPM 20-60-01, SWPM 20-51-00).
- (c) Install the LRRR RT.
- (d) Make sure that the connectors are correctly aligned and fully engaged.

SUBTASK 34-33-00-210-002

- (3) Do an inspection of the connectors on the coaxial cables and back of the LRRR RT tray:
- (a) Remove the applicable bulkhead liner to get access to the back of the LRRR RT tray (TASK 50-11-01-000-801).
- (b) Disconnect the coaxial cables from the LRRR RT tray.
- (c) Examine the connectors for damage, moisture, and unwanted material.
- (d) If it is necessary, clean or repair the connectors (SWPM 20-60-01, SWPM 20-51-00).
- (e) Connect the coaxial cable to the LRRR RT tray (SWPM 20-51-00).
- (f) Make sure that the connectors are correctly aligned and fully engaged.
- (g) Make sure that there is no excessive tension or compression in the coaxial cables.

SUBTASK 34-33-00-210-003

- (4) Do an inspection of the connectors on the coaxial cables and LRRR antennas:
- (a) Do these steps to get access to the LRRR antennas from the forward cargo compartment:
- 1) Remove the applicable floor panels (TASK 50-10-04-000-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-33-00

Page 509
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 2) Remove the applicable bulkhead liner (TASK 50-11-01-000-801).
 - 3) Remove the main battery, do this task: TASK 24-31-11-000-801-002.
 - 4) Remove the applicable insulation blankets (TASK 25-80-00-000-801).
 - (b) For each LRRRA antenna, do the steps that follow:
 - 1) Remove the compound, A50453, from the LRRRA antenna connector and coaxial cable connector.
 - 2) Disconnect the coaxial cable from the LRRRA antenna.
 - 3) Examine the connectors for damage, moisture, and unwanted material.
 - 4) If it is necessary, clean or repair the coaxial cable connector (SWPM 20-60-01, SWPM 20-51-00).
 - 5) If it is necessary, do one of the steps that follow:
 - a) Clean the LRRRA antenna connector (SWPM 20-60-01).
 - b) Replace the LRRRA antenna, do these tasks:
 - TASK 34-33-11-000-801, and
 - TASK 34-33-11-400-801

NOTE: The compound, A50453, is re-applied after all health check tests are complete.

 - 6) Connect the coaxial cable to the LRRRA antenna (TASK 34-33-11-400-801).
- NOTE: The compound, A50453, is re-applied after all health check tests are complete.

SUBTASK 34-33-00-860-026

- (5) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-00-710-008

- (6) Do the test of the LRRRA antenna (TASK 34-33-11-400-801).

SUBTASK 34-33-00-740-001

- (7) Do the DFCS BITE library test for the LRRRA system on the CDU:
 - (a) Push the INIT REF key on the CDU keypad.
 - (b) Push the Line Select Key (LSK) that is adjacent to each selection that follows:
 - 1) INDEX
 - 2) MAINT
 - 3) DFCS
 - 4) EXTENDED MAINTENANCE
 - 5) BITE LIBRARY TESTS
 - 6) CHANNEL A AND B

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 510
May 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- 7) RUN SELECT LIBRARY TESTS
- 8) 07 LRRRA
- 9) EXECUTE

SUBTASK 34-33-00-720-002

(8) Do a test of the LRRRA system coaxial cables with the CDU:

- (a) Push the INIT REF key on the CDU keypad.
- (b) Push the LSK that is adjacent to each selection that follows:

NOTE: More selections are available with the NEXT PAGE key.

- 1) INDEX
 - 2) MAINT
 - 3) DFCS
 - 4) EXTENDED MAINTENANCE
 - 5) SENSOR VALUES
 - 6) DIGITAL SIGNALS
 - 7) RAD ALT
 - 8) RAD ALT (164)
- (c) For each LRRRA RT, monitor the CDU screen while you do the steps that follow:
- 1) Gently shake the connected coaxial cables to check for a loose or bad connection between the LRRRA RT tray and the LRRRA antennas.
 - 2) Make sure that FAIL is not shown on the CDU for channels A and B.
 - a) If FAIL is shown on the CDU, check the connection of the coaxial cables at the LRRRA RT tray and the LRRRA antennas.
 - <1> If it is necessary, tighten the coaxial cable connectors (SWPM 20-51-00, TASK 34-33-11-400-801).
 - <2> If it is necessary, replace the coaxial cables between the LRRRA RT tray and the LRRRA antenna.

SUBTASK 34-33-00-390-001

(9) For each LRRRA antenna, apply compound, A50453, to the LRRRA antenna connector and coaxial cable connector (TASK 34-33-11-400-801).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-33-00-410-003

- (1) Do these steps to install the items that were removed to get access to the LRRRA system:
- (a) Install the applicable insulation blankets (TASK 25-80-00-400-801).
 - (b) Install the main battery (TASK 24-31-11-400-801-002).
 - (c) Install the applicable bulkhead liners (TASK 50-11-01-400-801).
 - (d) Install the applicable floor panels (TASK 50-10-04-400-801).

SUBTASK 34-33-00-410-004

(2) Close these access doors:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door
821	Forward Cargo Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-33-00

Page 511
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

————— END OF TASK —————

TASK 34-33-00-740-801

5. Low Range Radio Altimeter (LRRR) System - BITE Test

A. General

- (1) The Low Range Radio Altimeter (LRRR) BITE self-test is done at the front panel of the LRRR receiver/transmitter.
- (2) The LRRR system has two receiver/transmitters. The LRRR receiver/transmitters are on the E2 and E3 rack in the electronic equipment (EE) compartment.
- (3) The LRRR receiver/transmitter BITE test does a self check for existing internal and external faults. Results of the BITE test are displayed on the front panel of the LRRR receiver/transmitter
- (4) This test will make sure the that the radio altimeter operates correctly after a suspected 5G interference.
 - (a) There can be 5G interference to the radio altimeter signals because of the frequency spectrum (3.4 GHz - 4.2 GHz, 4.4 GHz - 4.9 GHz), antenna type, and power levels used by the 5G technology. The radio altimeters can become inoperative or can supply erroneous data, which can affect other systems on the airplane that use radio altimeter data.
 - 1) Follow your airline policy for reporting the specific event.
 - 2) For more information refer to 737MAX-FTD-34-21001.

B. BITE Procedure

SUBTASK 34-33-00-740-002

- (1) Do the applicable BITE procedure for the LRRR receiver/transmitter.

SUBTASK 34-33-00-740-003

- (2) Push and release the TEST button on the front panel of the LRRR receiver/transmitter to start the BITE test.
 - (a) Make sure that these indications occur:
 - 1) All the lights come on and then go off.
 - 2) The green light stay on for 30 seconds.
 - (b) Find the fault isolation task for the applicable maintenance messages.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

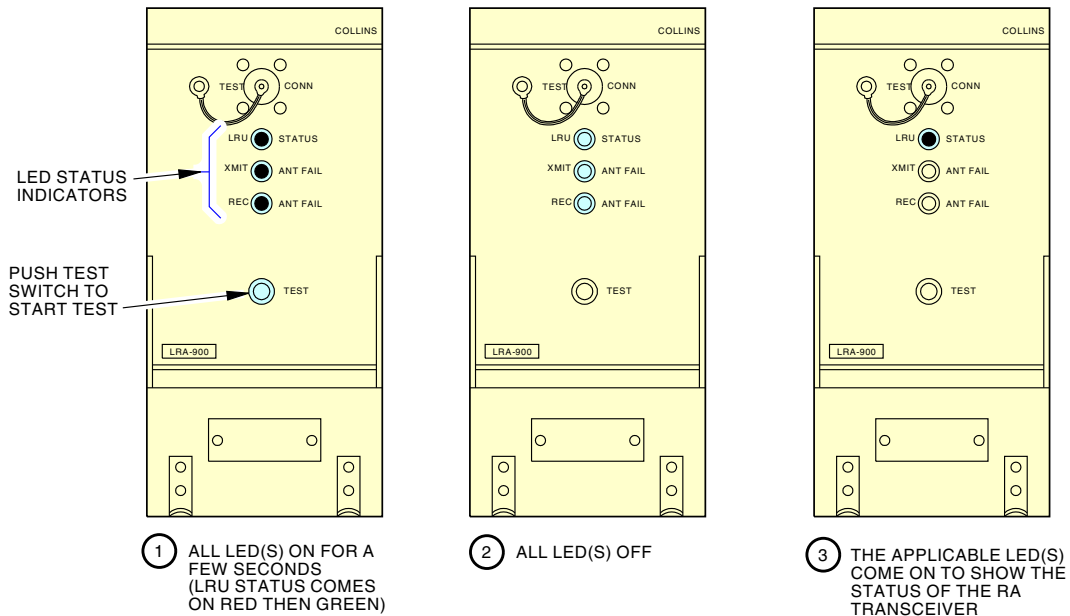
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-00

Page 512
May 15/2022

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



2608345 S0000627063_V1

RA SYSTEM - FRONT PANEL BITE Figure 502/34-33-00-990-804

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-33-00

Page 513
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LOW RANGE RADIO ALTIMETER ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
- (1) Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal
 - (2) Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation
- B. There are four LRRRA antennas installed on the bottom of the airplane. The No. 1 (M1737) and No. 2 (M1738) transmit antennas are the outer antennas. The No. 1 (M1739) and the No. 2 (M1740) receive antennas are the inner antennas.

TASK 34-33-11-000-801

2. Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal

(Figure 401)

A. General

- (1) This task gives the instructions to remove the Low Range Radio Altimeter (LRRRA) antenna.

B. References

Reference	Title
51-22-00-160-801	Prepare For Sealing (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-33-11

Page 401
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Consumable Materials

Reference	Description	Specification
A00230	Compound - Electrical Insulating Coating	BMS5-37
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

E. Location Zones

Zone	Area
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Prepare for the Removal

SUBTASK 34-33-11-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

G. LRRRA Antenna Removal

SUBTASK 34-33-11-000-001

- (1) Do these steps to remove the LRRRA antenna [1]:
- (a) Remove the screws [2] from the antenna [1].



BE CAREFUL WHEN YOU USE THE SEALANT REMOVAL TOOL TO BREAK THE SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRPLANE SKIN, AND OTHER COMPONENTS.

- (b) Use force around the antenna with the sealant removal tool, COM-2481, until the seal is fully broken.
- (c) Lower the antenna [1] until you can get access to the coaxial connector [4].
NOTE: Move the antenna [1] only as far as necessary to disconnect the cable.
- (d) Remove compound, A00230 sealant from the coaxial connector [4] and antenna connector.
- (e) Disconnect the coaxial connector [4] from the antenna [1] and remove the antenna [1].
- 1) Examine the antenna connector for moisture and contamination.
- a) Clean it with a cotton wiper, G00034, if it is necessary.
- (f) Remove the old sealant from the airplane skin (TASK 51-22-00-160-801).

————— END OF TASK —————

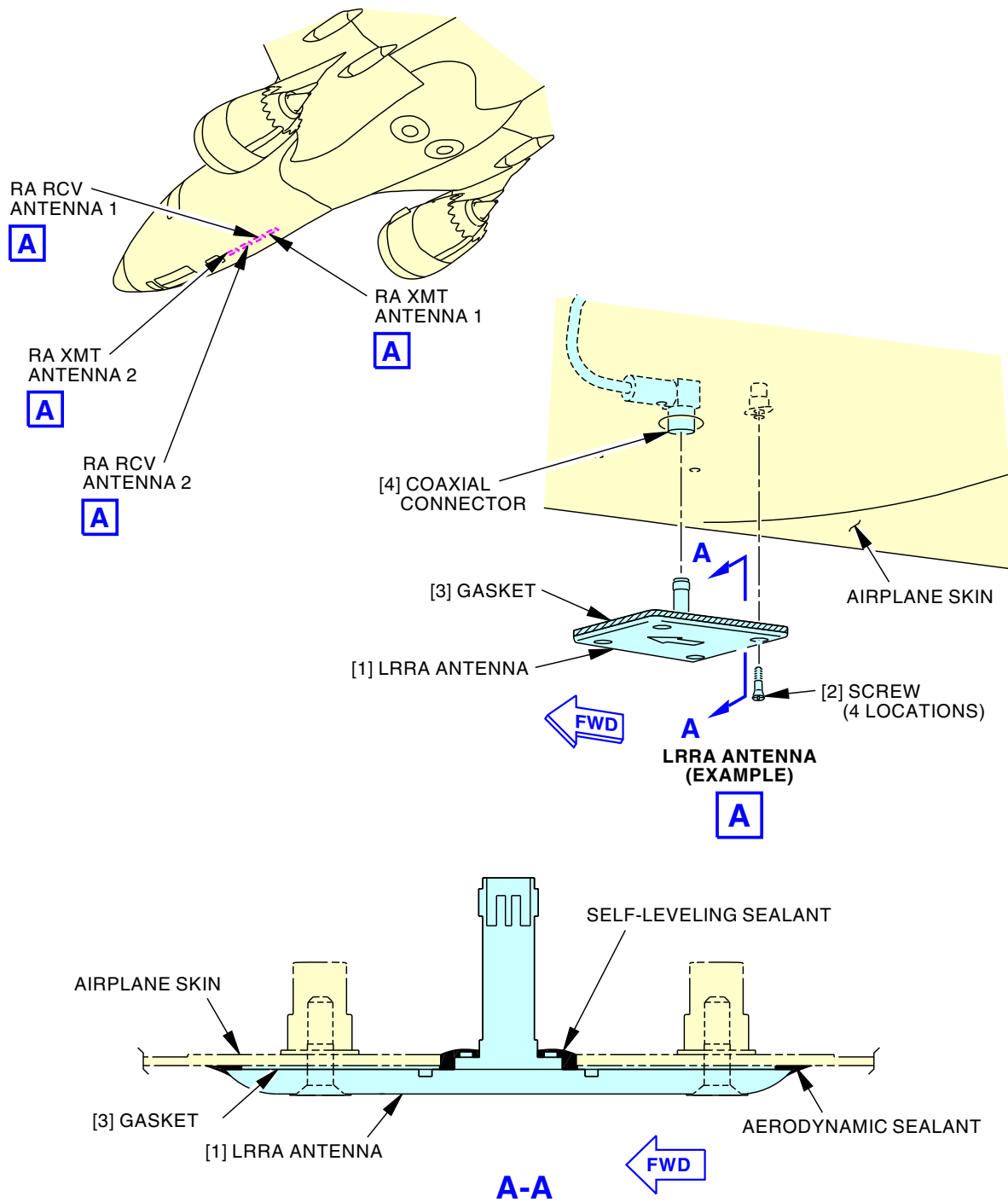
EFFECTIVITY
SIA ALL

34-33-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2022



2414856 S00061536259_V1

Low Range Radio Altimeter (LRRRA) Antenna Installation
Figure 401/34-33-11-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-11

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-33-11-400-801

3. Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation

(Figure 401)

A. General

(1) This task gives the instructions to install the Low Range Radio Altimeter (LRRRA) antenna.

B. References

Reference	Title
24-31-11-000-801-002	Battery Removal (P/B 401)
24-31-11-400-801-002	Battery Installation (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
50-10-04-000-801	Cargo Compartment Floor Panel Removal (P/B 401)
50-10-04-400-801	Cargo Compartment Floor Panel Installation (P/B 401)
50-11-01-000-801	Forward Cargo Compartment Forward Bulkhead Liner Removal (P/B 401)
50-11-01-400-801	Forward Cargo Compartment Forward Bulkhead Liner Installation (P/B 401)
51-21-31-350-801	Removal and Control of Corrosion for Aluminum and Aluminum Alloys (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)
52-31-00-580-801	Open the Cargo Door (P/B 201)
52-31-00-580-802	Close the Cargo Door (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-33-11

Page 404
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A50143	Sealant - SelfLeveling Green (Av-DEC - HT3326-5)	
A50403	Sealant - Self-Leveling, Polyurethane Kit, Red (P/N HT5509-2-XXX)	
A50453	Compound - Electrical Insulating Coating	BMS5-37 Type I Class A
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
B50073	Alcohol - Isopropyl	ASTM D 770
C00915	Compound - Organic Corrosion Inhibiting, Advanced	BMS3-29
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CLA)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Antenna	34-33-11-01-040	SIA ALL

F. Location Zones

Zone	Area
123	Forward Cargo Compartment - Left

EFFECTIVITY
SIA ALL

34-33-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

G. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

H. Prepare for the Installation

SUBTASK 34-33-11-110-001

- (1) Clean the airplane mating surface.



DO NOT GET SOLVENTS IN YOUR MOUTH, YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE DANGEROUS MATERIALS. SOLVENTS CAN BE FLAMMABLE. OBEY THE MATERIAL SAFETY DATA SHEETS (MSDS) FOR SOLVENTS. OBEY LOCAL REGULATIONS FOR THE CORRECT PROCEDURES TO USE OR DISCARD SOLVENTS. SOLVENTS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (a) Clean the airplane mating surface with a cotton wiper, G00034, that is moist with solvent, B00184.
- (b) Use a cotton wiper, G00034, and clean the mating surface again.
- (c) Do these steps until the mating surface is clean and dry.

SUBTASK 34-33-11-300-001

- (2) If the airplane mating surface has corrosion or unwanted material, do these steps to prepare the airplane mating surface.
 - (a) Remove the corrosion or unwanted material from the airplane mating surface (TASK 51-21-31-350-801).
 - (b) Apply a layer of alodine coating to the airplane mating surface (TASK 51-21-41-370-802).

I. LRRA Antenna Installation from Inside the Fuselage

SUBTASK 34-33-11-010-001

- (1) If it is necessary, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-33-11-010-002

- (2) Do these steps to get access to the LRRA antenna [1] from the forward cargo compartment:
 - (a) Open the forward cargo door (TASK 52-31-00-580-801).
 - (b) If it is necessary, remove the applicable floor panel (TASK 50-10-04-000-801).
 - (c) If it is necessary, remove the applicable bulkhead liner (TASK 50-11-01-000-801).
 - (d) If it is necessary, remove the main battery (TASK 24-31-11-000-801-002).
 - (e) If it is necessary, remove the applicable insulation blanket (TASK 25-80-00-000-801).

EFFECTIVITY
SIA ALL

34-33-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-11-160-001

- (3) Do these steps to clean the LRRRA antenna [1], coaxial connector [4], and airplane surface that will be sealed with compound, A50453.



WARNING

ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE PERSONAL PROTECTION EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- (a) Clean the surfaces of the coaxial connector [4], LRRRA antenna [1], and area around the LRRRA antenna [1] cutout with alcohol, B50073.

NOTE: Avoid the use of excessive alcohol.

- 1) Clean approximately 0.25 in. (6.35 mm) beyond the coaxial cable wire connector and antenna cutout.
- (b) Remove all alcohol, B50073, by wiping with a clean dry cotton wiper, G00034.

SUBTASK 34-33-11-400-001

- (4) Do these steps to install the LRRRA antenna [1]:

- (a) Discard the O-ring supplied with the antenna [1].
- (b) Remove the protective film from the side of the new gasket [3] that will be applied to the antenna [1] baseplate.
- (c) Line up the gasket [3] holes to the antenna [1] holes and push the gasket [3] firmly onto the antenna [1] baseplate.
- 1) If it is necessary, use fasteners to help align the gasket [3] with the antenna [1].
- (d) Remove the protective film from side of the gasket [3] that will be applied to the airplane surface.
- (e) Put the antenna [1] in the correct position on the airplane surface.
- (f) Install three of the four screws [2].
- 1) Make sure that you manually tighten the screws [2] to 25 in-lb (2.8 N·m).
- 2) After 15 minutes, manually tighten the screws [2] to 30 in-lb (3.4 N·m).
- (g) Use a plastic scraper (sealant removal tool, COM-2481) to remove all excess gel squeeze out from the antenna.
- 1) Put the scraper perpendicular to the edge of the antenna base, push flush to the airplane skin and pull excess gel squeeze away.



WARNING

ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE PERSONAL PROTECTION EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- 2) Use cotton wiper, G00034, wet with alcohol, B50073, to help with the removal of the gel squeeze out.

SUBTASK 34-33-11-390-001

- (5) Apply the self-leveling sealant, A50403, or the Self-Leveling Green Sealant, A50143, around the base of the LRRRA antenna [1] connector.

- (a) Fill entire cavity, up to and around the LRRRA antenna [1] connector.
- (b) Sealant should be level or convex.

NOTE: The sealant will be tacky within two or three minutes and fixed within ten minutes.

EFFECTIVITY
SIA ALL

34-33-11

D633AM101-SIA

Page 407
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-11-420-010

- (6) Connect the coaxial connector [4] to the antenna [1].
 - (a) Tighten the coaxial connector [4] to 15 in-lb (1.7 N·m) - 17 in-lb (1.9 N·m).

SUBTASK 34-33-11-390-002

- (7) Brush apply compound, A50453, from edge of the wire bundle, include the coaxial connector, the LRRRA antenna connector, and antenna cutout to give a moisture seal.

NOTE: A minimum of two coats of sealant is necessary to achieve a cured thickness of approximately 0.05 in. (1.27 mm) to 0.10 in. (2.54 mm) to make sure coverage is complete, and to build a film that is thick and strong enough to be easily removed. If the coating of sealant is too thin, then the sealant will break during removal, increasing the difficulty of removal. A wet film gauge can be used to estimate the thickness of the coating.

- (a) Brush apply a minimum of two coats of sealant.

NOTE: Bubbles caused by brushing are not a cause for rejection.

- 1) Wait approximately 5 to 10 minutes between sealant applications.
 - (b) Make sure that the sealant provides complete coverage under the gap where the coax connector and antenna connector mate.

SUBTASK 34-33-11-390-003

- (8) Brush apply compound, C00915, to the airplane skin adjacent to the sealed connector.

SUBTASK 34-33-11-700-002

- (9) Do these steps to complete the bonding measurement check:
 - (a) Measure the resistance between the LRRRA antenna [1] baseplate and airplane skin with an intrinsically safe approved bonding meter, COM-1550.
 - (b) Make sure that the resistance is less than 0.001 ohm (1 milliohm).

SUBTASK 34-33-11-420-011

- (10) Install the remaining screw [2].
 - (a) Manually tighten the screw [2] to 30 in-lb (3.4 N·m).

SUBTASK 34-33-11-390-007

- (11) Apply an aerodynamic fillet seal around the base of the LRRRA antenna [1] with sealant, A00247 (TASK 51-22-00-390-809).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

NOTE: If you install gasket TA71000419 or AG723000-02 with the antenna, the aerodynamic fillet seal is not necessary.

- (a) Let sealant, A00247, dry for the correct cure time.

SUBTASK 34-33-11-410-001

- (12) Do these steps to install the items that were removed to get access to the LRRRA antenna [1]:
 - (a) If it is necessary, install the applicable floor panel (TASK 50-10-04-400-801).
 - (b) If it is necessary, install the applicable bulkhead liner (TASK 50-11-01-400-801).
 - (c) If it is necessary, install the main battery (TASK 24-31-11-400-801-002).
 - (d) If it is necessary, install the applicable insulation blanket (TASK 25-80-00-400-801).
 - (e) Close the forward cargo door (TASK 52-31-00-580-802).

EFFECTIVITY
SIA ALL

34-33-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 408
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-11-410-002

- (13) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

J. LRRRA Antenna Installation from Outside the Fuselage

SUBTASK 34-33-11-160-003

- (1) Do these steps to clean the LRRRA antenna [1], coaxial connector [4], and airplane surface that will be sealed with compound, A50453.



WARNING

ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE PERSONAL PROTECTION EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- (a) Clean the surfaces of the coax connector, antenna connector, and area around the antenna cutout with alcohol, B50073.

NOTE: Avoid the use of excessive alcohol.

- 1) Clean approximately 0.25 in. (6.35 mm) beyond the coaxial cable wire connector and antenna cutout.
- (b) Remove all alcohol, B50073, by wiping with a clean dry cotton wiper, G00034.

SUBTASK 34-33-11-400-003

- (2) Do these steps to install the new gasket [3] onto the LRRRA antenna [1]:
- (a) Discard the O-ring supplied with the antenna [1].
 - (b) Remove the protective film from the side of the new gasket [3] that will be applied to the antenna [1] baseplate.
 - (c) Line up the gasket [3] holes to the antenna [1] holes and push gasket firmly onto antenna baseplate.
 - 1) If it is necessary, use fasteners to help align the gasket [3] with the antenna [1].
 - (d) Remove the protective film from side of the gasket [3] that will be applied to the airplane surface.

SUBTASK 34-33-11-390-005

- (3) Apply the self-leveling sealant, A50403, or the Self-Leveling Green Sealant, A50143, around the base of the LRRRA antenna [1] connector.
- (a) Fill entire cavity, up to and around the antenna connector.
 - (b) Sealant should be level or convex.

NOTE: The sealant will be tacky within two to three minutes and fixed within ten minutes.

SUBTASK 34-33-11-420-008

- (4) Connect the coaxial connector [4] to the antenna [1].
- (a) Tighten the coaxial connector [4] to 15 in-lb (1.7 N·m) - 17 in-lb (1.9 N·m).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-11

Page 409
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-33-11-390-006

- (5) Brush apply compound, A50453, from edge of the wire bundle, include the coaxial connector, LRRRA antenna connector and antenna cutout to give a moisture seal.

NOTE: A minimum of two coats of sealant is necessary to achieve a cured thickness of approximately 0.05 in. (1.27 mm) to 0.10 in. (2.54 mm) to make sure coverage is complete, and to build a film that is thick and strong enough to be easily removed. If the coating of sealant is too thin, then the sealant will break during removal, increasing the difficulty of removal. A wet film gauge can be used to estimate the thickness of the coating.

- (a) Brush apply a minimum of two coats of sealant.

NOTE: Bubbles caused by brushing are not a cause for rejection.

- 1) Wait approximately 5 to 10 minutes between sealant applications.
- (b) Make sure that the sealant provides complete coverage under the gap where the coax connector and antenna connector mate.

SUBTASK 34-33-11-420-009

- (6) Install the LRRRA antenna [1].

- (a) Put the antenna [1] in the correct position on the airplane surface.

- (b) Install the four screws [2].

- 1) Make sure that you manually tighten the screws [2] to 25 in-lb (2.8 N·m).
- 2) After 15 minutes, manually tighten the screws [2] to 30 in-lb (3.4 N·m).

- (c) Use a plastic scraper (sealant removal tool, COM-2481) to remove all excess gel squeeze out from the antenna.

- 1) Put the scraper perpendicular to the edge of the antenna base, push flush to the airplane skin and pull excess gel squeeze away.



ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE PERSONAL PROTECTION EQUIPMENT. USE IN A WELL-VENTILATED AREA.

- 2) Use cotton wiper, G00034, wet with alcohol, B50073, to help with the removal of the gel squeeze out.

SUBTASK 34-33-11-760-002

- (7) Do these steps to complete the bonding measurement check.

- (a) Measure the resistance between the LRRRA antenna [1] baseplate and airplane skin with an intrinsically safe approved bonding meter, COM-1550.

- (b) Make sure that the resistance is less than 0.001 ohm (1 milliohm).

SUBTASK 34-33-11-390-008

- (8) Apply an aerodynamic fillet seal around the base of the LRRRA antenna [1] with sealant, A00247 (TASK 51-22-00-390-809).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

NOTE: If you install gasket TA71000419 or AG723000-02 with the antenna, the aerodynamic fillet seal is not necessary.

- (a) Let sealant, A00247, dry for the correct cure time.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-11

Page 410
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

K. LRRA Antenna Installation Test

SUBTASK 34-33-11-410-003

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-11-860-002

- (2) Set the SOURCE switch on the instrument switching module to the AUTO position.

SUBTASK 34-33-11-710-001

- (3) Make sure that the captain's outboard display unit shows -4 ± 2 ft (-1.2 ± 0.6 m).

SUBTASK 34-33-11-710-002

- (4) Make sure that the first officer's outboard display unit shows -4 ± 2 ft (-1.2 ± 0.6 m).

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-11

Page 411
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LOW RANGE RADIO ALTIMETER ANTENNA - INSPECTION/CHECK

1. General

- A. This procedure has a task which inspects the low range radio altimeter.

TASK 34-33-11-211-801

2. Low Range Radio Altimeter (LRRRA) Antenna Inspection

A. **References**

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
34-33-11-000-801	Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal (P/B 401)
34-33-11-400-801	Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation (P/B 401)

B. **Consumable Materials**

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

C. **Location Zones**

Zone	Area
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Low Range Radio Altimeter (LRRRA) Antenna Inspection**

SUBTASK 34-33-11-200-001

- (1) Examine the outer surface of the LRRRA antenna for a circular area 0.25 in. (6.35 mm) or larger, which is not constant and smooth.
- (a) If an area is found, replace the LRRRA antenna.
- 1) Do these tasks:
- Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal, TASK 34-33-11-000-801
 - Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation, TASK 34-33-11-400-801.

SUBTASK 34-33-11-200-002

- (2) If the LRRRA antenna is not replaced in the previous step, examine the LRRRA antenna as follows:

- (a) Do this task: Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Removal, TASK 34-33-11-000-801.

NOTE: The LRRRA antenna connector is inspected and cleaned during the connector removal.

- (b) Remove all unwanted material from around the connector and the backplate.
- (c) Clean the backplate and connector where there is corrosion on the surface.

EFFECTIVITY
SIA ALL

34-33-11

D633AM101-SIA

Page 601
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Use a lint-free cotton wiper, G00034, and solvent (TASK 20-10-34-120-801).
- (d) Do this task: Low Range Radio Altimeter (LRRRA) Antenna with Sealant - Installation, TASK 34-33-11-400-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-11

Page 602
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

LRRA RECEIVER/TRANSMITTER - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
- (1) Low Range Radio Altimeter (LRRA) Receiver-Transmitter (RT) removal
 - (2) Low Range Radio Altimeter (LRRA) Receiver-Transmitter (RT) installation.
- B. The two LRRA RTs are in the main equipment center. The No. 1 LRRA RT, is on the E2 electronics equipment rack, shelf No. 1. The No. 2 LRRA RT is on the E3 electronics equipment rack, shelf No. 1.

TASK 34-33-21-000-801

2. Low Range Radio Altimeter (LRRA) Receiver/Transmitter (R/T) Removal

(Figure 401)

A. **General**

- (1) This task gives the instructions to remove the Low Range Radio Altimeter (LRRA) Receiver-Transmitter (RT).

B. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

C. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Low Range Radio Altimeter (LRRA) Receiver/Transmitter (R/T) Removal**

SUBTASK 34-33-21-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-33-21-010-001

- (2) To get access to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-21

Page 401
Jan 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-33-21-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) To remove the LRRR R/T [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

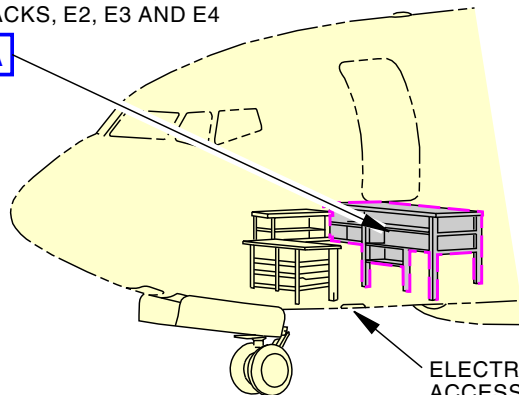
34-33-21

Page 402
Sep 15/2021

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ELECTRONIC EQUIPMENT
RACKS, E2, E3 AND E4

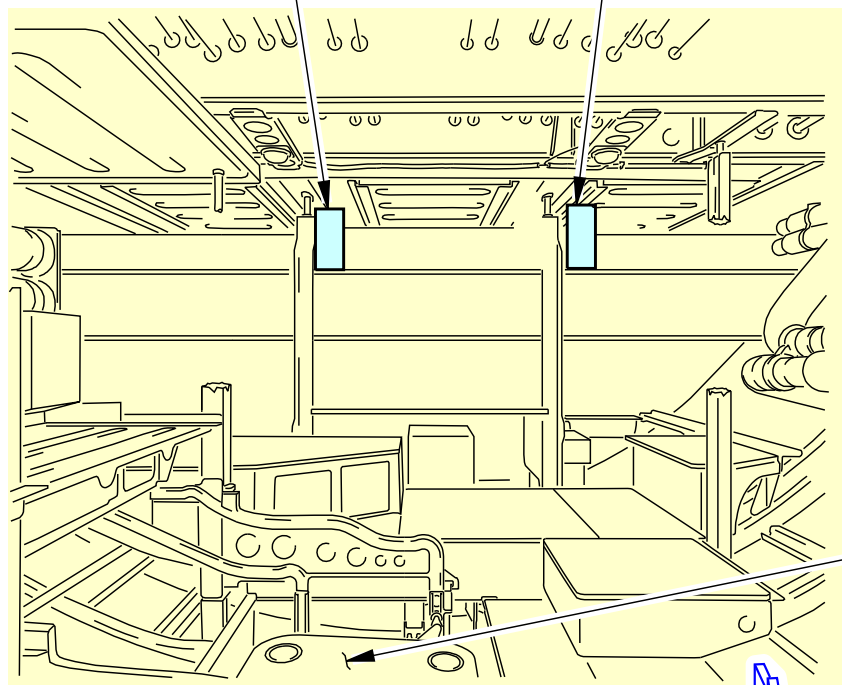
A



ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

[1] LEFT RA RECEIVER/
TRANSMITTER
(E2-1)

[1] RIGHT RA RECEIVER/
TRANSMITTER (E3-1)



ELECTRONIC
EQUIPMENT
ACCESS
DOOR, 117A



ELECTRONIC EQUIPMENT RACKS, E2, E3 AND E4

A

2483307 S0000581048_V1

Low Range Radio Altimeter (LRR) Receiver-Transmitter Installation
Figure 401/34-33-21-990-801

EFFECTIVITY
SIA ALL

34-33-21

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-33-21-400-801

3. Low Range Radio Altimeter (LRRR) Receiver/Transmitter (R/T) Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the Low Range Radio Altimeter (LRRR) Receiver-Transmitter (RT).

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	LRRR R/T	34-33-21-01-015	SIA ALL
		34-33-21-02-015	SIA ALL

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Low Range Radio Altimeter (LRRR) Receiver/Transmitter (R/T) Installation

SUBTASK 34-33-21-420-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (1) To install the LRRR R/T [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-33-21-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-33-21-860-003

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

EFFECTIVITY
SIA ALL

34-33-21

D633AM101-SIA

Page 404
Jan 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

G. Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation Test

SUBTASK 34-33-21-860-005

(1) Set the SOURCE switch on the instrument switching module to the AUTO position.

SUBTASK 34-33-21-710-001

(2) Make sure -4 ± 2 feet radio altitude is displayed on the captain's and the first officer's EFIS displays.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-33-21

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

WEATHER RADAR (WXR) SYSTEM - MAINTENANCE PRACTICES

1. **General**

- A. This procedure has these tasks:
- (1) Weather Radar (WXR) System Deactivation.
 - (2) Weather Radar (WXR) System Activation.
 - (3) Flight History Data Download.

TASK 34-41-00-040-801

2. **Weather Radar (WXR) System Deactivation**

(Figure 201)

A. **General**

- (1) This procedure removes electrical power to the Weather Radar system.

B. **Tools/Equipment**

Reference	Description
STD-858	Tag - DO NOT OPERATE

C. **Location Zones**

Zone	Area
111	Radome
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Procedure**

SUBTASK 34-41-00-410-001



WARNING

DO NOT MOVE THE THRUST LEVER. THE MOVEMENT OF THE THRUST LEVER CAN CAUSE AUTOMATIC OPERATION OF THE PREDICTIVE WINDSHEAR SYSTEM. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT IN THE AREA OF THE NOSE RADOME.

- (1) Attach a DO NOT OPERATE tag, STD-858 to the thrust levers.

SUBTASK 34-41-00-860-001

- (2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

E. **Weather Radar (WXR) System - Tryout**

NOTE: This tryout is to make sure the Weather Radar system is in a zero energy state.

EFFECTIVITY
SIA ALL

34-41-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 201
May 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-41-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-00-860-062

- (2) Do the steps that follow:
- (a) On the Captains and First Officer's EFIS control panels, push the WXR switches to on position.
 - (b) On the WXR control panel, P8, push the LEFT and RIGHT WX buttons.
 - (c) On the WXR control panel, P8, push the AUTO button to the off position.
 - (d) On the WXR control panel, P8, push the TEST button.
 - 1) Make sure that you do not hear the aural warnings.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

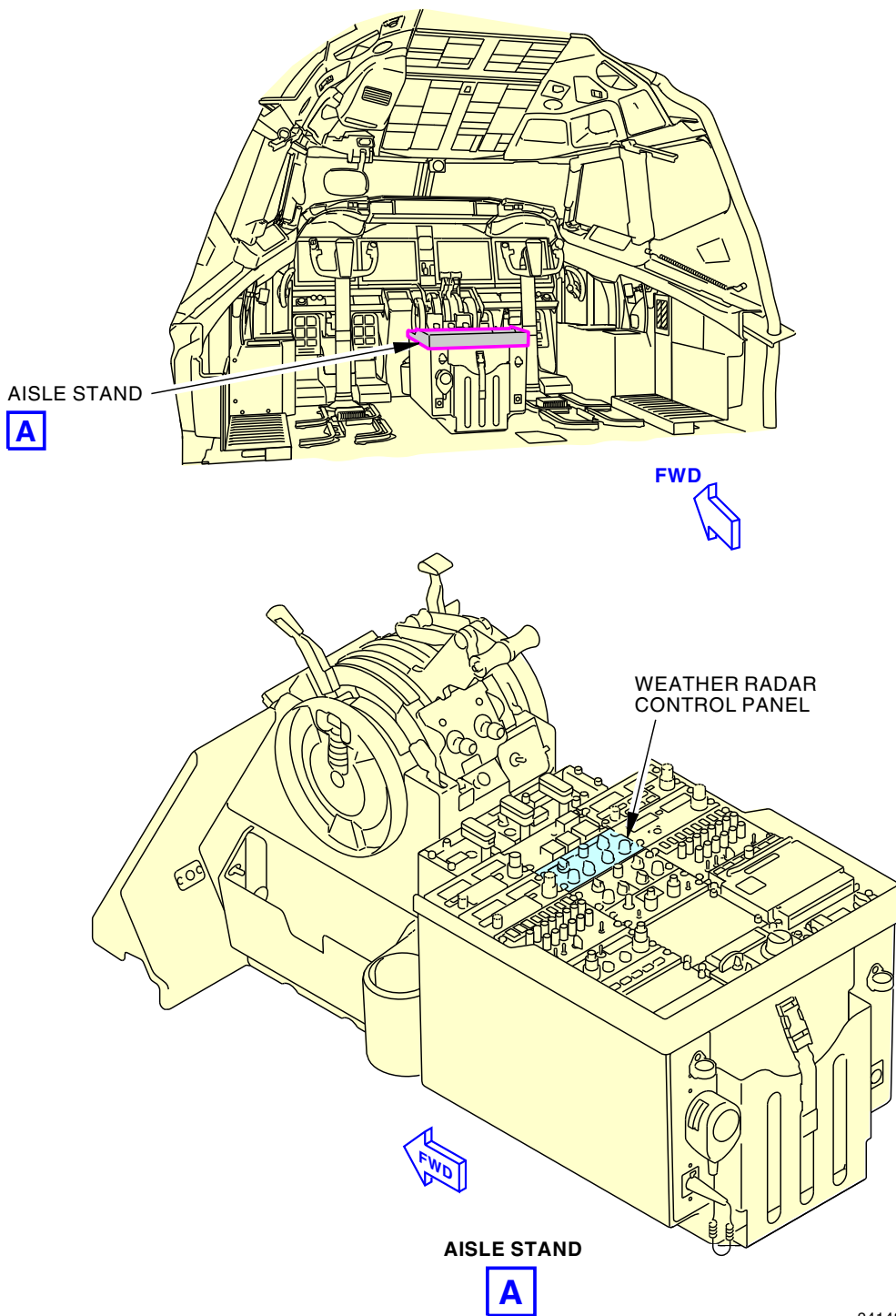
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-00

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414866 S00061536313_V2

WXR Control Panel
Figure 201/34-41-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-00-440-801

3. **Weather Radar (WXR) System - Activation**

(Figure 201)

A. General

- (1) This procedure adds electrical power to the Weather Radar system.

B. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

C. Location Zones

Zone	Area
111	Radome
112	Area Forward of Nose Landing Gear Wheel Well
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-41-00-860-004



DO NOT OPERATE THE WEATHER RADAR WHEN PERSONNEL ARE IN THE AREA USUALLY CONTAINED BY THE AIRCRAFT NOSE RADOME. DO NOT OPERATE THE WEATHER RADAR IN A HANGAR. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.



DO NOT OPERATE THE WEATHER RADAR WITHIN 3.3 FEET (1 METER) OF REFUELING OR DE-FUELING OPERATIONS, A FUEL SPILL OR OPEN FUEL CELLS. OPERATION OF THE WEATHER RADAR WITHIN THE 3.3 FEET (1 METER) LIMIT CAN CAUSE A FIRE OR EXPLOSION. A FIRE OR EXPLOSION CAN CAUSE INJURY OR DEATH TO PERSONNEL AND DAMAGE TO EQUIPMENT.



DO NOT OPEN THE NOSE RADOME IF THE WIND IS MORE THAN 15 KNOTS. IF YOU OPEN THE NOSE RADOME IN A WIND, THE RADOME CAN MOVE QUICKLY. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-00-860-063

- (2) Do the steps that follow:

- (a) On the Captains and First Officer's EFIS control panels, push the WXR switches to on position.

EFFECTIVITY
SIA ALL

34-41-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 204
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) On the WXR control panel, P8, push the LEFT and RIGHT WX buttons.
- (c) On the WXR control panel, P8, push the AUTO button to the off position.
- (d) On the WXR control panel, P8, push the TEST button.
 - 1) Make sure that you hear the aural warnings.

SUBTASK 34-41-00-010-001

- (3) Remove the DO NOT OPERATE tag, STD-858 from the thrust levers.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-00

Page 205
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

WEATHER RADAR (WXR) SYSTEM - ADJUSTMENT/TEST

1. **General**

A. This procedure has these tasks:

- (1) A Weather Radar (WXR) operational test
- (2) A WXR system test.

TASK 34-41-00-710-801

2. **Weather Radar (WXR) Operational Test**

(Figure 501)

A. **General**

- (1) The operational test uses the TEST MODE switch on the WXR Control Panel. In the TEST mode, the self test circuits monitor the performance of the weather radar system.
- (2) During the self test, the weather radar system operates as follows:
 - (a) It makes a test pattern that finds most system failures without test equipment.
 - (b) The WXR receiver/transmitter operates for 1 second.
 - (c) A special test pattern is made on the Display Units (DU).

B. **References**

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Weather Radar (WXR) Operational Test**

SUBTASK 34-41-00-860-006



DO NOT OPERATE THE WEATHER RADAR WITHIN 3.3 FEET (1 METER) OF REFUELING OR DE-FUELING OPERATIONS, A FUEL SPILL OR OPEN FUEL CELLS. OPERATION OF THE WEATHER RADAR WITHIN THE 3.3 FEET (1 METER) LIMIT CAN CAUSE A FIRE OR EXPLOSION. A FIRE OR EXPLOSION CAN CAUSE INJURY OR DEATH TO PERSONNEL AND DAMAGE TO EQUIPMENT.



DO NOT OPERATE THE WEATHER RADAR WHEN PERSONNEL ARE IN THE AREA USUALLY ENCLOSED BY THE AIRCRAFT NOSE RADOME OR IN A HANGAR. THESE CONDITIONS CAN CAUSE INJURY TO PERSONNEL.

- (1) Make sure that the MAX Display System (MDS) is ON.

SUBTASK 34-41-00-710-001

- (2) Make sure that the Air Data Inertial Reference Unit (ADIRU) is aligned to the NAV mode.

EFFECTIVITY
SIA ALL

34-41-00

D633AM101-SIA

Page 501
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) If it is necessary, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.
- (b) Make sure that the ATT flags on the Captains and First Officers Primary Flight Display (PFD) are not in view.

SUBTASK 34-41-00-710-002

- (3) Make sure that the Captain's and First Officer's EFIS displays are ON.

SUBTASK 34-41-00-860-061

- (4) Do these steps on the Captain's and First Officer's WXR Control Panels (CP's):
 - (a) Set the left and right modes to WX.
 - (b) Put the two TILT controls to 0 degrees.
 - (c) Select the two GAIN control switches to the 12 o'clock position.
 - (d) Put AUTO to the OFF position.

SUBTASK 34-41-00-710-004

- (5) Put the Captain's and the First Officer's EFIS control panel RANGE to 40.

NOTE: It is necessary that you see weather returns when you do this test. It is possible that weather conditions make it necessary to decrease the WXR CP panel "RANGE" position to a value that is less than 40.

SUBTASK 34-41-00-710-005

- (6) Put the Captain's EFIS control panel mode selector switch to MAP.

NOTE: Radar performance is not satisfactory when rain falls on the antenna. If the antenna is wet from rain, wipe the front surface of the antenna to dry it and then close the radome.

SUBTASK 34-41-00-710-006

- (7) Put the display source switch, on the P5-28 overhead panel, to AUTO .

SUBTASK 34-41-00-710-007

- (8) Push the Captain's and First Officer's EFIS Control Panel WXR switch to ON.

SUBTASK 34-41-00-860-060

- (9) Set the WXR-CP system select button L/R to right (in).

NOTE: If testing the left system, set the L/R button to left (out).

SUBTASK 34-41-00-710-008

- (10) On the WXR CP, put the system select switch to the TEST position.

NOTE: Anytime the predictive windshear (PWS) automatic activation criteria are active or the airplane is in the air, no flight deck effects of the PWS will show when you do the WXR test. If the WXR is in the test mode and an actual PWS alert occurs, the WXR Radar Processor switches to the WXR mode and shows a WXR return and PWS icon data on the map display with the WXR mode annunciation. As a result, no valid PWS icons will show with the WXR TEST pattern. If the mode switch on the WXR control panel is still in the TEST position, the WXR will go back to the test pattern on the map display when the PWS alert stops.



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-00-710-009

- (11) Make sure that you hear all the sounds and that you see all the indications that show in the table that follows.

NOTE: A caution alert is first. This is followed by the warning alert that is followed by the failure annunciations. The last you see is the normal WXR TEST pattern.

WXR Test Indications

Visual and Aural Test Timing Presentation	(Approximately) 0-3 Seconds	(Approximately) 6-9 Seconds	(Approximately) 9-12 Seconds
Amber Windshear (ND)	ON	OFF	OFF
Red Windshear (ND and PFD)	OFF	OFF	ON
PWS FAIL (ND)	OFF	ON	OFF
Aural	MONITOR RADAR DISPLAY	NONE	GO AROUND WINDSHEAR AHEAD, WINDSHEAR AHEAD WINDSHEAR AHEAD
Display		TEST PATTERN WITH PWS ICON	TEST PATTERN WITH PWS ICON

- (12) If it is necessary, repeat the test to make sure that all visual indications are displayed and aural indications are present.

SUBTASK 34-41-00-710-010

- (13) Make sure that the WXR FAIL annunciation does not show on the Captain's DU and the First Officer's DU.

SUBTASK 34-41-00-710-014

- (14) Repeat the test for the opposite system (left or right).

———— **END OF TASK** ————

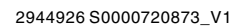
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-00

Page 503
Sep 15/2021





737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-00-730-801

3. Weather Radar (WXR) System Test

A. General

- (1) The system test gives a complete test of the Weather Radar (WXR) system. For best results during radar scanning, the airplane should point towards hills, mountains, or structures of various heights in the distance.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the System Test

SUBTASK 34-41-00-580-001



DO NOT OPERATE THE WEATHER RADAR WHEN PERSONNEL ARE IN THE AREA USUALLY ENCLOSED BY THE AIRCRAFT NOSE RADOME OR IN A HANGAR. THESE CONDITIONS CAN CAUSE INJURY TO PERSONNEL.

- (1) Point the airplane away from all large metal objects and to an open area.

NOTE: If possible, the antenna scan should include hills or mountains at different heights in the distance.

SUBTASK 34-41-00-710-012

- (2) Do this task: Weather Radar (WXR) Operational Test, TASK 34-41-00-710-801.

D. Weather Radar (WXR) System Test

SUBTASK 34-41-00-710-013

- (1) Make sure that the WXR FAIL annunciation does not show on the captain's DU and first officer's DU.

SUBTASK 34-41-00-730-001

- (2) Set the captain's EFIS and first officer's EFIS control panel mode select knob to the MAP position.

SUBTASK 34-41-00-860-008

- (3) Put the display source, on the P5-28 overhead panel, to the ALL ON 1 position.

SUBTASK 34-41-00-860-009

- (4) Make sure that the captain's and first officer's EFIS control panel WXR switch is in the ON position.

SUBTASK 34-41-00-860-042

- (5) Set the WXR-CP system select button L/R to left (out).

NOTE: If testing the right system, set the L/R button to right (in).

SUBTASK 34-41-00-860-010

- (6) Push the TEST switch on the WXR-CP.

SUBTASK 34-41-00-730-002

- (7) Make sure that you hear all the sounds and that you see all the indications for the weather radar test (Table 501).

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-41-00

Page 505
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 501/34-41-00-993-801 WXR Test Indications

Visual and Aural Test Timing Presentation	(Approximately) 0-3 Seconds	(Approximately) 6-9 Seconds	(Approximately) 9-12 Seconds
Amber Windshear (ND)	ON	OFF	OFF
Red Windshear (ND and PFD)	OFF	OFF	ON
PWS FAIL (ND)	OFF	ON	OFF
Aural	MONITOR RADAR DISPLAY	NONE	GO AROUND WINDSHEAR AHEAD, WINDSHEAR AHEAD WINDSHEAR AHEAD
Display		TEST PATTERN WITH PWS ICON	TEST PATTERN WITH PWS ICON

SUBTASK 34-41-00-730-003

- (8) Make sure that the WXR FAIL annunciation does not show on the captain's DU and first officer's DU.

SUBTASK 34-41-00-860-011

- (9) Put the display source, on the P5-28 overhead panel, to the ALL ON 2 position.

SUBTASK 34-41-00-860-012

- (10) Push the TEST switch on the WXR-CP.

SUBTASK 34-41-00-860-066

- (11) Make sure that you hear all the sounds and that you see all the indications for the weather radar test (Table 501).

SUBTASK 34-41-00-860-043

- (12) Put the display source, on the P5-28 overhead panel, to the AUTO position.

SUBTASK 34-41-00-860-044

- (13) Push the TEST switch on the WXR-CP.

SUBTASK 34-41-00-730-004

- (14) Make sure that the two INBD DUs show WXR and TEST on the left side of the display.

SUBTASK 34-41-00-730-005

- (15) Make sure that the two INBD DUs show TEST in the weather radar mode field.

SUBTASK 34-41-00-730-006

- (16) Make sure that "0" shows in the weather radar tilt field followed by a "M".

SUBTASK 34-41-00-860-013

- (17) Select AUTO on the WXR-CP.

SUBTASK 34-41-00-730-007

- (18) Make sure that "0" shows in the weather radar tilt field followed by a "A".

SUBTASK 34-41-00-860-014

- (19) Deselect AUTO on the WXR-CP.

SUBTASK 34-41-00-860-015

- (20) Turn the inner INBD DU BRT control knob, on the P1 captain's instrument panel.

SUBTASK 34-41-00-730-008

- (21) Make sure that there is a change in intensity of the test pattern on the captain's INBD DU.

EFFECTIVITY
SIA ALL

34-41-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-00-860-016

- (22) Turn the inner INBD DU BRT control knob, on the P3 first officer's instrument panel.

SUBTASK 34-41-00-730-009

- (23) Make sure that there is a change in intensity of the test pattern on the first officer's INBD DU.

SUBTASK 34-41-00-860-017

- (24) Set the TEST switch on the WXR-CP to the OFF (out) position.

NOTE: It is possible that the WXR return "drifts" or moves when the airplane is on the ground. This occurs because the MAX Display System (MDS) shows the WXR returns based on the "valid" True Airspeed from ADIRU.

SUBTASK 34-41-00-730-010

- (25) Make sure that the test pattern is no longer displayed.

SUBTASK 34-41-00-730-049

- (26) Make sure that WXR and TEST are no longer displayed on both ND's.

SUBTASK 34-41-00-860-048

- (27) Set the left and right GAIN control knobs to fully counter-clockwise position.

SUBTASK 34-41-00-730-038

- (28) Make sure that VAR is displayed on both ND's.

SUBTASK 34-41-00-860-049

- (29) Set the left GAIN control knob to the 12 o'clock position.

SUBTASK 34-41-00-730-039

- (30) Make sure that VAR is displayed on the right ND.

SUBTASK 34-41-00-860-050

- (31) Turn the left and right GAIN control knobs to 12 o'clock position.

SUBTASK 34-41-00-860-051

- (32) Select the left and right WX modes on the WXR-CP.

SUBTASK 34-41-00-860-052

- (33) Rotate the LFT TILT control slowly to UP 15 then to DN 15 and then to 0.

SUBTASK 34-41-00-730-040

- (34) Make sure that the displayed weather and/or ground returns change on the captain's ND.

SUBTASK 34-41-00-860-053

- (35) Rotate the RGT TILT control slowly to UP 15 then to DN 15 and then to 0.

SUBTASK 34-41-00-730-041

- (36) Make sure that the displayed weather and/or ground returns change on the first officer's ND.

SUBTASK 34-41-00-860-054

- (37) Rotate the RGT TILT control to +15 degrees.

SUBTASK 34-41-00-860-055

- (38) Set the left TFR mode on the WXR-CP.

SUBTASK 34-41-00-730-042

- (39) Make sure that both ND's display the same returns.

SUBTASK 34-41-00-860-056

- (40) Set the left WX mode on the WXR-CP.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-00

Page 507
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-00-730-043

- (41) Make sure that the displayed weather and/or ground returns change on the captain's ND.

SUBTASK 34-41-00-860-057

- (42) Set the right TFR mode on the WXR-CP.

SUBTASK 34-41-00-730-044

- (43) Make sure that both ND's display the same returns.

SUBTASK 34-41-00-860-058

- (44) Set the right WX mode on the WXR-CP.

SUBTASK 34-41-00-730-045

- (45) Make sure that the displayed weather and/or ground returns change on the first officer's ND.

SUBTASK 34-41-00-860-059

- (46) Set the left and right modes on the WXR-CP to WX.

SUBTASK 34-41-00-860-021

- (47) Set the range selector knob to 80, 160, 320, 5, 10, 20, and 40, on the captain's EFIS control panel.

NOTE: A test for the 640 range is not required.

SUBTASK 34-41-00-730-013

- (48) Make sure that for each range selection the captain's INBD DU shows the track line, range marker, and weather and/or ground returns.

SUBTASK 34-41-00-860-022

- (49) Set the range selector knob to 80, 160, 320, 5, 10, 20, and 40, on the first officer's EFIS control panel.

NOTE: A test for the 640 range is not required.

SUBTASK 34-41-00-730-014

- (50) Make sure that for each range selection the first officer's INBD DU shows the track line, range marker, and weather and/or ground returns.

SUBTASK 34-41-00-710-016

- (51) Repeat the test for the opposite system (left or right).

SUBTASK 34-41-00-860-023

- (52) Set the Left (L) and Right (R) ADIRU to the OFF position on the Inertial Reference System (IRS) Mode Select Unit (MSU).

SUBTASK 34-41-00-730-015

- (53) Make sure that the two inboard DUs show WXR and ATT on the left side of the display.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-41-00-860-024

- (1) Push the WXR button, on the captain's EFIS control panel.

SUBTASK 34-41-00-730-016

- (2) Make sure that the WXR annunciator is out on the captain's EFIS Display.

SUBTASK 34-41-00-860-025

- (3) Push the WXR button, on the first officer's EFIS control panel.

EFFECTIVITY
SIA ALL

34-41-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 508
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-00-730-017

- (4) Make sure that the WXR annunciator is out on the first officer's EFIS Display.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-00

Page 509
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

WEATHER RADAR ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Weather Radar Antenna Flat Plate Removal
 - (2) Weather Radar Antenna Flat Plate Installation
 - (3) Weather Radar Antenna Drive Unit Removal
 - (4) Weather Radar Antenna Drive Unit Installation.
- B. The weather radar antenna is located in the radome.

TASK 34-41-11-000-803

2. Weather Radar Antenna Flat Plate Removal

(Figure 401)

A. **References**

Reference	Title
53-52-00-010-801	Nose Radome Open (P/B 201)

B. **Location Zones**

Zone	Area
111	Radome

C. **Prepare for the Removal**

SUBTASK 34-41-11-010-002



DO NOT OPEN THE NOSE RADOME IF THE WIND IS MORE THAN 15 KNOTS. IF YOU OPEN THE NOSE RADOME IN A WIND, THE RADOME CAN MOVE QUICKLY. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.



DO NOT LET THE WORKSTANDS OR EQUIPMENT HIT OR TOUCH THE WEATHER RADAR ANTENNA. THIS CAN CAUSE DAMAGE TO THE WEATHER RADAR ANTENNA.

- (1) Open the nose radome (TASK 53-52-00-010-801).

NOTE: Keep the radome closed when it is raining. Wipe water completely from the flat plate before you close the radome.

D. **Weather Radar Antenna Flat Plate Removal**

SUBTASK 34-41-11-860-003

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-11

Page 401
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-41-11-020-010

- (2) Remove the lockwire from the clamp jaw bolts [6] on the antenna drive unit [5].

SUBTASK 34-41-11-020-011

- (3) Loosen the two clamp jaw bolts [6] alternately until the jaw clamps [7] clears the waveguide flange.

SUBTASK 34-41-11-020-012



WARNING

USE TWO PERSONS AND A SAFELY INSTALLED WORKSTAND. THIS WILL PREVENT INJURY TO YOU AND DAMAGE TO THE WXR ANTENNA.

- (4) Remove the antenna flat plate [1].

———— **END OF TASK** ————

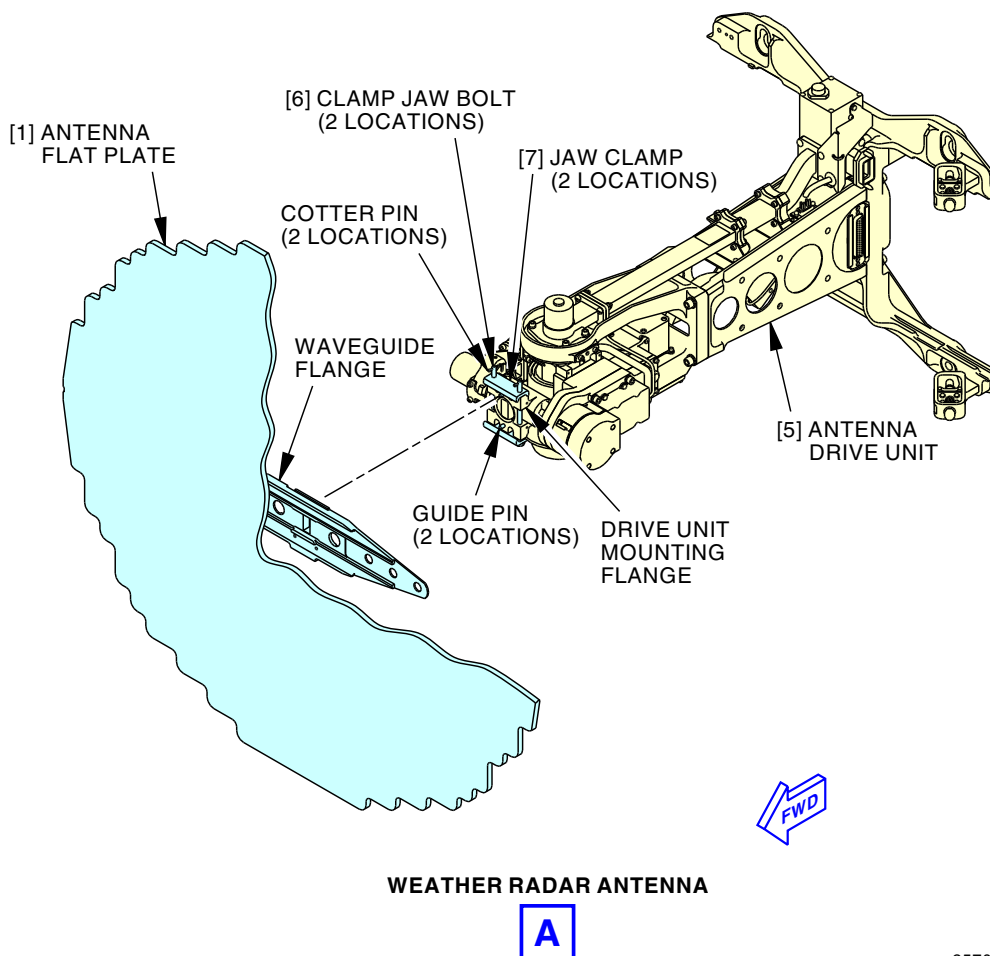
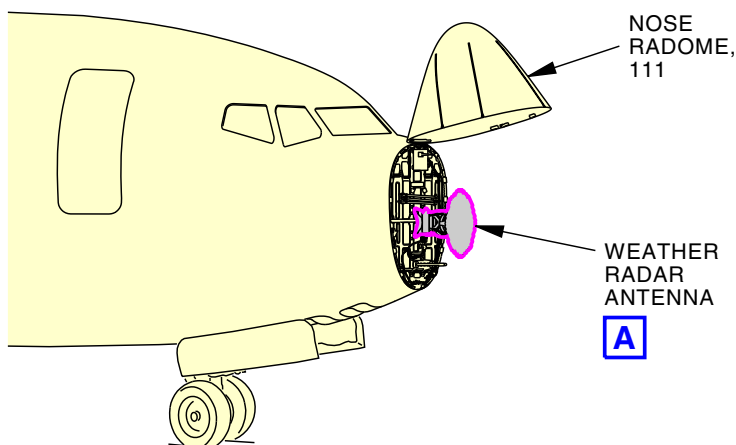
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-11

Page 402
Sep 15/2023



2570764 S0000616666_V1

Weather Radar Antenna Flat Plate Installation
Figure 401/34-41-11-990-803

EFFECTIVITY
SIA ALL

34-41-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-11-400-803

3. Weather Radar Antenna Flat Plate Installation

(Figure 401)

A. References

Reference	Title
20-10-44-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
34-41-00-710-801	Weather Radar (WXR) Operational Test (P/B 501)
53-52-00-410-801	Nose Radome Close (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Antenna flat plate	34-41-11-03-025	SIA ALL

C. Location Zones

Zone	Area
111	Radome

D. Weather Radar Antenna Flat Plate Installation

SUBTASK 34-41-11-860-004

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-11-820-001

- (2) Turn the clamp jaw bolts [6] on the antenna drive unit [5] counterclockwise.

SUBTASK 34-41-11-820-002



USE TWO PERSONS AND A SAFELY INSTALLED WORKSTAND. THIS WILL PREVENT INJURY TO YOU AND DAMAGE TO THE WXR ANTENNA.

- (3) Align the antenna flat plate [1] with the antenna drive unit [5].
- (a) Make sure that the guide pins on the antenna drive unit [5] goes in the holes on the waveguide flange.

SUBTASK 34-41-11-420-005

- (4) Turn the two clamp jaw bolts [6] until the jaw clamps [7] holds the waveguide flange.

NOTE: Alternate between the clamp jaw bolts [6] while you tighten the jaw clamps [7].

SUBTASK 34-41-11-420-006

- (5) Tighten the clamp jaw bolts [6] to 20 ±3 in-lb (2.3 ±0.4 N·m).

SUBTASK 34-41-11-420-007

- (6) Install the lockwire on the two clamp jaw bolts [6] (TASK 20-10-44-400-801).

EFFECTIVITY
SIA ALL

34-41-11

D633AM101-SIA

Page 404
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-11-410-003



CAUTION

DO NOT LET THE WORKSTANDS OR EQUIPMENT HIT OR TOUCH THE WEATHER RADAR ANTENNA. THIS CAN CAUSE DAMAGE TO THE WEATHER RADAR ANTENNA.

- (7) Close the nose radome (TASK 53-52-00-410-801).

SUBTASK 34-41-11-860-005

- (8) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

E. Weather Radar Antenna Flat Plate Installation Test

SUBTASK 34-41-11-710-001

- (1) Do this task: Weather Radar (WXR) Operational Test, TASK 34-41-00-710-801.

————— **END OF TASK** —————

TASK 34-41-11-000-804

4. Weather Radar Antenna Drive Unit Removal

(Figure 402)

A. References

<u>Reference</u>	<u>Title</u>
34-41-41-000-804	Weather Radar Receiver/Transmitter Removal (P/B 401)
53-52-00-010-801	Nose Radome Open (P/B 201)

B. Location Zones

<u>Zone</u>	<u>Area</u>
111	Radome

C. Prepare for the Removal

SUBTASK 34-41-11-010-003



WARNING

DO NOT OPEN THE NOSE RADOME IF THE WIND IS MORE THAN 15 KNOTS. IF YOU OPEN THE NOSE RADOME IN A WIND, THE RADOME CAN MOVE QUICKLY. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.



CAUTION

DO NOT LET THE WORKSTANDS OR EQUIPMENT HIT OR TOUCH THE WEATHER RADAR ANTENNA. THIS CAN CAUSE DAMAGE TO THE WEATHER RADAR ANTENNA.

- (1) Open the nose radome (TASK 53-52-00-010-801).

NOTE: Keep the radome closed when it is raining. Wipe water completely from the flat plate before you close the radome.

EFFECTIVITY
SIA ALL

34-41-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-11-000-001

- (2) Remove left and right weather radar receiver/transmitters from antenna drive unit (TASK 34-41-41-000-804).

D. Weather Radar Antenna Drive Unit Removal

SUBTASK 34-41-11-860-006

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-11-020-013

- (2) Remove the two bolts [21] and washers [26] on the bottom of the antenna drive unit [5].

SUBTASK 34-41-11-020-014

- (3) Loosen the two bolts [21] on the top of the antenna drive unit [5].

SUBTASK 34-41-11-020-015



USE TWO PERSONS AND A SAFELY INSTALLED WORKSTAND. THIS WILL PREVENT INJURY TO YOU AND DAMAGE TO THE WXR ANTENNA.

- (4) Lift the antenna drive unit [5] up and move forward from the two bolts [21] and washers [26].

————— END OF TASK —————

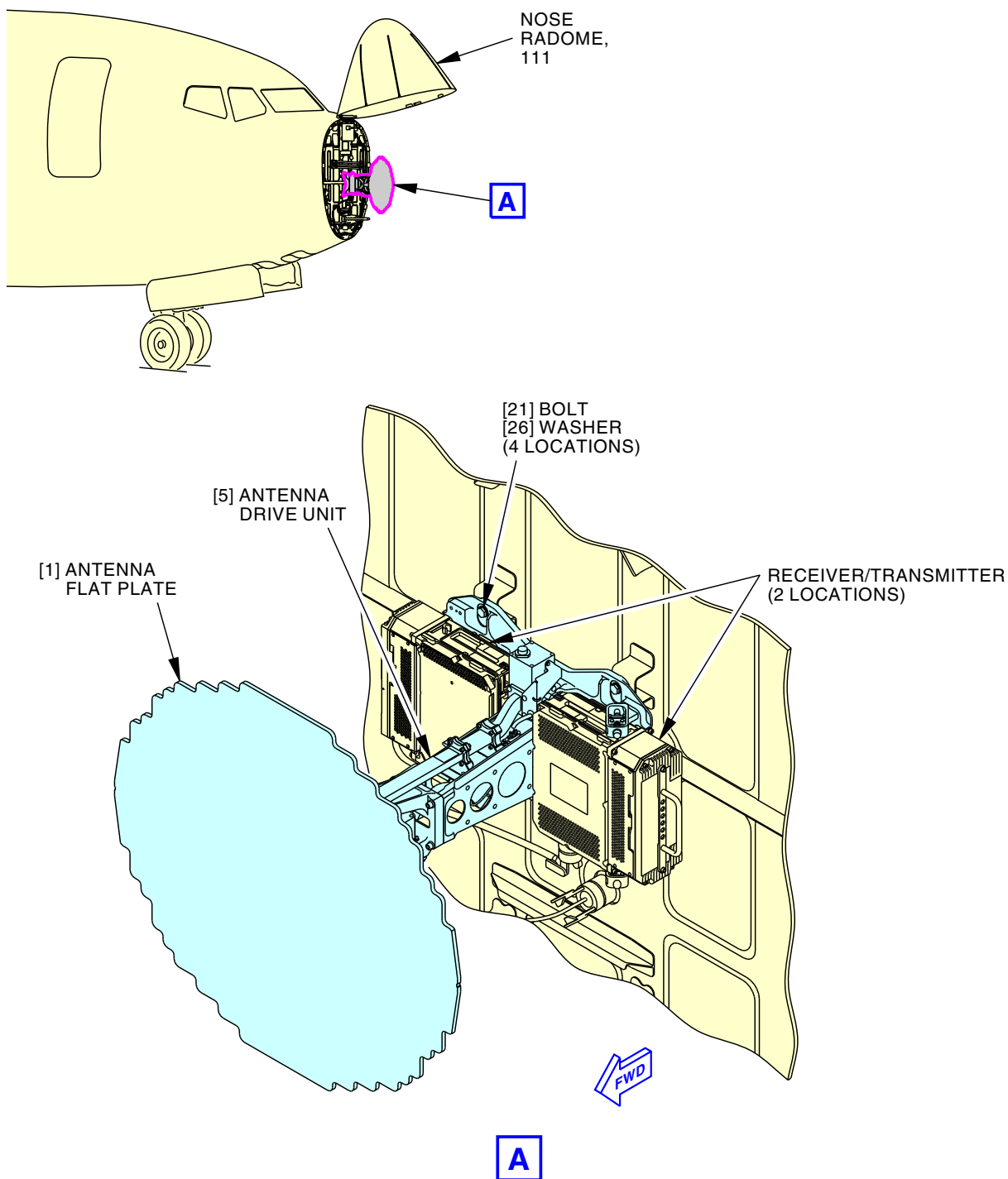
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-11

Page 406
Sep 15/2023



2577480 S0000619705_V1

Weather Radar Antenna Drive Unit Installation
Figure 402/34-41-11-990-804

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-11

Page 407
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-11-400-804

5. Weather Radar Antenna Drive Unit Installation

(Figure 402)

A. General

- (1) An auto alignment process will take place and will require up to 30 minutes to complete depending on the flight profile. The display may show excessive ground returns prior to the auto alignment completion.
 - (a) Recommended flight profile for auto-alignment:
 - 1) Achieve cruise altitude at minimum 17000 feet above prevailing terrain in radar field of view.
 - 2) System in Auto mode.
NOTE: Switching to manual mode will interrupt WXR auto-alignment.
 - 3) Un-accelerated straight level flight, no maneuvering.
 - 4) Not over mountainous terrain or large variations of terrain
NOTE: The automatic alignment feature will work in mountainous terrain; however, it may take longer to complete.
 - 5) Not in visible weather, no significant weather within the radar field of view between 80 nmi (148 km) and 140 nmi (259 km).
 - 6) Not over water.
NOTE: Flying over water could give weak returns.

B. References

Reference	Title
34-41-00-710-801	Weather Radar (WXR) Operational Test (P/B 501)
34-41-41-400-804	Weather Radar Receiver/Transmitter Installation (P/B 401)
53-52-00-410-801	Nose Radome Close (P/B 201)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Consumable Materials

Reference	Description	Specification
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C50315	Coating - Chemical Conversion - Bonderite M-CR 600 Aero (Formerly Alodine 600)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Antenna drive unit	34-41-11-03-020	SIA ALL

E. Location Zones

Zone	Area
111	Radome

EFFECTIVITY
SIA ALL

34-41-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 408
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Weather Radar Antenna Drive Unit Installation

SUBTASK 34-41-11-860-008

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-11-100-001

- (2) Clean the faying surfaces on the aluminum brackets and the aluminum antenna drive unit [5] (SWPM 20-20-00, Paragraph 2, Cleaning of Faying Surfaces).

SUBTASK 34-41-11-390-001

- (3) Apply one coat of primer, C00259 to the abraded surfaces on the antenna drive unit [5] and brackets.

SUBTASK 34-41-11-390-002

- (4) Manually apply coating, C00064 or Bonderite M-CR 600 Aero coating, C50315 to the abraded surfaces on the antenna drive unit [5] and brackets.

SUBTASK 34-41-11-420-008

- (5) Install the antenna drive unit [5] on the two bolts [21] and washers [26].

SUBTASK 34-41-11-420-009

- (6) Install the two bolts [21] and washers [26] on the bottom of the antenna drive unit [5].

SUBTASK 34-41-11-820-003

- (7) Make sure that the antenna drive unit [5] is aligned to:
- (a) Mounted in ± 0.25 degree of 1 degree in the pitch axis.
 - (b) Mounted in ± 0.25 degree of 1 degree in the roll axis.
 - (c) Mounted in ± 1 degree in the azimuth axis.

SUBTASK 34-41-11-400-001

- (8) Install left and right weather radar receiver/transmitters onto the antenna drive unit [5] (TASK 34-41-41-400-804).

SUBTASK 34-41-11-410-004



DO NOT LET THE WORKSTANDS OR EQUIPMENT HIT OR TOUCH THE WEATHER RADAR ANTENNA. THIS CAN CAUSE DAMAGE TO THE WEATHER RADAR ANTENNA.

- (9) Close the nose radome (TASK 53-52-00-410-801).

SUBTASK 34-41-11-860-007

- (10) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

EFFECTIVITY
SIA ALL

34-41-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 409
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

G. Weather Radar Antenna Drive Unit Installation Test

SUBTASK 34-41-11-710-002

(1) Do this task: Weather Radar (WXR) Operational Test, TASK 34-41-00-710-801.

————— END OF TASK —————



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

WEATHER RADAR RECEIVER/TRANSMITTER - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Weather Radar Receiver/Transmitter Removal
 - (2) Weather Radar Receiver/Transmitter Installation.
- B. The weather radar receiver/transmitter is in the nose radome.

TASK 34-41-41-000-804

2. Weather Radar Receiver/Transmitter Removal

(Figure 401)

A. **References**

Reference	Title
53-52-00-010-801	Nose Radome Open (P/B 201)

B. **Location Zones**

Zone	Area
111	Radome

C. **Prepare for the Removal**

SUBTASK 34-41-41-010-006



DO NOT OPEN THE NOSE RADOME IF THE WIND IS MORE THAN 15 KNOTS. IF YOU OPEN THE NOSE RADOME IN A WIND, THE RADOME CAN MOVE QUICKLY. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.



DO NOT LET THE WORKSTANDS OR EQUIPMENT HIT OR TOUCH THE WEATHER RADAR ANTENNA. THIS CAN CAUSE DAMAGE TO THE WEATHER RADAR ANTENNA.

- (1) Open the nose radome, do this task: Nose Radome Open, TASK 53-52-00-010-801.

NOTE: Keep the radome closed when it is raining. Wipe water completely from the flat plate before you close the radome.

D. **Weather Radar Receiver/Transmitter Removal**

SUBTASK 34-41-41-020-011



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (1) Remove the electrical connector [3].

SUBTASK 34-41-41-020-012



SLOWLY LOOSEN THE CLAMPS UNTIL THEY TOUCH THE MECHANICAL STOPS. IF YOU LOOSEN THEM FARTHER, DAMAGE TO THE CLAMPS CAN OCCUR.

- (2) Turn the bolt heads on the module clamps [5] counterclockwise until it stops.

EFFECTIVITY
SIA ALL

34-41-41

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the module clamps [5] are fully backed out.

SUBTASK 34-41-41-020-010

- (3) Pull the receiver/transmitter [1] until its bosses align with the notches on the groove of the antenna drive unit [2].

SUBTASK 34-41-41-020-009

- (4) Remove the receiver/transmitter [1] from the antenna drive unit [2].

SUBTASK 34-41-41-480-002

- (5) Put protective covers on the electrical connector [3] and waveguide flange.

———— **END OF TASK** ————

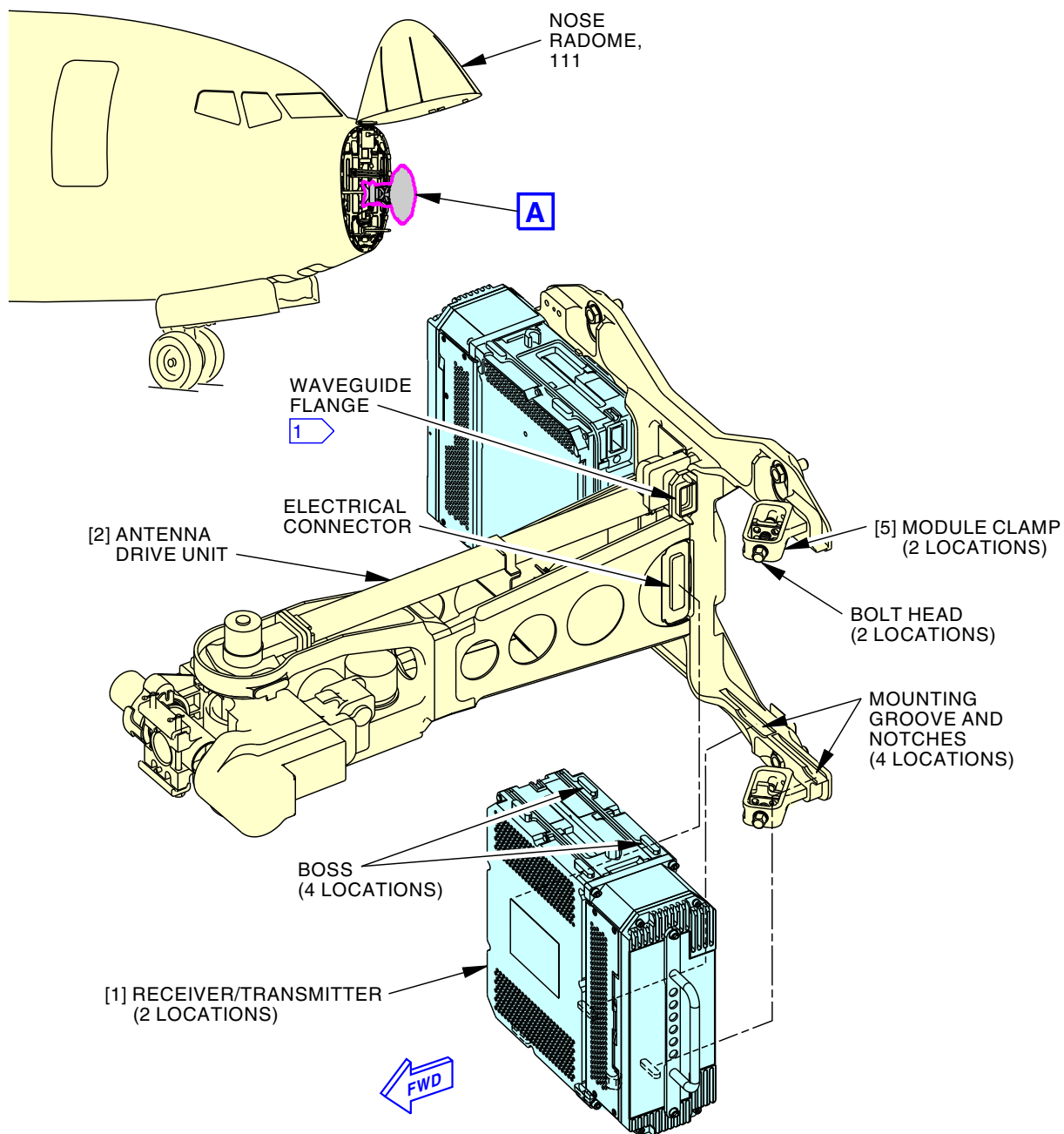
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-41

Page 402
Sep 15/2021



NOTE:

- 1 THE WAVEGUIDE FLANGE ON THE ANTENNA DRIVE UNIT MATES WITH THE WAVEGUIDE FLANGE ON THE RECEIVER/TRANSMITTER.

A

2577490 S0000619402_V1

Weather Radar Receiver/Transmitter Installation
Figure 401/34-41-41-990-805

EFFECTIVITY
SIA ALL

34-41-41

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-41-400-804

3. Weather Radar Receiver/Transmitter Installation

(Figure 401)

A. References

Reference	Title
34-41-00-710-801	Weather Radar (WXR) Operational Test (P/B 501)
53-52-00-410-801	Nose Radome Close (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Receiver/transmitter	34-41-41-03-020	SIA ALL

C. Location Zones

Zone	Area
111	Radome

D. Prepare for the Installation

SUBTASK 34-41-41-020-013

- (1) Turn the bolt head on each module clamp [5] counterclockwise until it stops.
 - (a) Make sure that the module clamps [5] are fully backed out.

SUBTASK 34-41-41-010-007

- (2) Remove the protective covers from the electrical connectors and waveguides.

E. Weather Radar Receiver/Transmitter Installation

SUBTASK 34-41-41-420-008

- (1) Put the bosses on the receiver/transmitter [1] into the notches until it aligns with the mounting groove on the antenna drive unit [2].

SUBTASK 34-41-41-820-002

- (2) Push the receiver/transmitter [1] into the antenna drive unit [2] until its fully engaged.
 - (a) Make sure that the electrical connector and the waveguide flange on the receiver/transmitter [1] engage with the antenna drive unit [2].

SUBTASK 34-41-41-420-009

- (3) Lightly tighten the bolt head on each module clamp [5] clockwise.

SUBTASK 34-41-41-420-010

- (4) Tighten the bolt head on each module clamp [5] to 20 ±3 in-lb (2.3 ±0.4 N·m).

SUBTASK 34-41-41-420-011

- (5) Connect the electrical connector [3] to the receiver/transmitter [1].

SUBTASK 34-41-41-410-003



DO NOT LET THE WORKSTANDS OR EQUIPMENT HIT OR TOUCH THE WEATHER RADAR ANTENNA. THIS CAN CAUSE DAMAGE TO THE WEATHER RADAR ANTENNA.

- (6) Close the nose radome, do this task: Nose Radome Close, TASK 53-52-00-410-801.

EFFECTIVITY
SIA ALL

34-41-41

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

F. Weather Radar Receiver/Transmitter Installation Test

SUBTASK 34-41-41-710-004

(1) Do this task: Weather Radar (WXR) Operational Test, TASK 34-41-00-710-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-41

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

WEATHER RADAR PROCESSOR - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the weather radar processor.
 - (2) An installation of the weather radar processor.
- B. The weather radar processor is in the Electronic Equipment bay.

TASK 34-41-42-000-801

2. Weather Radar Processor Removal

Figure 401

A. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
212	Flight Compartment - Right

C. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

D. **Removal Procedure**

SUBTASK 34-41-42-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-42-010-001

- (2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-41-42-020-001



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) To remove the Weather Radar Processor [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-42

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-41-42-020-002

- (4) Put protective covers on the electrical connectors.

———— **END OF TASK** ————

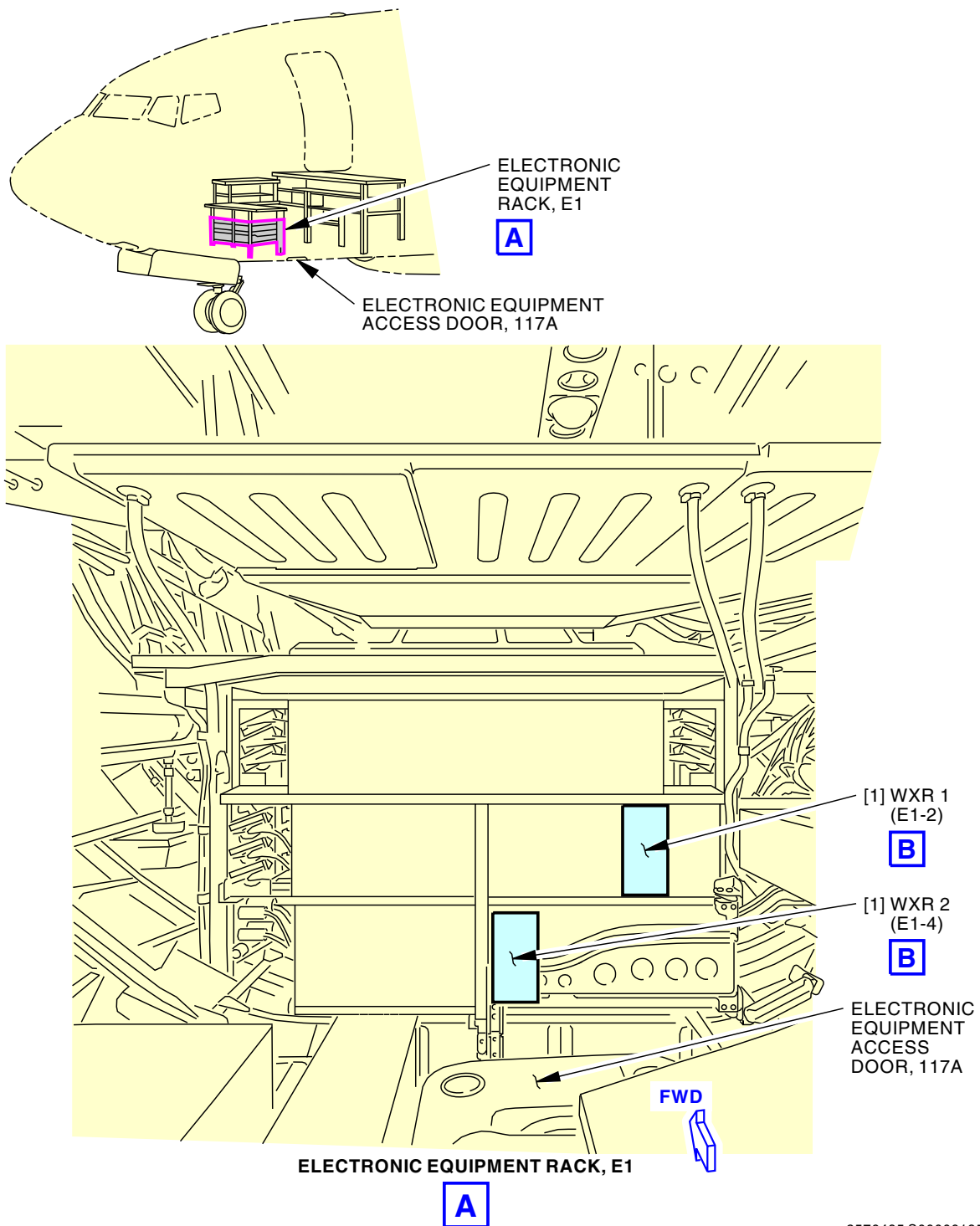
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-42

Page 402
Sep 15/2021



2576495 S0000619590_V2

Weather Radar Processor Installation
Figure 401/34-41-42-990-801 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

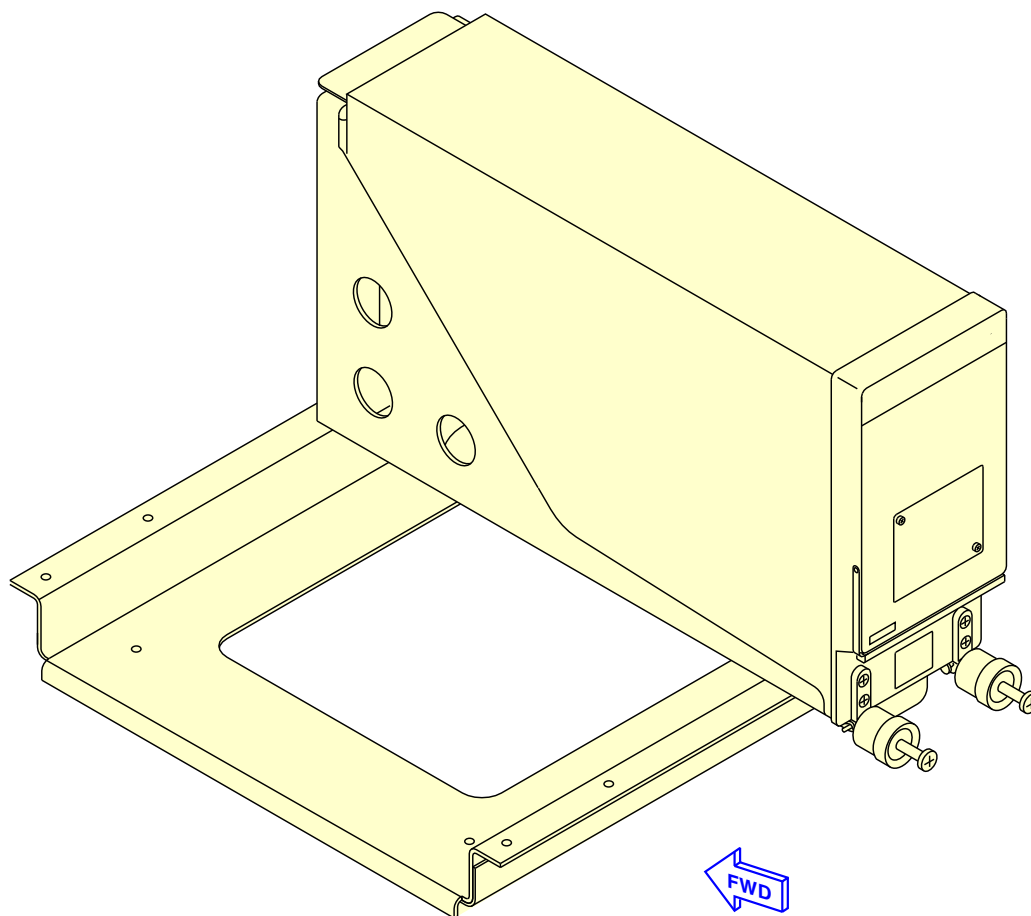
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-42

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



WXR RADAR

B

2914780 S0000699987_V1

Weather Radar Processor Installation
Figure 401/34-41-42-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-42

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-42-400-801

3. Weather Radar Processor Installation

Figure 401

A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-41-00-710-801	Weather Radar (WXR) Operational Test (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Weather Radar Processor	34-41-42-01-110	SIA ALL

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Installation Procedure

SUBTASK 34-41-42-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-42-420-001

- (2) Remove the protective covers from the electrical connectors.

SUBTASK 34-41-42-420-002

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) To install the Weather Radar Processor [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.
- (4) Make sure that the Weather Radar Processor [1] is fully mated by using a reference point or inspection of rear connector gap.

NOTE: The WXR processor may require additional force to fully mate the connector.

EFFECTIVITY
SIA ALL

34-41-42

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Installation Test

SUBTASK 34-41-42-860-003

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-42-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-41-42-470-001

- (3) Wait 5 minutes for the WXR processor to complete a data load with the WXR receiver/transmitter.

SUBTASK 34-41-42-710-001

- (4) Do this task: Weather Radar (WXR) Operational Test, TASK 34-41-00-710-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-42

Page 406
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

WEATHER RADAR CONTROL PANEL - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the weather radar control panel.
- (2) An installation of the weather radar control panel.

B. The weather radar control panel is located in the flight compartment on the aft electronics panel, P8.

TASK 34-41-53-000-801

2. Weather Radar Control Panel Removal

(Figure 401)

A. **References**

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Removal Procedure**

SUBTASK 34-41-53-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-53-910-001



CAUTION

DO NOT TOUCH THE UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

- (2) Before you touch the weather radar control panel [1], do the procedure for devices that are sensitive to electrostatic discharge (TASK 20-40-12-000-802).

SUBTASK 34-41-53-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE WEATHER-RADAR CONTROL PANEL. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE WEATHER-RADAR CONTROL PANEL.

- (3) Do these steps to remove the weather radar control panel [1]:
 - (a) Loosen the four fasteners [2].

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-53

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Carefully lift the weather radar control panel [1] from the aft electronics panel, P8, to get access to the electrical connector [3].
- (c) Disconnect the electrical connector [3].
- (d) Put a protective cover on the electrical connector [3].

———— **END OF TASK** ————

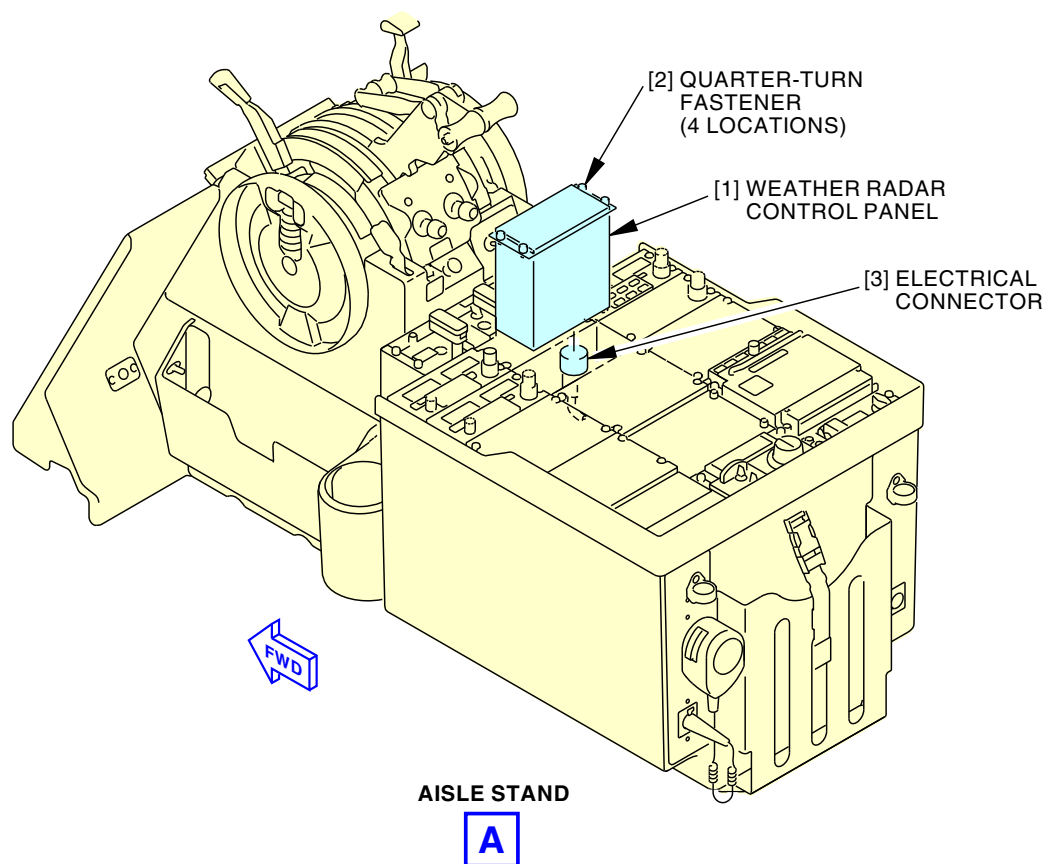
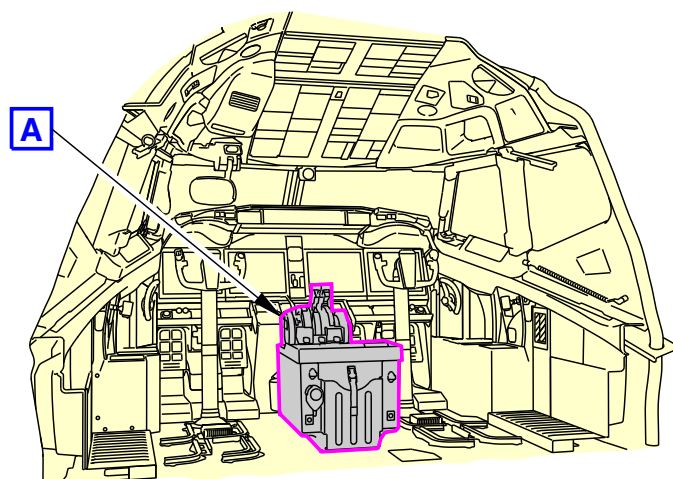
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-53

Page 402
Sep 15/2021



2414877 S00061536359_V1

Weather Radar Control Panel Installation
Figure 401/34-41-53-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-53

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-41-53-400-801

3. **Weather Radar Control Panel Installation**

(Figure 401)

A. **References**

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

B. **Expendables/Parts**

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Weather radar control panel	31-11-91-01E-355 34-41-53-01-010	SIA ALL SIA ALL

C. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Installation Procedure**

SUBTASK 34-41-53-910-002



DO NOT TOUCH THE UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE UNIT.

- (1) Before you touch the weather radar control panel [1], do the procedure for devices that are sensitive to electrostatic discharge (TASK 20-40-12-400-802).

SUBTASK 34-41-53-860-002

- (2) Make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-41-53-420-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE WEATHER-RADAR CONTROL PANEL. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE WEATHER-RADAR CONTROL PANEL.

- (3) Do these steps to install the weather radar control panel [1]:

EFFECTIVITY
SIA ALL

34-41-53

D633AM101-SIA

Page 404
Sep 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- (a) Remove the protective cover from the electrical connector [3].
- (b) Examine the electrical connector for bent or broken pins, dirt, and damage.
- (c) Connect the electrical connector [3].
- (d) Put the weather radar control weather radar control panel [1] in its position on the aft electronics control panel, P8.
- (e) Tighten the four fasteners [2].

SUBTASK 34-41-53-860-003

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

E. Installation Test

SUBTASK 34-41-53-860-012

- (1) Set the left and right TILT control knobs on the weather radar control panel to 0 degrees.

SUBTASK 34-41-53-860-013

- (2) Set the AUTO switch to off (out).

SUBTASK 34-41-53-860-015

- (3) Set the left and right GAIN control knobs to the 12 o'clock position.

SUBTASK 34-41-53-860-006

- (4) Set the RANGE on the Captain's and First Officer's EFIS control panel to 40.

SUBTASK 34-41-53-860-007

- (5) Make sure that the Captain's and First Officer's EFIS displays are on.

SUBTASK 34-41-53-860-008

- (6) Make sure that the air data inertial reference system is aligned. To align it, do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-41-53-860-009



DO NOT OPERATE THE WEATHER RADAR WHEN PERSONNEL ARE IN THE AREA USUALLY CONTAINED BY THE AIRCRAFT NOSE RADOME. DO NOT OPERATE THE WEATHER RADAR IN A HANGAR. IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES TO PERSONNEL CAN OCCUR.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-41-53

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(WARNING PRECEDES)



DO NOT OPERATE THE WEATHER RADAR WITHIN 3.3 FEET (1 METER) OF REFUELING OR DE-FUELING OPERATIONS, A FUEL SPILL OR OPEN FUEL CELLS. OPERATION OF THE WEATHER RADAR WITHIN THE 3.3 FEET (1 METER) LIMIT CAN CAUSE A FIRE OR EXPLOSION. A FIRE OR EXPLOSION CAN CAUSE INJURY OR DEATH TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (7) Push the WXR switch on the Captain's and First Officer's EFIS control panel to turn on the weather radar system.

SUBTASK 34-41-53-700-002

- (8) Turn the left TILT control slowly up 15, then down 15 and then 0 on the weather radar control panel.
- (a) Make sure that the tilt position that shows in the Captain's weather radar tilt field on the display unit agrees with the tilt position on the weather radar control panel.

SUBTASK 34-41-53-730-001

- (9) Set the L/R switch on the WXR control panel to the Left (out) [Right (in)] position:
- NOTE: The "L/R" switch on the Control Panel switches between the Left and Right Transceivers.

SUBTASK 34-41-53-730-002

- (10) Set the AUTO switch on the WXR control panel to off (out).
- (a) Verify "0" is shown on Weather Radar tilt field followed by the letter "M".

SUBTASK 34-41-53-730-003

- (11) Set the AUTO switch to on (in).
- (a) Verify a tilt angle is shown on Weather Radar tilt field followed by the letter "A". The tilt angle can be any number between -15 and +15.

SUBTASK 34-41-53-730-004

- (12) Set the AUTO switch to off (out).

SUBTASK 34-41-53-730-005

- (13) Turn the right tilt control slowly up 15, then down 15, then 0 on the weather radar control panel.
- (a) Make sure that the tilt position that shows in the First Officer's weather radar tilt field on the display unit agrees with the tilt position on the weather radar control panel.

SUBTASK 34-41-53-860-010

- (14) Select TEST on the WXR radar control panel.

SUBTASK 34-41-53-210-001

- (15) Make sure that a green, yellow, red, magenta test pattern shows on the Captain's (First Officer's) display unit.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-41-53

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) - MAINTENANCE PRACTICES

1. **General**

A. This procedure has these tasks:

- (1) Traffic Alert and Collision Avoidance System Deactivation (TCAS).
- (2) Traffic Alert and Collision Avoidance System Activation (TCAS).

TASK 34-45-00-040-801

2. **Traffic Alert and Collision Avoidance System - Deactivation**

(Figure 201)

A. General

- (1) This procedure removes electrical power to the TCAS system.

B. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-45-00-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01195	TCAS

D. Traffic Alert and Collision Avoidance System - Tryout

NOTE: This tryout is to make sure the TCAS system is in a zero energy state.

SUBTASK 34-45-00-860-002

- (1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01195	TCAS

SUBTASK 34-45-00-740-004

- (2) On the ATC control panel, push and release the test switch.
 - (a) Make sure that you hear no sound from the flight compartment speakers.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

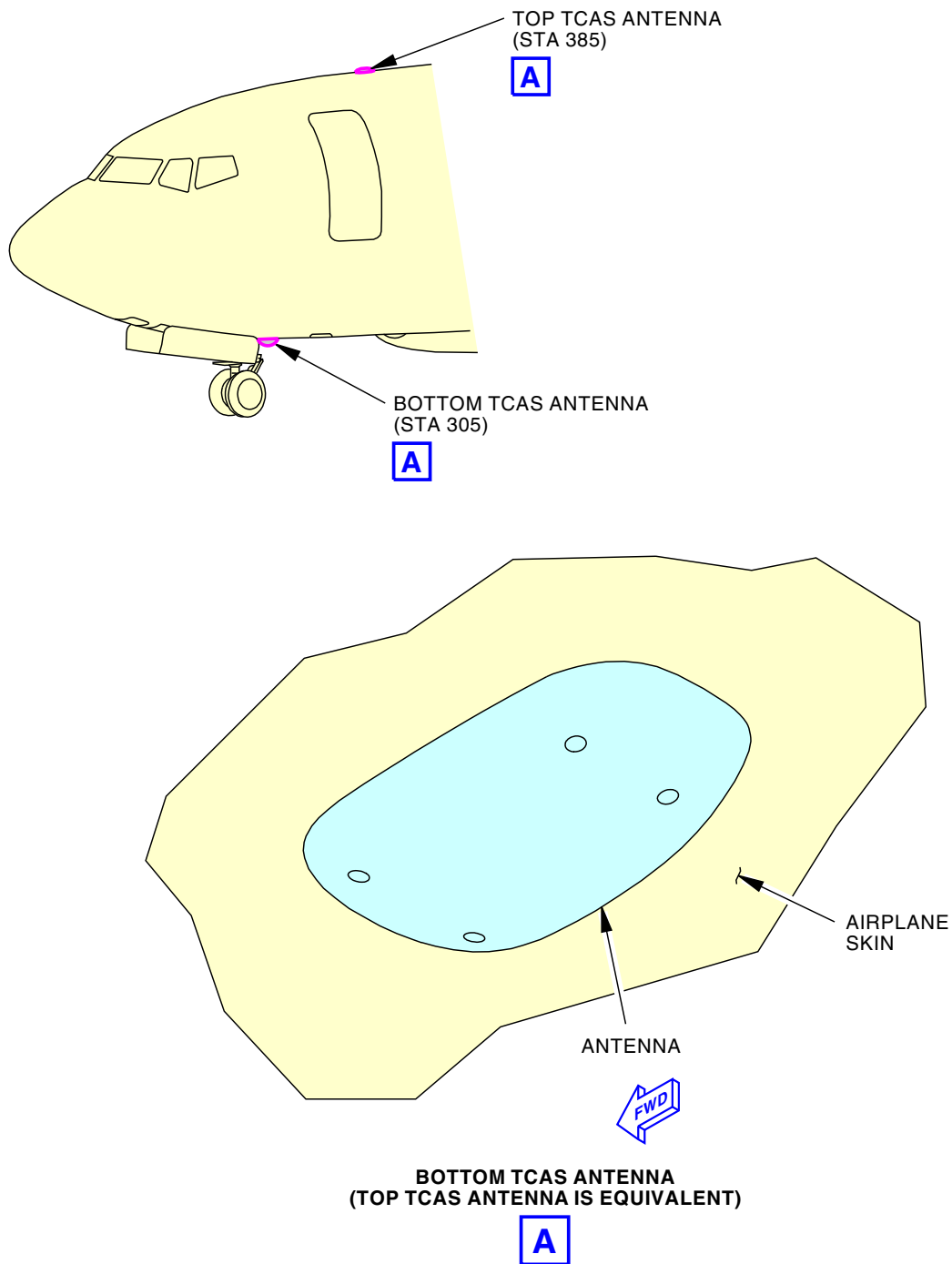
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414878 S00061536366_V1

TCAS Antenna
Figure 201/34-45-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-45-00-440-801

3. Traffic Alert and Collision Avoidance System - Activation
(Figure 201)

A. General

- (1) This procedure adds electrical power to the TCAS system.

B. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-45-00-860-003



WARNING

KEEP ALL PERSONNEL AT A SAFE DISTANCE FROM THE ANTENNA. RF ENERGY CAN CAUSE INJURIES TO PERSONNEL.

- (1) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01195	TCAS

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) TCAS Operational Test
- (2) TCAS System Test (With the IFR TCAS-201 Test Set)
- (3) TCAS System Test (With the TIC TR-220 Test Set)
- (4) TCAS System Test (With the TIC T-49 Test Set)
- (5) TCAS System Test (With the IFR-6000 Test Set).

TASK 34-45-00-710-801

2. TCAS - Operational Test

A. General

- (1) This test makes sure that the TCAS operates correctly. It uses only the system's Built In Test Equipment (BITE) functions. Special test or ground equipment is not necessary.

B. References

Reference	Title
23-51-00-710-801	Flight Interphone System Operational Test (P/B 501)
31-65-00-710-801	MAX Display System - Operational Test (P/B 501)
34-21-00-710-801	Air Data Inertial Reference System - Operational Test (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
34-33-00-710-801	Low Range Radio Altimeter (LRRA) System - Operational Test (P/B 501)
34-53-00-710-801	ATC System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Operational Test

SUBTASK 34-45-00-860-005

- (1) Make sure that these systems are serviceable:
 - (a) Air Data System (TASK 34-21-00-710-801)
 - (b) Air Traffic Control System (TASK 34-53-00-710-801)
 - (c) MAX Display System (TASK 31-65-00-710-801)
 - (d) Flight Interphone System (TASK 23-51-00-710-801)
 - (e) Low Range Radio Altimeter System (TASK 34-33-00-710-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 501
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-45-00-860-006

- (2) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-45-00-860-007

- (3) Wait until the align light on the MSU goes off.

SUBTASK 34-45-00-860-008

- (4) Put the display mode switch on the EFIS control panel to the MAP position.

SUBTASK 34-45-00-860-009

- (5) Set the range knob on the EFIS control panel to 10.

SUBTASK 34-45-00-860-010

- (6) Set the Mode Select switch on the ATC control panel to TA/RA.

SUBTASK 34-45-00-860-011

- (7) Push the TFC switch on the EFIS control panel.
 - (a) Make sure that the inboard display shows TFC.

SUBTASK 34-45-00-860-012

- (8) Set the Transponder Select switch on the ATC control panel to the 1 position.
 - (a) Make sure that the FAIL lamp on the ATC control panel is off.

NOTE: If the ATC is not receiving the GPS signal, the FAIL lamp will be on.

SUBTASK 34-45-00-860-054

- (9) Set the Mode Reply switch on the ATC control panel to STBY.
 - (a) Make sure that the inboard displays show the TCAS OFF indication.
 - (b) Set the Mode Reply switch on the ATC control panel to the ON position.

SUBTASK 34-45-00-860-014

- (10) Set the Mode Select switch on the ATC control panel to TA or TA ONLY.
 - (a) Make sure that the inboard displays show the TA ONLY indication.

SUBTASK 34-45-00-860-015

- (11) Set the Mode Select switch on the ATC control panel to TA/RA.
 - (a) Make sure that TA ONLY continues to show on the inboard displays.

SUBTASK 34-45-00-860-055



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (12) Make sure that the ATC transponders are in standby mode.
 - (a) Set the Mode Reply switch on the ATC control panel to STBY.

E. Procedure

SUBTASK 34-45-00-740-002

- (1) Do the operational test as follows:
 - (a) Press and release the TEST button on the ATC control panel.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 502
May 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- (b) Make sure that these results occur:
- 1) The inboard displays show a test pattern as described below:
 - a) TCAS TEST shows on the left side of the inboard displays.
 - b) The word TRAFFIC shows on the right side of the inboard displays.
 - c) An R/A (red square) shows at 3 o'clock and flying level (no arrow).
 - d) A Traffic Advisory (yellow circle) shows at 9 o'clock and climbing (up arrow).
 - e) Proximity Traffic (solid white diamond) shows at 1 o'clock and descending (down arrow).
 - f) Non-Threat Traffic (open white diamond) shows at 11 o'clock and flying level (no arrow).
 - 2) Make sure that the outboard displays show the DO NOT CLIMB and DO NOT DESCEND resolution advisory.
 - 3) A TCAS SYSTEM TEST OK synthesized voice announcement comes on at the end of the test if the test passes.

SUBTASK 34-45-00-740-003

- (2) Do the operational test again with the Transponder Select switch on the ATC control panel set to the 2 position.

SUBTASK 34-45-00-840-001



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (3) Make sure that the ATC transponders are in standby mode.
- (a) Set the Mode Reply switch on the ATC control panel to STBY.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-45-00-860-016

- (1) Make sure that the switches are back to their normal condition.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

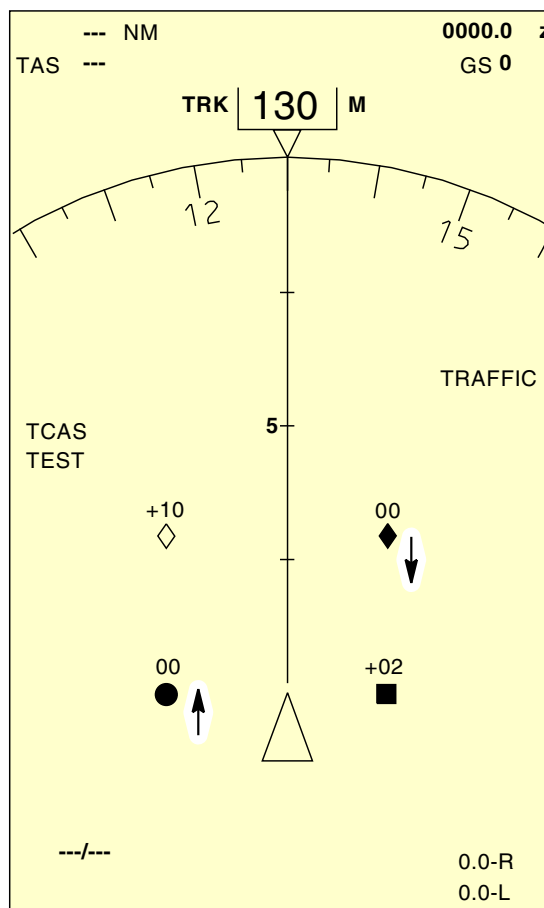
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

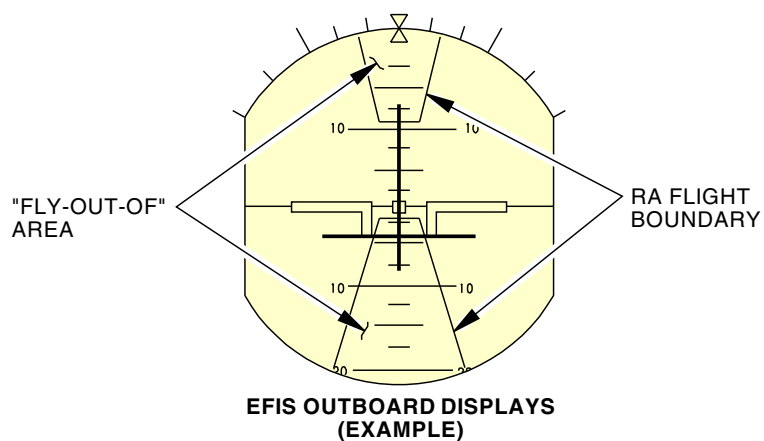
Page 503
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



EFIS INBOARD DISPLAYS
(EXAMPLE)



EFIS OUTBOARD DISPLAYS
(EXAMPLE)

2528984 S0000598007_V1

TCAS Test Pattern
Figure 501/34-45-00-990-802

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 504
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-45-00-730-801

3. TCAS - System Test (With the IFR TCAS-201 Test Set)

A. General

- (1) This test is a complete system test of the Traffic Alert and Collision Avoidance System (TCAS). The system test first runs the Operational Test, and then does a test of the TCAS with ground test equipment.

B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34-11-00-790-802	Static and Total Air Pressure System - Pressurization (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 505
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1922	Test Set - Radio Altimeter Part #: 110-0430-100-02 Supplier: L04V3 Part #: 110-0460-105 Supplier: L04V3 Part #: 9599-607-15902 Supplier: F0052 Opt Part #: 110-0430-100 Supplier: L04V3
COM-4112	Test Set - Ramp, TCAS-201 Opt Part #: TCAS-201 Supplier: 51190

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the System Test

SUBTASK 34-45-00-860-046

- (1) To stop the GPS input to the transponder, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

NOTE: While the MMR circuit breakers are open, the ATC FAIL lamp will be on in the ATC/TCAS control panel and the UNABLE REQD NAV PERF-RNP message will be on. These indications have no effect on the performance of the TCAS during the test.

SUBTASK 34-45-00-840-002

 CAUTION	DO NOT OPERATE THE TEST SET WHEN THE TEST SET ANTENNA IS WITHIN 15 INCHES (38 CM) OF AIRPLANE ANTENNA. IF YOU OPERATE THE TEST SET WITHIN THIS DISTANCE, DAMAGE TO THE TEST SET CAN OCCUR.

- (2) Do the following steps to setup the TCAS-201 test set, COM-4112, with the ground test method:
- (a) Put the TCAS-201 test set, COM-4112, antenna approximately 50 ft (15 m) from the top TCAS antenna at an angle of 45 degrees off of the airplane center line.
- NOTE:** Use the antenna stand to prevent unnecessary movements to the test set antenna. Unnecessary movements can cause the TCAS to loose tracking.
- 1) Make sure that there is no obstruction between the TCAS antennas.
- NOTE:** If ground equipment, walkways or other objects that could cause a signal obstruction or a multipath problem are in the area, choose a more suitable location for the test set and change the setup in the test set accordingly.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 506
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Point the TCAS-201 test set, COM-4112, antenna in the direction of the applicable TCAS antenna.

NOTE: This allows the correct TCAS antenna to receive the strongest signal.

- (c) Push the POWER switch to supply power to the TCAS-201 test set, COM-4112.
- (d) Push the SET/CONT key on the TCAS-201 test set, COM-4112.
- (e) Enter the distance (± 5 ft) between the TCAS-201 test set, COM-4112, antenna and the airplane's top TCAS antenna in the HORIZ field.
- (f) Enter 17 ft in the VERT field.
- (g) Enter the gain of the TCAS-201 test set, COM-4112, antenna in the GAIN field.

NOTE: The antenna gain should be listed on the test set antenna.

- (h) Enter the loss of the cable in the LOSS field.

NOTE: The cable loss values should be listed on the cable.

F. Test the TCAS system

SUBTASK 34-45-00-710-001

- (1) Do this task: TCAS - Operational Test, TASK 34-45-00-710-801.

- (a) Make sure that the Operational Test passes.

SUBTASK 34-45-00-730-001

- (2) Do the TCAS Bearing Accuracy Test as follows:

- (a) Put the transponder select switch on the ATC/TCAS control panel (referred to as the control panel for the rest of this section) to the 1 position.
 - (b) Put the mode select switch on the control panel to the TA or TA ONLY position.
 - (c) Shield the bottom TCAS antenna.

NOTE: This is to test the top TCAS antenna. You may have to get up high to be able to interrogate the top TCAS antenna from the rear of the airplane.

- (d) Push the SCEN key on the TCAS-201 test set, COM-4112, to show the scenario menu.
 - (e) Set up this scenario:

- 1) INTRUDER TYPE: ATCRBS
 - 2) ALT = OFF
 - 3) RANGE: 8.0 nmi
 - 4) RATE: 0 knots

- (f) Push the RUN/STOP key to start the test.
 - (g) Use the TCAS-201 test set, COM-4112, to interrogate the four quadrants of the TCAS antenna at bearings of 0, 45, 90, 180, 225, 270 degrees.

- 1) Make sure that the inboard displays show the intruder's correct bearing ± 15 degrees.

- (h) Shield the top TCAS antenna or move the TCAS-201 test set, COM-4112, antenna close to the bottom TCAS antenna (out of the line of sight from the top TCAS antenna).

NOTE: This is to test the bottom antenna. If you move the TCAS-201 test set, COM-4112, you have to change the values in the setup screen accordingly.

- (i) Do the steps in the Bearing Accuracy Test again for the bottom antenna.

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

Page 507
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-45-00-860-017

- (3) Do the Self-Test inhibit test:
- (a) Put the airplane in the air mode with the BITE in the Proximity Switch Electronic Unit (PSEU) (TASK 32-09-00-860-801).
 - (b) Push and release the TEST switch on the control panel.
 - 1) Make sure that a TCAS self-test does not occur.

SUBTASK 34-45-00-860-018

- (4) Prepare to do the TCAS intruder Climb Resolution Advisory Test:
- (a) Put the STBY/AUTO switch on the control panel to STBY.
 - (b) Use the pitot/static air data model test set, COM-1914, to apply an altitude of 40,000 ft (12 km) (TASK 34-11-00-790-802).

NOTE: The 40,000 ft (12 km) barometric altitude is chosen to minimize false TCAS alerts to TCAS equipped airplanes nearby.
 - (c) Put the mode select switch on the control panel to the TA/RA position.
 - (d) Connect the radio altimeter test set, COM-1922, to the airplane.
 - (e) Use the radio altimeter test set, COM-1922, and set the radio altitude to 2400 ft (732 m).

NOTE: Increase the radio altitude by 600 feet per minute (fpm) or less. TCAS RAs are inhibited below 1100 ft (335 m) during climb, so TA ONLY shows below 1100 ft (335 m).

 - 1) Make sure that the inboard displays do not show the TA ONLY indication when radio altitude is greater than 1100 feet.
 - (f) Put the EFIS control panel to the MAP mode and a range of 20 on the inboard displays.
 - (g) Push the SCEN key to show the scenario menu.
 - (h) Set up this scenario:
 - 1) INTRUDER TYPE: ATCRBS
 - 2) ALT = ON
 - 3) RANGE: 8.0 nmi
 - 4) RATE: +500 knots
 - 5) ALTITUDE: 39,900 ft
 - a) Make sure that the intruder's altitude is 100 ft (30 m) below your airplane's barometric altitude.

NOTE: You can change the airplane's altitude or intruder setup on the test set to do this.
 - 6) RATE: 0 fpm.

SUBTASK 34-45-00-860-019

- (5) Do the TCAS intruder Climb Resolution Advisory Test:
- (a) Push the RUN/STOP key to start the scenario, and look for this sequence on the EFIS display and flight compartment speaker:
 - 1) The intruder moves down the 45 degree bearing mark toward the airplane symbol.
 - 2) The intruder has the correct relative altitude.
 - 3) The intruder begins as Non-threat Traffic (open white diamond).
 - 4) The intruder changes to Proximate Traffic (solid white diamond).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 508
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 5) The intruder changes to a Traffic Advisory (solid yellow circle).
- 6) The TCAS gives a "TRAFFIC, TRAFFIC" voice announcement on the flight compartment speaker.
- 7) The intruder changes to a Resolution Advisory (solid red square), and gives a "climb, climb" or "climb, climb, climb" voice announcement on the flight compartment speaker.
- 8) The outboard displays show an RA resolution to pull up.
- 9) Shortly before the intruder reaches the closest point of approach, the TCAS gives an "increase climb" voice announcement on the flight compartment speaker.
- 10) Shortly after the intruder reaches the airplane symbol on the inboard displays, the TCAS gives a "Clear of Conflict" voice announcement on the flight compartment speaker.

NOTE: The "Clear of Conflict" voice announcement sometimes may not be given.

- (b) Push the RUN/STOP key on the TCAS-201 test set, COM-4112.

SUBTASK 34-45-00-860-020

- (6) Prepare to do the TCAS intruder Descend Resolutionary Advisory Test:
 - (a) Put the transponder select switch on the control panel to the 2 position.
 - (b) On the TCAS-201 test set, COM-4112, push the SCEN key to display the scenario menu.
 - (c) Set up this scenario:
 - 1) INTRUDER TYPE: Mode S
 - 2) RANGE: 8.0 nmi
 - 3) RATE: +500 knots
 - 4) ALTITUDE: 40,100 ft

- a) Make sure that the intruder's altitude is 100 ft (30 m) above your airplane's barometric altitude.

NOTE: You can change the airplane's altitude or intruder setup on the test set to do this.

- 5) RATE: 0 fpm.

SUBTASK 34-45-00-730-002

- (7) Do the TCAS intruder Descend Resolutionary Advisory Test:
 - (a) Push the RUN/STOP key to start the scenario, and look for this sequence on the EFIS display and flight compartment speaker:
 - 1) The intruder moves down the 45 degree bearing mark toward the airplane symbol.
 - 2) The intruder has the correct relative altitude.
 - 3) The intruder begins as Non-threat Traffic (open white diamond).
 - 4) The intruder changes to Proximate Traffic (solid white diamond).
 - 5) The intruder changes to a Traffic Advisory (solid yellow circle).
 - 6) The TCAS gives a "TRAFFIC, TRAFFIC" voice announcement on the flight compartment speaker.
 - 7) The intruder changes to a Resolution Advisory (solid red square), and gives a "descend, descend" or "descend, descend, descend" voice announcement on the flight compartment speaker.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 509
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 8) The outboard displays show an RA resolution to push down.
- 9) Shortly before the intruder reaches the closest point of approach, the TCAS gives an "increase descent" voice announcement on the flight compartment speaker.
- 10) Shortly after the intruder reaches the airplane symbol on the inboard displays, the TCAS gives a "Clear of Conflict" voice announcement on the flight compartment speaker.

NOTE: The "Clear of Conflict" voice announcement sometimes may not be given.

- (b) Push the RUN/STOP key to stop the Scenario.

SUBTASK 34-45-00-860-021

- (8) Prepare to do the High Altitude Climb Inhibit Test:

- (a) Use the pitot/static air data model test set, COM-1914, to make a simulated altitude of 48,500 ft (15 km).

NOTE: Let the VSI return to zero after the simulated altitude is reached.

- (b) Push the SCEN key on the TCAS-201 test set, COM-4112, to show the scenario menu.
- (c) Set up this scenario:
 - 1) RANGE: 4.2 nmi
 - 2) RATE: +500 knots
 - 3) ALTITUDE: 48,300 ft
 - 4) RATE: 0 fpm

SUBTASK 34-45-00-860-022

- (9) Do the High Altitude Climb Inhibit Test:

- (a) Push the RUN/STOP key to start the scenario.
- (b) Make sure that the relative altitude of the intruder is -02.

NOTE: If the relative altitude of the intruder is not -02, increase or decrease your airplane's altitude accordingly.

- (c) Make sure that the TCAS gives the "TRAFFIC, TRAFFIC" annunciation.
- (d) Make sure that the TCAS gives the "Monitor Vertical Speed" annunciation.

NOTE: A crossing descend resolution advisory may be given instead of the Monitor Vertical Speed resolution advisory. Decrease the intruder's altitude or increase the airplane's altitude to correct this.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-45-00-840-003

- (1) Put the STBY/AUTO switch on the control panel to STBY.

SUBTASK 34-45-00-860-023

- (2) Return the airplane back to field level altitude.

SUBTASK 34-45-00-840-013

- (3) Put the mode select switch on the control panel to the TA/RA position.

SUBTASK 34-45-00-860-024

- (4) Use the radio altimeter test set, COM-1922, to bring down the radio altitude to 0 feet.

NOTE: Decrease the radio altitude by 600 feet per minute (fpm) or less. RAs are inhibited below 900 ft (274 m) during descent, so TA ONLY will show at low altitude.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 510
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the inboard displays show the TA ONLY indication when radio altitude is less than 900 ft (274 m).

SUBTASK 34-45-00-840-004

- (5) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-45-00-080-001

- (6) Remove the installed test sets:
- (a) TCAS-201 test set, COM-4112.
 - (b) radio altimeter test set, COM-1922.
 - (c) air data model test set, COM-1914.

SUBTASK 34-45-00-080-002

- (7) Remove the TCAS antenna shield, if installed.

SUBTASK 34-45-00-860-047

- (8) To put back the GPS input to the transponder, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

————— END OF TASK —————

TASK 34-45-00-730-804

4. TCAS – System Test (With the TIC TR-220 Test Set)

(Figure 502)

A. General

- (1) This task gives the instructions on how to do the Traffic Alert and Collision Avoidance System (TCAS) system test with the TR-220 test set.
- (2) The TR-220 lets the mechanic manually select a scenario already pre-programmed in the test set. The test set simulates an intruder aircraft converging on the position of the airplane under test. The mechanic can then observe the TCAS display to make sure that the correct TA (Traffic Advisory) and RA (Resolution Advisory) are presented on the display.

B. References

<u>Reference</u>	<u>Title</u>
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
34-11-00 P/B 201	STATIC AND TOTAL AIR PRESSURE SYSTEM - MAINTENANCE PRACTICES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 511
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-10728	Test Set - Ramp, TR-220 Part #: TR-220 Supplier: 92606

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the System Test

SUBTASK 34-45-00-860-048

- (1) To stop the GPS input to the transponder, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 512
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

NOTE: While the MMR circuit breakers are open, the ATC FAIL lamp will be on in the ATC/TCAS control panel and the UNABLE REQD NAV PERF-RNP message will be on. These indications have no effect on the performance of the TCAS during the test.

SUBTASK 34-45-00-010-001

- (2) Open the TR-220 ramp test set, COM-10728 cover.

SUBTASK 34-45-00-010-002

- (3) Release the two push button holders and remove the test set cover.

SUBTASK 34-45-00-480-002

- (4) Install the directional antenna for the TR-220 ramp test set, COM-10728 as follows:

NOTE: The directional antenna is the only antenna that can be used for the TCAS test.

- (a) If you will install the antenna on the test set case, slide the mounting tabs into the slots on the test set.

NOTE: The slots are located on the front of the test set case.

- (b) If you will hold the antenna by hand, attach the supplied handle to the bottom of the antenna and hand tighten only.

NOTE: You can also attach the antenna to a tripod. This will increase its stability in high wind conditions.

SUBTASK 34-45-00-710-004

- (5) Do this task: TCAS - Operational Test, TASK 34-45-00-710-801.

- (a) Make sure the Operational Test passes.

SUBTASK 34-45-00-940-001

- (6) Prepare the TR-220 ramp test set, COM-10728 for the test as follows:

- (a) Set the UUT FUNCTION switch to the SETUP position.

- (b) Move the TEST SET switch to the ON position.

- 1) Make sure that the GREEN LED is on.

- (c) Toggle the AUTO/MANUAL switch to locate the ANT GAIN menu on the test set display.

- (d) Use the UP/FWD, DOWN/REV switch to enter the 1030 MHz and 1090 MHz gain values for the antenna.

- (e) Move the TEST SET switch to OFF position.

NOTE: The values will remain in the test set memory. You will only need to enter the values again if you will repair or replace the antenna.

- (f) Connect the antenna connectors to the ANTENNA SUM and DIFF ports on the test set front panel.

NOTE: If you will hand hold or install the antenna on a tripod, connect the extender cable that is supplied with the test set. Make sure that you match the color coded cables correctly. If the connections are reverse, the test set display will show a fault. This tells the mechanic to examine the connections.

SUBTASK 34-45-00-480-003

- (7) Place the test set directional antenna 10 ft (3 m) to 170 ft (52 m) from the airplane under test as follows:

- (a) Make sure that there is no obstruction between the antenna and the airplane under test.

- (b) Point the directional antenna to the TCAS antenna on the airplane.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 513
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-45-00-480-004

- (8) Move the TEST SET switch to the ON position.
 - (a) Make sure that GREEN LED is on.

SUBTASK 34-45-00-480-005

- (9) Toggle the AUTO/MANUAL switch to locate the T/S Distance menu on the test set display.

SUBTASK 34-45-00-480-006

- (10) Use the UP/FWD, DOWN/REV switch to enter the approximate distance between the test set and the airplane TCAS antenna.

SUBTASK 34-45-00-480-007

- (11) If it is necessary, turn the antenna to gain a strong RF signal as follows:

NOTE: A steady LED indicates a strong signal. Adjustment to the antenna orientation is not necessary.

- (a) If you see a blinking LED on the antenna optical sight, turn the antenna to gain a strong RF signal.

NOTE: A TURN indicator may also appear on the display. By slowly turning the antenna, the TURN indicator will spin slower until a lock is obtained and the test set will show the appropriate display.

NOTE: When the test is inside a hangar, signal reflections can cause erroneous TURN indications. If this happens, remove the antenna cable connection from the DIFF port. This will not affect the test results.

SUBTASK 34-45-00-480-008

- (12) Connect the air data model test set, COM-1914 to the airplane so that you can pressurize the two air data computers (PAGEBLOCK 34-11-00/201).

SUBTASK 34-45-00-860-042

- (13) Put airplane in the air mode with the BITE in the Proximity Sensor Electronics Unit (PSEU) (TASK 32-09-00-860-801).

SUBTASK 34-45-00-860-043

- (14) Put landing gear handle to OFF.

F. TCAS System Test (With the TIC TR-220)

SUBTASK 34-45-00-730-007

- (1) Move the UUT FUNCTION switch to the TCAS position.

NOTE: The test set will first measure transmit power and frequency. The measurements are approximate values and used for reference purposes only.

SUBTASK 34-45-00-210-001

- (2) Press the AUTO/TEST/MANUAL switch and look for the Mode S address in the test set display.

SUBTASK 34-45-00-730-008

- (3) Press the AUTO/TEST/MANUAL switch to access the TCAS scenario selection screen.

NOTE: Random scenario samples that will result in proper intruder convergence in an RA and/or TA on the display are listed in the table that follows.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 514
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Test Set TCAS Scenarios

Scenario # ^[1]	Airplane Altitude (ft) (Pumped Up)	Intruder Starting Altitude (ft) ^[2]	Intruder Speed (kts)	TCAS Distance (nmi)	Intruder Vertical Speed (fpm)
1	-1000	2000	180	10	-900
2	-500	1000	300	15	-500
3	0	0	600	20	0
4	500	1000	300	25	-100
5	1000	3500	180	25	-300
6	5000	4000	300	25	200
7	7500	9500	600	40	-500
8	10000	15000	180	50	-300
9	12500	7500	300	25	1000
10	15000	30000	600	30	-5000
11	17500	34000	180	15	-3300
12	20000	10000	300	50	1000
13	25000	41500	600	30	5500
14	33000	50000	180	30	-1700
15	42000	15000	300	25	5400
16	49000	31000	600	45	4000
17	3000	5000	300	25	-400
18	3500	2000	180	45	-100
19	4500	2500	300	50	200
20	7500	3000	600	45	1000
21	8500	10000	180	15	-300
22	9000	15000	300	30	1000

*[1] If these scenarios are not in the test set memory or a scenario with different parameters is necessary, refer to the test set operational manual to program the parameters into the test set memory.

*[2] Starting altitudes above or below the airplane altitude simulates an intruder converging from above or below the airplane under test.

SUBTASK 34-45-00-730-009

(4) Use the UP/FWD, DOWN/REV switch to select the intruder scenario.

SUBTASK 34-45-00-730-010

(5) Use the air data model test set, COM-1914 to apply an altitude of 10,000 feet.

SUBTASK 34-45-00-730-011

(6) If it is necessary, toggle the INCREASE-DECREASE VELOCITY switch to select the intruder speed.

SUBTASK 34-45-00-730-012

(7) Do the test for each intruder type with the ATCRBS/AIR - MODE S/GND switch as follows:

(a) For TCAS I type intruder, move the switch to the ATCRBS position.

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 515
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) For TCAS II type intruder, move the switch to the Mode S position.

SUBTASK 34-45-00-860-044

- (8) Set the mode selector on the ATC/TCAS transponder panel to the TA/RA position.
- (a) Make sure that you see the TCAS test pattern on the EFIS inboard and outboard displays (Figure 501).

SUBTASK 34-45-00-730-013

- (9) Press the AUTO/TEST/MANUAL switch to AUTO and do these steps:
- NOTE: The test set is now simulating the intruder aircraft from the selected scenario. The STP that is on the test set display indicates that the intruder aircraft is stopped at the initial position.
- (a) If the airplane equipment is an ATCRBS transponder, make sure that the display show ACQ.
- (b) If the airplane equipment is a Mode S transponder, make sure that the display initially show ACQ then change to TRK.

SUBTASK 34-45-00-730-014

- (10) Toggle the TO/START - FROM/STOP switch to the TO position to start the intruder aircraft convergence on the airplane under test.
- NOTE: The test set display will show the altitude, range, speed and climb rate of the intruder simulation.

SUBTASK 34-45-00-210-002

- (11) Make sure that the correct indications for traffic and resolution advisories show in the TCAS display.
- NOTE: When the intruder simulation range reaches 0 nmi, the test set will reverse the heading. The intruder aircraft will then return to the start point. This will continue back and forth until the operator stops the simulation.

SUBTASK 34-45-00-730-015

- (12) Toggle the TO/START - FROM/STOP switch to the STOP position.
- NOTE: During the simulation, you may stop and hold the intruder aircraft at any range.

SUBTASK 34-45-00-550-001

- (13) Move the TR-220 ramp test set, COM-10728 to a different location around the airplane under test.
- NOTE: Place the directional antenna 10 ft (3 m) to 170 ft (52 m) from the airplane. If it is necessary, turn the antenna to gain a strong RF signal

SUBTASK 34-45-00-210-003

- (14) Make sure that the correct azimuth information is on the TCAS display.

SUBTASK 34-45-00-730-016

- (15) Toggle the TO/START - FROM/STOP switch to the START position to start the intruder simulation at the different location.

SUBTASK 34-45-00-940-002

- (16) If it is necessary, you can adjust the scenario parameters without changing the stored parameters as follows:
- (a) Make sure that the TCAS scenario is on the test set display.
- (b) Press the TO/START-FROM/STOP switch up twice.
- (c) Make sure that the scenario window show STP.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 516
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- (d) Move the CHN/ALT - DIST-VERT SPEED switch the relative position of the parameter you want to change.
- (e) Move the UP-DOWN switch to change the intruder altitude or distance or vertical speed.
- (f) Move the INCREASE - DECREASE VELOCITY as necessary to change the intruder speed.
- (g) Press the TO/START - FROM/STOP switch up and verify that the simulation is on again.

SUBTASK 34-45-00-730-017

- (17) Move the TEST SET switch to OFF after you finish the test.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-45-00-080-009

- (1) Remove the directional antenna from the TR-220 ramp test set, COM-10728.

SUBTASK 34-45-00-410-001

- (2) Install and close the TR-220 ramp test set, COM-10728 cover.

SUBTASK 34-45-00-080-011

- (3) Disconnect the air data model test set, COM-1914 from the airplane (PAGEBLOCK 34-11-00/201).

SUBTASK 34-45-00-860-049

- (4) To put back the GPS input to the transponder, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

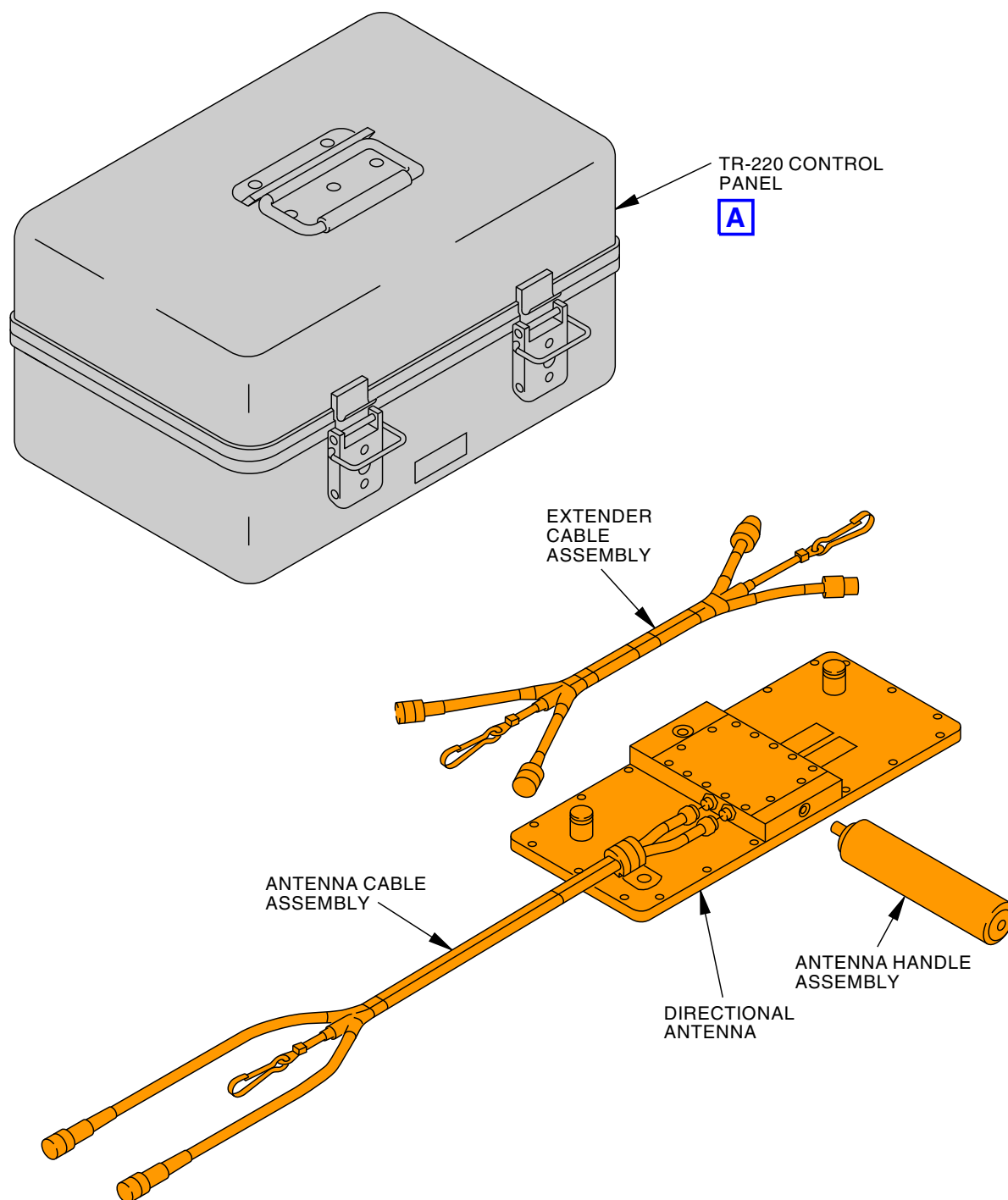
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 517
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2910433 S0000697817_V1

TR-220 Multifunction Test Set
Figure 502/34-45-00-990-804 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

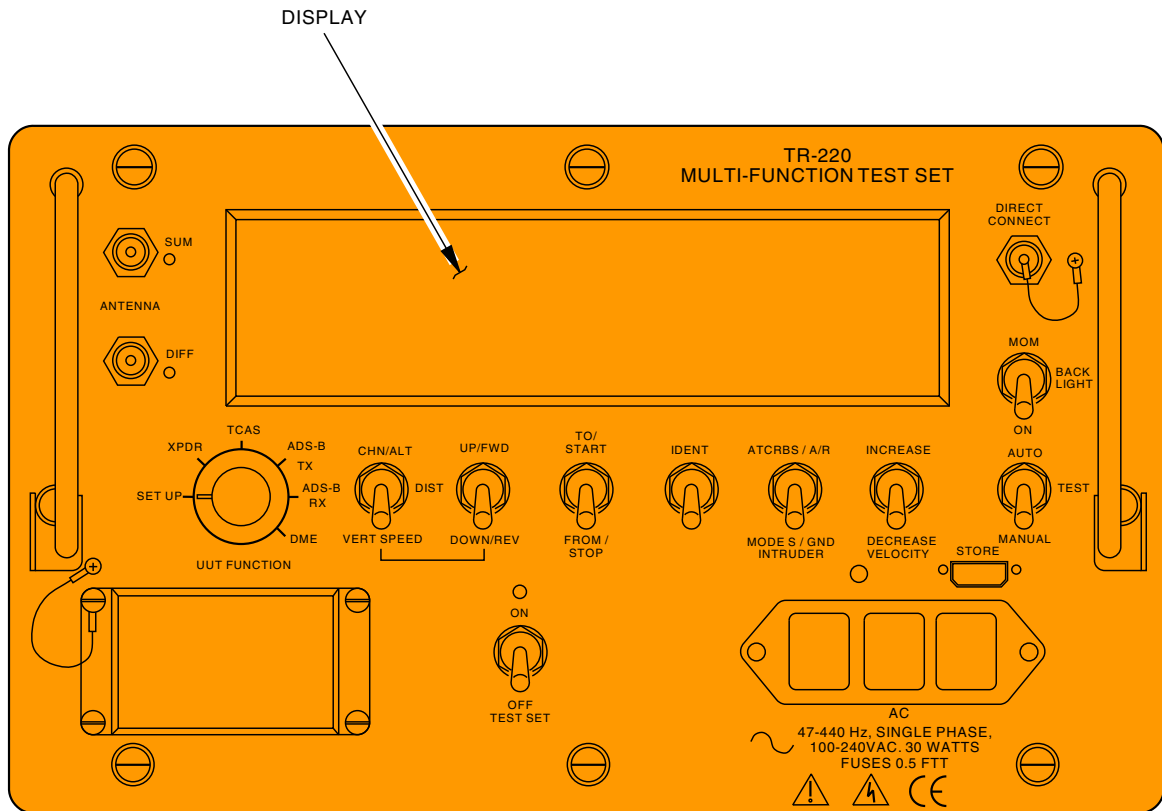
D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 518
Sep 15/2021

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



TR-220 CONTROL PANEL

A

2910456 S0000697818_V1

TR-220 Multifunction Test Set
Figure 502/34-45-00-990-804 (Sheet 2 of 2)

EFFECTIVITY SIA ALL	

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 519
 Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-45-00-730-802

5. TCAS - System Test (with the TIC T-49 Test Set)

A. General

- (1) This test is a complete system test of the Traffic Alert and Collision Avoidance System (TCAS). The system test first runs the TCAS Operational Test, and then does a test of the TCAS with ground test equipment.

B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34-11-00-790-802	Static and Total Air Pressure System - Pressurization (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 520
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description
COM-1922	Test Set - Radio Altimeter Part #: 110-0430-100-02 Supplier: L04V3 Part #: 110-0460-105 Supplier: L04V3 Part #: 9599-607-15902 Supplier: F0052 Opt Part #: 110-0430-100 Supplier: L04V3
COM-13601	Test Set - Ramp, T-49C Opt Part #: T-49C Supplier: 92606

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the System Test

SUBTASK 34-45-00-860-050

- (1) To stop the GPS input to the transponder, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

NOTE: While the MMR circuit breakers are open, the ATC FAIL lamp will be on in the ATC/TCAS control panel and the UNABLE REQD NAV PERF-RNP message will be on. These indications have no effect on the performance of the TCAS during the test.

SUBTASK 34-45-00-860-025

- (2) Do the following steps to setup the T-49C ramp test set, COM-13601:
- (a) Put the T-49C ramp test set, COM-13601, antenna about 50 ft (15 m) in front of the airplane on the center line.
- 1) Make sure that there is no obstruction between the TCAS antennas.
- NOTE:** If ground equipment, people, walkways or other objects that could cause a signal obstruction or a multipath problem are in the area, move the test set within 15 ft (5 m) to 30 ft (9 m) of the airplane.
- (b) Point the T-49C ramp test set, COM-13601, antenna in the direction of the applicable TCAS antenna.

SUBTASK 34-45-00-860-026

- (3) Connect the cable of the T-49C ramp test set, COM-13601, antenna to the T-49C ramp test set, COM-13601, antenna connector.

SUBTASK 34-45-00-860-027

- (4) Put the transponder select switch on the ATC/TCAS control panel (referred to as the control panel for the rest of this section) to the 1 position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 521
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Test the TCAS system

SUBTASK 34-45-00-710-002

(1) Do this task: TCAS - Operational Test, TASK 34-45-00-710-801.

(a) Make sure that the Operational Test passes.

SUBTASK 34-45-00-860-028

(2) Do the Self-Test Inhibit Test:

(a) Put the airplane in the air mode with the BITE in the Proximity Switch Electronic Unit (PSEU) (TASK 32-09-00-860-801).

(b) Press and release the TEST button switch on the control panel.

1) Make sure that a TCAS self-test does not occur.

SUBTASK 34-45-00-860-029

(3) Prepare to do the TCAS Bearing Accuracy Test:

(a) Connect the radio altimeter test set, COM-1922, to the airplane.

(b) Use the radio altimeter test set, COM-1922, to make a radio altitude of 2400 ft (732 m).

NOTE: Increase the radio altitude by 600 feet per minute (fpm) or less. RAs are inhibited below 1100 ft (335 m) during climb, so TA ONLY will show below 1100 ft (335 m).

1) Make sure that the inboard displays do not show the TA ONLY indication when the radio altitude is greater than 1100 ft (335 m).

(c) Connect a pitot/static air data model test set, COM-1914, to the airplane (TASK 34-11-00-790-802).

(d) Use the pitot/static air data model test set, COM-1914, to make a barometric altitude of 40,000 ft (12 km).

NOTE: The 40,000 ft (12 km) barometric altitude is chosen to minimize false TCAS alerts to TCAS equipped airplanes nearby.

1) Make sure that the altitude reporting function of the ATC is off or on standby during this procedure.

(e) Put the EFIS control panel to MAP mode and a range of 20 on the inboard displays.

(f) Put the mode select switch on the control panel to the TA position.

(g) Supply power to the T-49C ramp test set, COM-13601.

SUBTASK 34-45-00-860-030

(4) Do the TCAS Bearing Accuracy Test as follows:

(a) Put the intruder type switch on the T-49C ramp test set, COM-13601, to the ATRBS position.

(b) Put the scenario switch on the T-49C ramp test set, COM-13601, to the fixed intruder scenario position (+1000).

(c) Shield the bottom TCAS antenna.

NOTE: This is to test the top TCAS antenna. You may have to get up high to be able to interrogate the top TCAS antenna from the rear of the airplane.

(d) Push the interrogate switch on the T-49C ramp test set, COM-13601.

1) Make sure that the T-49C ramp test set, COM-13601, display shows the type of intruder selected.

(e) Use the T-49C ramp test set, COM-13601, to interrogate the four quadrants of the TCAS antenna at bearings of 0, 45, 90, 180, 225, and 270 degrees.

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

Page 522
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the inboard displays show the intruders bearing within ± 15 degrees.
- (f) Put the scenario switch on the T-49C ramp test set, COM-13601, to the fixed intruder scenario position (-1000).
- (g) Put the power setting to low (LO) on the T-49C ramp test set, COM-13601.
NOTE: A HI power setting can increase the likelihood of a multipath problem.
- (h) Shield the top TCAS antenna or move the test set antenna to the bottom TCAS antenna (out of the line of sight from the top TCAS antenna).
NOTE: This is to test the bottom TCAS antenna. You may have to get up high to be able to interrogate the top TCAS antenna from the rear of the airplane.
- (i) Use the test set to interrogate the four quadrants of the TCAS antenna at bearings of 0, 45, 90, 180, 225, and 270 degrees.
 - 1) Make sure that the inboard displays show the intruders bearing within ± 15 degrees.

SUBTASK 34-45-00-860-031

(5) Do the TCAS Intruder Test:

- (a) Put the mode select switch on the control panel to the TA/RA position.
- (b) Put the T-49C ramp test set, COM-13601, directional antenna 45 degrees to the right of the center line of the airplane with a 50 ft (15 m) separation from the airplane.
NOTE: The directional antenna will send signals to the TCAS antenna.
- (c) Put the scenario switch on the T-49C ramp test set, COM-13601, to the straight approach 14 nmi position.
- (d) Put the intruder type switch on the T-49C ramp test set, COM-13601, to the MODE S position.
- (e) Push the interrogate switch.
 - 1) Make sure that the T-49C ramp test set, COM-13601, display shows the correct intruder type.
- (f) Push the interrogate switch to start the scenario.
 - 1) Make sure that the T-49C ramp test set, COM-13601, display shows the airplane's altitude ± 100 ft (30 m) and the correct scenario (Range 14 nmi, Co-Altitude, Closure rate 720 knots).
- (g) Increase the airplane's altitude by 200 ft (61 m).
- (h) Make sure that the following sequence shows on the EFIS secondary display and the voice announcements are heard on the flight compartment speakers:
 - 1) The intruder ascends to the airplane symbol from the 45 degree bearing mark.
 - 2) The intruder begins as Non-threat Traffic (open white diamond).
 - 3) The intruder changes to Proximate Traffic (solid white diamond).
 - 4) The intruder changes to a Traffic Advisory (solid yellow circle).
 - 5) The TCAS gives a "TRAFFIC, TRAFFIC" voice announcement on the flight compartment speaker.
 - 6) The intruder changes to a Resolution Advisory (solid red square), and gives a "climb, climb" or "climb, climb, climb" voice announcement on the flight compartment speaker.
 - 7) The outboard displays show a vertical resolution to pull up.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 523
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 8) Before the intruder gets to the closest point of approach, the TCAS gives an "increase climb" voice announcement on the flight compartment speaker.

NOTE: The "increase climb" voice announcement sometimes may not be given.

- 9) Shortly after the intruder reaches the airplane symbol on the inboard displays, the TCAS gives a "Clear of Conflict" voice announcement on the flight compartment speaker.

NOTE: Some T-49C ramp test set, COM-13601, software will not allow the "Clear of Conflict" voice announcement to occur.

- (i) Put the intruder type switch on the T-49C ramp test set, COM-13601, to the TCAS position.
- (j) Push the interrogate switch.
- 1) Make sure that the T-49C ramp test set, COM-13601, display shows the correct intruder type.
- (k) Push the interrogate switch to start the scenario.
- 1) Make sure that the T-49C ramp test set, COM-13601, display shows the airplane's altitude ± 100 ft (30 m) and the correct scenario (Range 14 nmi, Co-Altitude, Closure rate 720 knots).
- (l) Decrease the airplane's altitude by 200 ft (61 m).
- (m) Make sure that the following sequence shows on the inboard displays display:
- 1) The intruder descends to the airplane symbol from the 45 degree bearing mark.
- 2) The intruder begins as Non-threat Traffic (open white diamond).
- 3) The intruder changes to Proximate Traffic (solid white diamond).
- 4) The intruder changes to a Traffic Advisory (solid yellow circle).
- 5) The TCAS gives a "TRAFFIC, TRAFFIC" voice announcement on the flight compartment speaker.
- 6) The intruder changes to a Resolution Advisory (solid red square), and gives a "descend, descend" or "descend, descend, descend" voice announcement on the flight compartment speaker.
- 7) The outboard displays show a vertical resolution to push down.
- 8) Before the intruder gets to the closest point of approach, the TCAS gives an "increase descent" voice announcement on the flight compartment speaker.
- NOTE: The "increase descent" voice announcement sometimes may not be given.
- 9) Shortly after the intruder reaches the airplane symbol on the inboard displays, the TCAS gives a "Clear of Conflict" voice announcement on the flight compartment speaker.
- NOTE: Some T-49C ramp test set, COM-13601, software will not allow the "Clear of Conflict" voice announcement to occur.

SUBTASK 34-45-00-860-032

- (6) Do the High Altitude Climb Inhibit Test:
- (a) Put the transponder select switch on the control panel to the 2 position.
- (b) Use the pitot/static air data model test set, COM-1914, to make a simulated altitude of 49,000 ft (15 km).
- (c) Do the previous TCAS intruder scenario test again.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 524
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that TCAS does not give a CLIMB corrective action.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-45-00-840-006

- (1) Put the STBY/AUTO switch on the control panel to STBY.

SUBTASK 34-45-00-860-033

- (2) Return the airplane back to field level altitude.

SUBTASK 34-45-00-840-014

- (3) Put the mode select switch on the control panel to the TA/RA position.

SUBTASK 34-45-00-860-034

- (4) Use the radio altimeter test set, COM-1922, to bring down the radio altitude to 0 feet.

NOTE: Decrease the radio altitude by 600 feet per minute (fpm) or less. RAs are inhibited below 900 ft (274 m) during descent, so TA ONLY will show at low altitude.

- (a) Make sure that the inboard displays show the TA ONLY indication when radio altitude is less than 900 feet.

SUBTASK 34-45-00-840-007

- (5) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-45-00-080-004

- (6) Remove the installed test sets:

- (a) T-49C ramp test set, COM-13601.
- (b) radio altimeter test set, COM-1922.
- (c) air data model test set, COM-1914.

SUBTASK 34-45-00-080-005

- (7) Remove the TCAS antenna shield, if installed.

SUBTASK 34-45-00-860-051

- (8) To put back the GPS input to the transponder, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

————— END OF TASK —————

TASK 34-45-00-730-803

6. TCAS - System Test (With the IFR-6000 Test Set)

A. General

- (1) This test is a complete system test of the Traffic Alert and Collision Avoidance System (TCAS). The system test first runs the TCAS Operational Test, and then does a test of TCAS with ground test equipment.
- (2) The IFR-6000 ramp test set, COM-10727, is used to examine the TCAS system.

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 525
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34-11-00-790-802	Static and Total Air Pressure System - Pressurization (P/B 201)
34-33-00-700-801	Radio Altitude Simulation Test (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADSE 650 Supplier: 3BSK6 Part #: ADTS2000 Supplier: 52892 Part #: ADTS3350ER Supplier: 52892 Part #: ADTS405MKII Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: ADTS553F Supplier: U0427 Part #: ADTS554F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43B Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS405F Supplier: U0427 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2 Opt Part #: MPS43 Supplier: A0197
COM-1922	Test Set - Radio Altimeter Part #: 110-0430-100-02 Supplier: L04V3 Part #: 110-0460-105 Supplier: L04V3 Part #: 9599-607-15902 Supplier: F0052 Opt Part #: 110-0430-100 Supplier: L04V3
COM-10727	Test Set - Ramp, IFR-6000 Part #: IFR 6000 Supplier: 51190

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 526
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

D. Prepare for the System Test

SUBTASK 34-45-00-860-052

- (1) To stop the GPS input to the transponder, open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

NOTE: While the MMR circuit breakers are open, the ATC FAIL lamp will be on in the ATC/TCAS control panel and the UNABLE REQD NAV PERF-RNP message will be on. These indications have no effect on the performance of the TCAS during the test.

SUBTASK 34-45-00-710-003

- (2) Do this task: TCAS - Operational Test, TASK 34-45-00-710-801.

- (a) Make sure that the TCAS Operational Test passes.

SUBTASK 34-45-00-860-035

- (3) Set the captain's and first officer's altimeter to 29.92 inches of mercury.

SUBTASK 34-45-00-700-001

- (4) Do the Self-Test inhibit test:



WARNING

PREPARE THE SAFETY-SENSITIVE SYSTEMS FOR THE AIR MODE BEFORE YOU OPEN THE AIR/GROUND CIRCUIT BREAKERS. IN THE AIR MODE, MANY OF THE AIRPLANE SYSTEMS CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (a) Put the airplane in the air mode with the BITE in the Proximity Switch Electronic Unit (PSEU) (TASK 32-09-00-860-801).
- (b) Push and release the TEST switch on the ATC/TCAS control panel.
- 1) Make sure that a TCAS self-test does not occur.

SUBTASK 34-45-00-480-001

- (5) Do the following steps to setup the IFR-6000 ramp test set, COM-10727:

NOTE: Refer to the IFR-6000 Operation Manual for more detailed information on the setup.



CAUTION

DO NOT OPERATE THE TEST SET WHEN THE TEST SET ANTENNA IS WITHIN 15 INCHES (38 CM) OF AIRPLANE ANTENNA. IF YOU OPERATE THE TEST SET WITHIN THIS DISTANCE, DAMAGE TO THE TEST SET CAN OCCUR.

- (a) Mount the Directional Antenna on the test set friction hinge and connect the Directional Antenna ANT Connector to the Test Set ANT Connector via the 12 in. (30 cm) coaxial cable.
- (b) Set the tester at a location forward of the airplane (50 ft (15 m) or less) and 45 degrees from the center line of the airplane.
- (c) Face the test set antenna in the direction of the top TCAS antenna.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 527
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Make sure that there is no obstruction between the TCAS antenna and test set antenna.

NOTE: If ground equipment, walkways or other objects that could cause a signal obstruction or a multipath problem, choose a more suitable location for the test set and change the setup in the test set accordingly.

- (e) Push the POWER Key to energize the Test Set On.

NOTE: The IFR-6000 is equipped with a self-test for quick performance evaluation. An abbreviated self-test is run at Power-Up. The full self-test is initiated manually. Refer to the IFR-6000 Operation Manual for the full self-test procedure.

- (f) Push the SETUP Control Key to show the setup screens. Continue pushing the SETUP Control Key to cycle to the SETUP-TCAS Screen. Use the NEXT PARAM and PREV PARAM Soft Keys to select each parameter. Use the DATA keys to set the value of each parameter.

- 1) Select RF PORT: Set to ANTENNA.
- 2) Select ANT RANGE: Set to setup range from IFR-6000 antenna to the top TCAS Antenna.
- 3) Select ANT HEIGHT: Set to setup height from IFR-6000 antenna to the top TCAS Antenna.
- 4) Select UUT ADDRESS: Set to AUTO.

NOTE: When the UUT ADDRESS is set to AUTO, the Mode S address is obtained from the airplane's ATC Transponder. When set to MANUAL, you must enter the airplane's Mode S address in the MANUAL AA field.

- 5) Select ANT CABLE LOSS: Set to the cable loss found on the cable.
- 6) Select ANT GAIN (dBi), 1.03 GHz and 1.09 GHz: Set antenna gain to the figures marked on the supplied Directional Antenna.
- 7) Select SQUITTERS: Set to ON.
- 8) Select ALT REPORTING: Set to ON.
- 9) Select DISPLAYED ALT: Set to ABSOLUTE.
- 10) Select TEST SET AA: Set to A92493.

NOTE: TEST SET AA is a simulated Mode S address and must be different than the UUT ADDRESS.

E. Test the TCAS system

SUBTASK 34-45-00-730-003

- (1) Do the TCAS Bearing Accuracy Test as follows:

- (a) Put the transponder select switch on the ATC/TCAS control panel (referred to as the control panel for the rest of this section) to the 1 position.
- (b) Put the mode select switch on the control panel to the TA or TA ONLY position.
- (c) On the test set, push the TCAS Mode Key to show the TCAS screen. Use the NEXT PARAM and PREV PARAM Soft Keys to select each parameter. Use the DATA keys to set the value of each parameter.
- (d) Setup the scenario as follows:
 - 1) Select SCENARIO: Set to 0 CUSTOM.
 - 2) Select TCAS TYPE: Set to TCAS II.
 - 3) Select % REPLY: Set to 100.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 528
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 4) Select INTRUDER TYPE: Set to ATCRBS.
 - 5) Select RANGE START: Set to 8 nmi.
 - 6) Select RANGE RATE: Set to 0 knots.
 - 7) Select ALT START: Set to -100 ft.
 - 8) Select ALT STOP: Set to -100 ft.
 - 9) Select UUT ALT: Enter altitude shown on Captain's altimeter.
 - 10) Select ALT DETECT: Set to OFF.
- (e) Shield the bottom TCAS antenna with an antenna shield.
- (f) Make sure that you face the test set antenna towards the top TCAS antenna.
- (g) Push the RUN Soft Key to start the test.
- 1) Make sure that the inboard displays shows the intruder's bearing ± 15 degrees.
- (h) Push the STOP Soft Key to stop the test.
- (i) Use the test set to interrogate the four quadrants of the TCAS antenna at the approximate bearings of 0, 90, 180, 270 degrees.

NOTE: The bearing accuracy test at some aircraft bearings may not be possible. Aircraft landing gear, fuselage, wing or engine nacelles may block the signal between the TCAS antenna and the test set.

NOTE: If you moved the test set, you must change the test set setup accordingly.

- (j) Remove the antenna shield from the bottom TCAS antenna.
- (k) Shield the top TCAS antenna or move the test set close to the bottom TCAS antenna (out of the line of sight from the top TCAS antenna).
- (l) Change the IFR-6000 ramp test set, COM-10727, setup parameters to test the bottom antenna.
- 1) Enter the vertical and horizontal distances to the bottom TCAS antenna.
- (m) Do the steps in the Bearing Accuracy Test again for the bottom antenna.

SUBTASK 34-45-00-860-036

- (2) Prepare to do the TCAS intruder Climb Resolution Advisory Test:

- (a) Put the STBY/AUTO switch on the control panel to STBY.
- (b) Use the pitot/static air data model test set, COM-1914, to apply an altitude of 40,000 ft (12 km) (TASK 34-11-00-790-802).

NOTE: The 40,000 ft (12 km) barometric altitude is chosen to minimize false TCAS alerts to TCAS equipped airplanes nearby.

- (c) Put the mode select switch on the control panel to the TA/RA position.
- (d) Connect the radio altimeter test set, COM-1922, to the airplane (TASK 34-33-00-700-801).
- (e) Use the radio altimeter test set, COM-1922, and set the radio altitude to 2400 ft (732 m).

NOTE: Increase the radio altitude by 600 feet per minute (fpm) or less. TCAS RAs are inhibited below 1100 ft (335 m) during climb, so TA ONLY shows below 1100 ft (335 m).

- 1) Make sure that the inboard displays do not show the TA ONLY indication when radio altitude is greater than 1100 ft (335 m).
- (f) Put the EFIS control panel to the MAP mode and a range of 20 on the inboard displays.

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

Page 529
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (g) Set the test set at a location forward of the airplane (50 ft (15 m) or less) and 45 degrees from the center line of the airplane.
 - (h) Push the TCAS Mode Select Key to show the TCAS Test Screen. Use the NEXT PARAM and PREV PARAM Soft Keys to select each parameter. Use the DATA keys to set the value of each parameter.
 - (i) Setup the scenario as follows:
 - 1) Select SCENARIO: Set to 0 CUSTOM.
 - 2) Select TCAS TYPE: Set to TCAS II.
 - 3) Select % REPLY: Set to 100.
 - 4) Select INTRUDER TYPE: Set to ATCRBS.
 - 5) Select RANGE START: Set to 8 nmi.
 - 6) Select RANGE STOP: Set to 0.35 nmi.
 - 7) Select RANGE RATE: Set to 500 knots.
 - 8) Select ALT START: Set to -100 ft.
 - 9) Select ALT STOP: Set to -100 ft.
 - a) Make sure that the intruder's altitude is 100 ft (30 m) below your airplane's barometric altitude.
- NOTE: In all IFR-6000 TCAS scenarios, altitude START and STOP parameters are Relative to UUT altitude.
- 10) Select ALT RATE: Set to 0 fpm.
 - 11) Select CONVERGE: Set to OFF.
 - 12) Select ALT DETECT: Set to ON.
- NOTE: When the ALT DETECT field is set to ON, the UUT ALT is automatically obtained from the airplane's ATC transponder.

SUBTASK 34-45-00-730-004

- (3) Do the TCAS Intruder Climb Resolution Advisory Test:
 - (a) Push the RUN TEST soft key on the test set to start the test.
 - (b) Make sure that the following sequence occurs on the EFIS display and flight compartment speaker:
 - 1) The intruder moves down the 45 degree bearing mark toward the airplane symbol.
 - 2) The intruder has the correct relative altitude.

NOTE: The relative altitude shown can be -00 or -01 depending on your actual vertical separation. This is because TCAS can only display relative altitude by 100 foot increments.
 - 3) The intruder begins as Non-threat Traffic (open white diamond).
 - 4) The intruder changes to Proximate Traffic (solid white diamond).
 - 5) The intruder changes to a Traffic Advisory (solid yellow circle).
 - 6) The TCAS gives a "TRAFFIC, TRAFFIC" voice announcement on the flight compartment speaker.
 - 7) The intruder changes to a Resolution Advisory (solid red square), and gives a "climb, climb" or "climb, climb, climb" voice announcement on the flight compartment speaker.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 530
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 8) The outboard displays show a RA resolution to pull up.
- 9) Shortly before the intruder reaches the closest point of approach, the TCAS gives an "increase climb" voice announcement on the flight compartment speaker.
- 10) Shortly after the intruder reaches the airplane symbol on the inboard displays, the TCAS gives a "Clear of Conflict" voice announcement on the flight compartment speaker.

NOTE: The "Clear of Conflict" voice announcement sometimes may not be given.

- (c) Push the STOP TEST soft key to stop the test.

SUBTASK 34-45-00-860-037

- (4) Prepare to do the TCAS Intruder Descend Resolution Advisory Test:
 - (a) Put the transponder select switch on the control panel to the 2 position.
 - (b) Push the TCAS Mode Select Key on the IFR-6000 ramp test set, COM-10727, to show the TCAS Test Screen.
 - (c) Change the scenario setup as follows:
 - 1) Select INTRUDER TYPE: Set to Mode S.
 - 2) Select ALT START: Set to +100 ft.
 - 3) Select ALT STOP: Set to +100 ft.
 - a) Make sure that the intruder's altitude is 100 ft (30 m) above your airplane's barometric altitude.

NOTE: In all IFR-6000 TCAS scenarios, altitude START and STOP parameters are Relative to UUT altitude.

SUBTASK 34-45-00-730-005

- (5) Do the TCAS Intruder Descend Resolution Advisory Test:
 - (a) Push the RUN TEST soft key on the IFR-6000 ramp test set, COM-10727, to start the test.
 - (b) Make sure that the following sequence occurs on the EFIS displays and flight compartment speaker:
 - 1) The intruder moves down the 45 degree bearing mark toward the airplane symbol.
 - 2) The intruder has the correct relative altitude.

NOTE: The relative altitude shown can be +00 or +01 depending on your actual vertical separation. This is because TCAS can only display relative altitude by 100 foot increments.
 - 3) The intruder begins as Non-threat Traffic (open white diamond).
 - 4) The intruder changes to Proximate Traffic (solid white diamond).
 - 5) The intruder changes to a Traffic Advisory (solid yellow circle).
 - 6) The TCAS gives a "TRAFFIC, TRAFFIC" voice announcement on the flight compartment speaker.
 - 7) The intruder changes to a Resolution Advisory (solid red square), and gives a "descend, descend" or "descend, descend, descend" voice announcement on the flight compartment speaker.
 - 8) The outboard displays show a RA resolution to push down.
 - 9) Shortly before the intruder reaches the closest point of approach, the TCAS gives an "increase descent" voice announcement on the flight compartment speaker.

EFFECTIVITY
SIA ALL

34-45-00

D633AM101-SIA

Page 531
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 10) Shortly after the intruder reaches the airplane symbol on the inboard displays, the TCAS gives a "Clear of Conflict" voice announcement on the flight compartment speaker.

NOTE: The "Clear of Conflict" voice announcement sometimes may not be given.

- (c) Push the STOP TEST soft key to stop the test.

SUBTASK 34-45-00-860-038

- (6) Prepare to do the High Altitude Climb Inhibit Test:

- (a) Use the air data model test set, COM-1914, to make a simulated altitude of 48,500 ft (15 km).
- (b) Push the TCAS Mode Select Key on the test set to show the TCAS Test Screen.
- (c) Change the scenario setup as follows:
 - 1) Select INTRUDER TYPE: Set to ATCRBS.
 - 2) Select ALT START: Set to -200 ft.
 - 3) Select ALT STOP: Set to -200 ft.

NOTE: In all IFR-6000 TCAS scenarios, altitude START and STOP parameters are Relative to UUT altitude.

SUBTASK 34-45-00-730-006

- (7) Do the High Altitude Climb Inhibit Test:

- (a) Push the RUN TEST soft key on the test set to start the test.
- (b) Make sure that the following sequence occurs on the EFIS displays and flight compartment speaker:
 - 1) The relative altitude of the intruder is -02.

NOTE: If the relative altitude of the intruder is not -02, change the intruder setup altitude accordingly.

- 2) The TCAS gives the "TRAFFIC, TRAFFIC" voice annunciation.
- 3) The TCAS gives the "Monitor Vertical Speed" voice annunciation.

NOTE: A crossing descend resolution advisory may be given instead of the Monitor Vertical Speed resolution advisory. Decrease the intruder's altitude or increase the airplane's altitude appropriately to correct this.

- (c) Push the STOP TEST soft key to stop the test.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 34-45-00-840-009

- (1) Put the STBY/AUTO switch on the control panel to STBY.

SUBTASK 34-45-00-860-039

- (2) Return the airplane back to field level altitude.

SUBTASK 34-45-00-840-015

- (3) Put the mode select switch on the control panel to the TA/RA position.

SUBTASK 34-45-00-860-040

- (4) Use the radio altimeter test set, COM-1922, to bring down the radio altitude to 0 feet.

NOTE: Decrease the radio altitude by 600 feet per minute (fpm) or less. RAs are inhibited below 900 ft (274 m) during descent, so TA ONLY will show at low altitude.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-45-00

Page 532
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the inboard displays shows the TA ONLY indication when the radio altitude is less than 900 ft (274 m).

SUBTASK 34-45-00-840-010

- (5) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-45-00-080-007

- (6) Remove the installed test sets:
- (a) IFR-6000 ramp test set, COM-10727.
 - (b) air data model test set, COM-1914.
 - (c) radio altimeter test set, COM-1922.

SUBTASK 34-45-00-080-008

- (7) Remove the TCAS antenna shield, if installed.

SUBTASK 34-45-00-860-053

- (8) To put back the GPS input to the transponder, remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-00

Page 533
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) COMPUTER - REMOVAL/
INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the TCAS computer
 - (2) An installation of the TCAS computer.
- B. The TCAS computer, M1485, is installed on the E1 rack in the electronic compartment.

TASK 34-45-01-000-801

2. TCAS Computer Removal

(Figure 401)

A. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

B. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right

C. **Procedure**

SUBTASK 34-45-01-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01195	TCAS

SUBTASK 34-45-01-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE TCAS COMPUTER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE TCAS COMPUTER.

- (2) To remove the TCAS computer [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

SUBTASK 34-45-01-020-002

- (3) Install dust caps on the electrical connectors.

———— **END OF TASK** ————

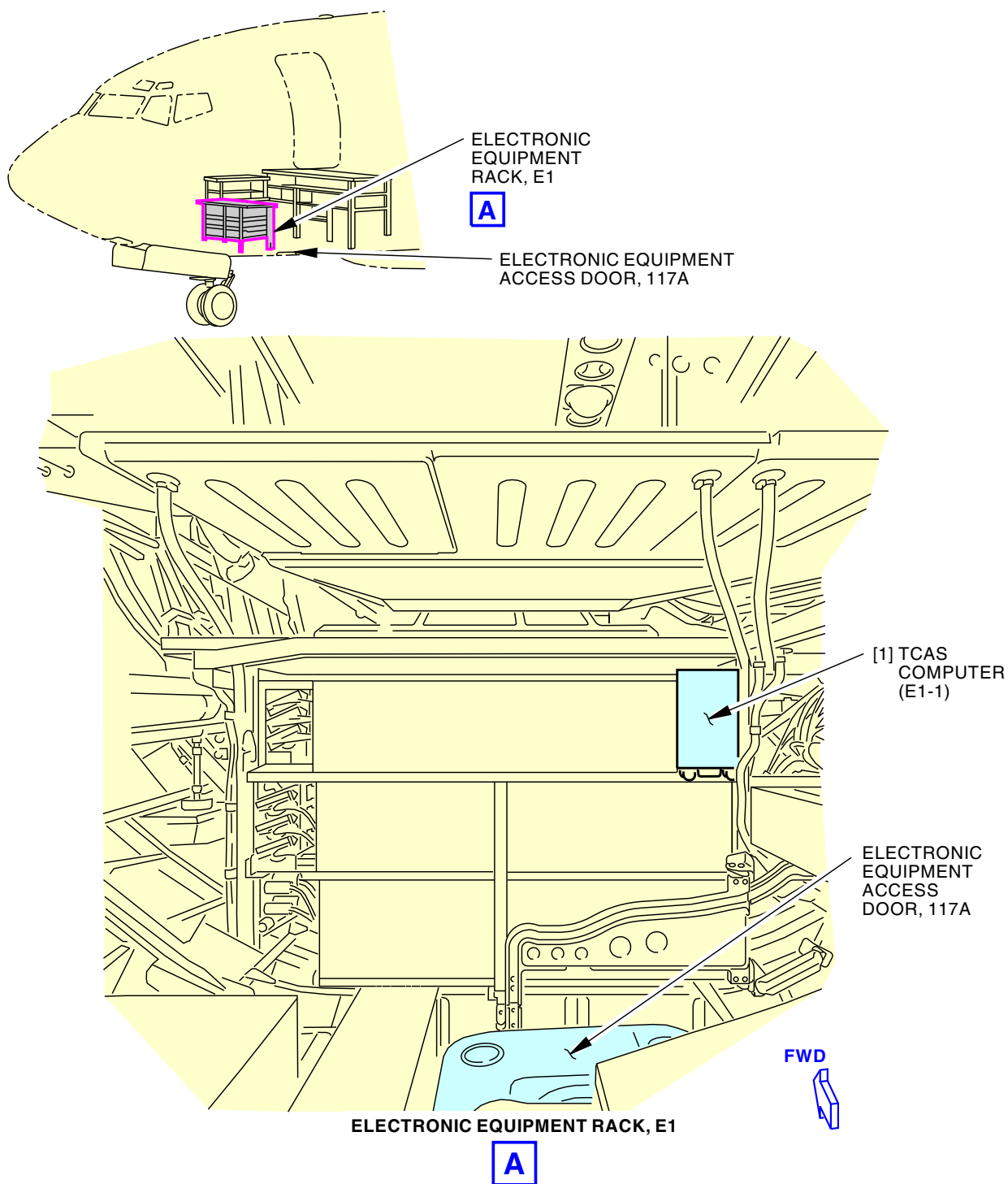
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-01

Page 401
Sep 15/2021



2414880 S00061536377_V1

TCAS Computer Installation
Figure 401/34-45-01-990-801

EFFECTIVITY
SIA ALL

34-45-01

D633AM101-SIA

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-45-01-400-801

3. TCAS Computer Installation

(Figure 401)

A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Computer	34-45-01-07-005	SIA ALL

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Procedure

SUBTASK 34-45-01-420-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE TCAS COMPUTER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE TCAS COMPUTER.

- (1) Remove the dust caps from the electrical connectors.

SUBTASK 34-45-01-420-002

- (2) To install the TCAS computer [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

E. Installation Test

SUBTASK 34-45-01-860-003

- (1) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	6	C01195	TCAS

SUBTASK 34-45-01-860-004

- (2) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-45-01-860-005

- (3) Wait until the align light on the MSU goes off.

SUBTASK 34-45-01-740-001

- (4) On the ATC control panel, push and release the test switch.

EFFECTIVITY
SIA ALL

34-45-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-45-01-740-002

- (5) Make sure that you hear "TCAS system test okay" on the flight compartment speakers.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-01

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks.
- (1) A removal of the TCAS directional antenna.
 - (2) An installation of the TCAS directional antenna.
- B. There are two TCAS antennas installed on the airplane. One is installed on the top of the airplane, at station 385. The other is installed on the bottom of the airplane, at station 305.

TASK 34-45-02-000-801

2. TCAS Antenna Removal

(Figure 401)

A. References

Reference	Title
51-22-00-160-801	Prepare For Sealing (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

C. Consumable Materials

Reference	Description	Specification
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-02

Page 401
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
221	Passenger Compartment - Aft of Control Compartment to Forward Entry Door - Left

E. TCAS Antenna Removal

SUBTASK 34-45-02-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	6	C01195	TCAS

SUBTASK 34-45-02-020-001

- (2) Do these steps to remove the TCAS antenna [3]:
- (a) Remove the sealant from around the edge of the TCAS antenna [3] and the top of the bolts [4].
 - (b) Remove the cotton balls [5] from the bolt-holes.
 - 1) If foam plugs are installed with the antenna, remove the foam plugs from the bolt-holes.
 - (c) Remove the bolts [4] from the TCAS antenna [3].



BE CAREFUL WHEN YOU USE THE SEALANT REMOVAL TOOL TO BREAK THE SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRPLANE SKIN, AND OTHER COMPONENTS.

- (d) Use force around the TCAS antenna [3] with the sealant removal tool, COM-2481, until the seal is fully broken.



LOWER THE ANTENNA ONLY AS FAR AS REQUIRED TO DISCONNECT THE COAXIAL CONNECTOR. DAMAGE TO THE CABLE CAN OCCUR IF YOU PULL THE CABLE.

- (e) Move the TCAS antenna [3] until you can get access to the coaxial connectors [1].
- (f) Disconnect the coaxial connectors [1].
 - 1) Do not let the coaxial connectors [1] retract into the airplane.
- (g) Install dust caps on the coaxial connectors [1] at the end of the antenna cables.
- (h) Remove the TCAS antenna [3].
- (i) Remove and discard the O-ring [2].

SUBTASK 34-45-02-140-001

- (3) Remove the sealant from the airplane skin around the antenna area (TASK 51-22-00-160-801).

SUBTASK 34-45-02-110-001

- (4) Use a clean rag and some solvent, B00184, to clean the airplane surface around the antenna area.

————— END OF TASK —————

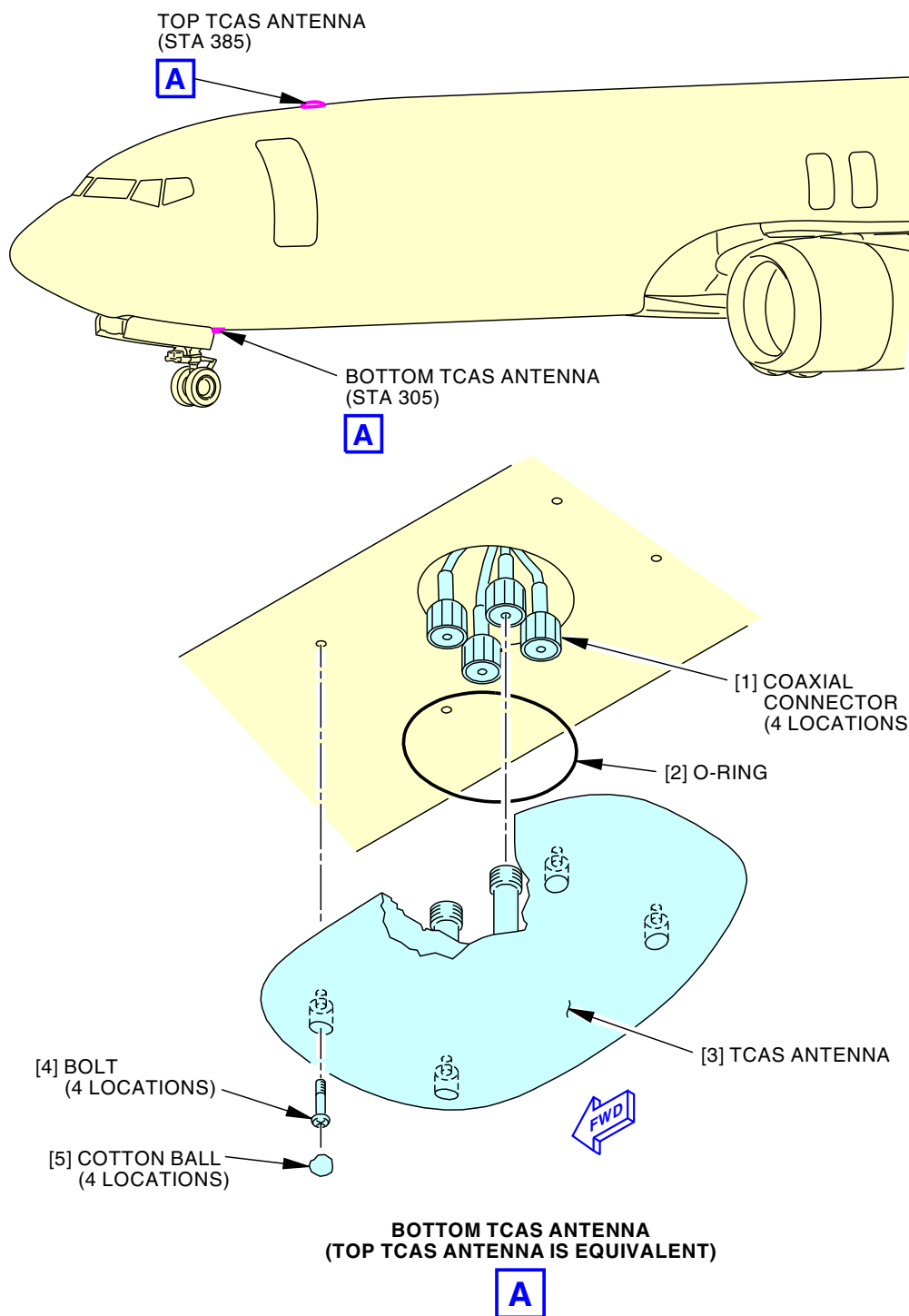
EFFECTIVITY
SIA ALL

34-45-02

D633AM101-SIA

Page 402
May 15/2022

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414881 S00061536382_V1

TCAS Directional Antenna Installation
Figure 401/34-45-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-02

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-45-02-400-801

3. TCAS Antenna Installation

(Figure 401)

A. References

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
51-21-00-160-801	Surface Preparation Of Aluminum Bonding Surfaces For Antenna Installations (P/B 701)
51-21-00-160-802	Surface Preparation Of Flame Sprayed Skin Panel Bonding Surfaces For Antenna Installations (P/B 701)
51-21-95-300-801	Alodine Treatment Application (P/B 701)
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
D00652	Lubricant - O-Ring - Parker Super-O-Lube	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	O-ring	34-45-02-01-030	SIA ALL
		34-45-02-01-080	SIA ALL
3	TCAS antenna	34-45-02-01-020	SIA ALL
		34-45-02-01-070	SIA ALL

EFFECTIVITY
SIA ALL

34-45-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

E. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
221	Passenger Compartment - Aft of Control Compartment to Forward Entry Door - Left

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

G. TCAS Antenna Installation

SUBTASK 34-45-02-860-003

- (1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01195	TCAS

SUBTASK 34-45-02-210-001

- (2) Visually examine the contact surfaces of the TCAS antenna [3] and the airplane for corrosion and unwanted substances.

NOTE: If the surfaces are not clean, the electrical ground between the antenna and surface will not be sufficient, and incorrect system operation will occur.

SUBTASK 34-45-02-110-005



DO NOT GET SOLVENTS IN YOUR MOUTH, YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE DANGEROUS MATERIALS. SOLVENTS CAN BE FLAMMABLE OR CAUSE DAMAGE TO THE ENVIRONMENT. REFER TO THE MATERIAL SAFETY DATA SHEETS (MSDS) AND THE LOCAL SAFETY PRECAUTIONS.

- (3) Prepare the antenna surface per solvent cleaning (TASK 51-21-00-160-802).

SUBTASK 34-45-02-120-001

- (4) Prepare the skin panel surface per abrasive cleaning (TASK 51-21-00-160-801).

SUBTASK 34-45-02-620-001

- (5) Apply coating, C00064, to the contact surfaces of the antenna and airplane (TASK 51-21-95-300-801).

SUBTASK 34-45-02-620-002

- (6) Apply a layer of Parker Super-O-Lube lubricant, D00652, on the new O-ring [2] and groove of the O-ring [2].

SUBTASK 34-45-02-420-001

- (7) Install the TCAS antenna [3].
- (a) Make sure that the O-ring [2] is installed on the TCAS antenna [3].
 - (b) Remove the dust caps on the antenna cables.
 - (c) Examine the coaxial connectors [1] for bent or broken pins, dirt, and damage.
 - (d) Connect the coaxial connectors [1] to the TCAS antenna [3] as follows:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-02

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 401/34-45-02-993-801

CABLE SLEEVE COLOR	TCAS ANTENNA CONNECTOR
Yellow	J1
Black	J2
Blue	J3
Red	J4

- (e) Tighten the coaxial connectors [1] to 4 in-lb (0.45 N·m) - 6 in-lb (0.68 N·m) (hand tight plus 1/8 turn).
- (f) Put the TCAS antenna [3] into position.
- (g) Apply a layer of sealant, A00247, to the shank and threads of the bolts [4].
- (h) Install the bolts [4].
- (i) Tighten the bolts [4] to 35 in-lb (3.95 N·m).

SUBTASK 34-45-02-700-001

- (8) For electrical bonding check access to the top TCAS antenna [3], do these steps:

NOTE: The electrical bonding check must be performed from the inside of the airplane. The top TCAS antenna [3] is located at approximately STA 385.00.

- (a) Remove the applicable ceiling panel(s) for access to the top TCAS antenna [3].
- (b) If it is necessary, remove the insulation blankets to access the top TCAS antenna [3].

SUBTASK 34-45-02-700-002

- (9) For electrical bonding check access to the bottom TCAS antenna [3], do these steps:

NOTE: The electrical bonding check must be performed from the inside of the airplane. The bottom TCAS antenna [3] is located at approximately STA 305.00.

- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

- (b) If it is necessary, remove the insulation blankets to access the bottom TCAS antenna [3].

SUBTASK 34-45-02-760-001

- (10) Use an intrinsically safe approved bonding meter, COM-1550, to make sure that the resistance from the applicable antenna base to the inside airplane skin is not greater than 0.001 ohm (1.0 milliohm) (SWPM 20-20-00).

- (a) Install the applicable insulation blankets, if you had removed them for the electrical bonding check.

SUBTASK 34-45-02-400-001

- (11) For the top TCAS antenna [3], install the applicable ceiling panel(s) you had removed for the electrical bond check.

SUBTASK 34-45-02-410-002

- (12) For the bottom TCAS antenna [3] do this step:

- (a) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

34-45-02

D633AM101-SIA

Page 406
May 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-45-02-390-001

(13) Apply sealant, A00247, to the TCAS antenna [3] (TASK 51-22-00-390-809).

(a) Apply sealant, A00247, to the outer edge of the TCAS antenna [3].

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

(b) Fill the bolt-holes with cotton balls [5] until a gap of less than 1/8 in. (3 mm) is left.

1) If foam plugs are supplied with the antenna, install the foam plugs instead of cotton in the bolt-hole.

(c) Apply sealant, A00247, to fill in all bolt-holes.

1) Do not apply more than 1/8 in. (3 mm) of sealant into the bolt-holes.

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

(d) Let sealant, A00247, dry for the correct cure time.

SUBTASK 34-45-02-140-002

(14) Remove the unwanted sealant from around the antenna base (TASK 51-22-00-390-809).

SUBTASK 34-45-02-860-004

(15) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	6	C01195	TCAS

H. TCAS Antenna Test

SUBTASK 34-45-02-730-001

(1) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-45-02-740-001

(2) Do a TCAS operational test.

(a) On the Air Traffic Control (ATC) control panel, put the mode switch to the TEST position.

1) Make sure that you hear "TCAS system test okay" on the flight compartment speakers.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-45-02

Page 407
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ENHANCED GROUND PROXIMITY WARNING SYSTEM (EGPWS) - MAINTENANCE PRACTICES

1. General

- A. This procedure gives the instructions to:
- (1) Install software in the Enhanced Ground Proximity Warning Computer (EGPWC).
 - (2) Do a software configuration check of the EGPWC.
 - (3) Do a Flight History Data Download.
- B. This procedure has these tasks:
- (1) Install software into the EGPWC Computer.
 - (a) Operational Program Configuration (OPC) software.
 - (b) Terrain Database (TDB) software.
 - (2) Install the EGPWC software with the Portable Maintenance Device (PMD). For this task, the PMD maintenance laptop is connected to the Onboard Network System (ONS) port on the P61 panel in the Flight Compartment.
 - (3) Verify the Operational Program Configuration (OPC) software part number.
 - (4) Load the Terrain Database (TDB) software with the USB Drive.
 - (5) Load the Terrain Database (TDB) with ARINC 615A Dataloader.
 - (6) Verify the Terrain Database (TDB) software part number.
 - (7) Flight History Data Download.

TASK 34-49-00-470-801

2. Install Software into the EGPWS Computer

A. General

- (1) This task contains information on EGPWS Computer software installation.
- (2) The EGPWS Computer (EGPWC) has these on-airplane loadable software parts:
 - (a) Operational Program Configuration (OPC) software.
 - (b) Terrain Database (TDB) software.
- (3) For the MAX, software is distributed electronically to the airplane Onboard Network Server (ONS) Mass Storage Device (MSD).
 - (a) The software is first distributed from the secure server directly to the Maintenance Laptop (ML) or other Portable Maintenance Device (PMD). It is then transferred onto the ONS MSD using the ONS data transfer function (web client).
 - (b) When the software transfer to the target MSD is complete, the software is installed in the EGPWC with the PMD. The dataloader connects to the ONS Onboard Maintenance Function (OMF) Data Load application.

B. Procedure

SUBTASK 34-49-00-470-001

- (1) To install EGPWS software with the Onboard Network System (ONS), do this task: Install the EGPWC Software with the ONS, TASK 34-49-00-470-803.

SUBTASK 34-49-00-470-004

- (2) To install the Terrain Database (TDB) software with the USB Drive, do this task: Load the Terrain Database with USB Drive Load, TASK 34-49-00-470-804.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-49-00

Page 201
May 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-49-00-470-803

3. Install the EGPWC Software with the ONS

A. General

- (1) This task provides the instructions to install Operational Program Configuration (OPC) software into the Enhanced Ground Proximity Warning Computer (EGPWC).
- (2) This task provides the instructions to install Terrain Database (TDB) into the EGPWC.
- (3) The Onboard Network System (ONS) is used to access the Mass Storage Device (MSD) to load the EGPWC.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-11321	Device - Universal Maintenance (UMD) Part #: G45004-3 Supplier: 81205 Part #: G45004-31 Supplier: 81205 Opt Part #: G45003-3 Supplier: 81205 Opt Part #: G45004-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Installation

SUBTASK 34-49-00-860-005

- (1) Make sure that the parking brake is on.

SUBTASK 34-49-00-860-006

- (2) Make sure that the SYSTEM SELECT switch, on the P61 panel, is set to the NORMAL position.

SUBTASK 34-49-00-840-007

- (3) Set the FMC Source Select switch on the P5 panel to the NORMAL position.

G. EGPWC Software with the ONS Installation

SUBTASK 34-49-00-470-014

- (1) Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-010-007

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-49-00-470-021

- (3) Make sure that the EGPWC front panel LEDs are as follows:

- (a) DATALOAD STATUS is green in color or is off.
- (b) COMPUTER STATUS LED is green in color.

SUBTASK 34-49-00-470-022

- (4) For OPC software installation, do this task: Verify the Operational Program Configuration (OPC) Part Number, TASK 34-49-00-700-801.

SUBTASK 34-49-00-700-056

- (5) For Terrain Database installation, do this task: Verify the Terrain Database Part Number, TASK 34-49-00-700-802.

H. Put the Airplane Back to its Usual Condition

SUBTASK 34-49-00-470-023

- (1) If the universal maintenance device, SPL-11321, is not required for another task:
- (a) Close the browser window.
 - (b) Shut down the laptop.
 - (c) Disconnect the Ethernet cable between the laptop and data port.

SUBTASK 34-49-00-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— END OF TASK —————

TASK 34-49-00-700-801

4. Verify the Operational Program Configuration (OPC) Part Number

(Figure 201)

A. General

- (1) This task has instructions to do a check of the Operational Program Configuration (OPC) part number. The Enhanced Ground Proximity Warning Computer (EGPWC) self-test can be activated from the flight compartment.

NOTE: You can do a check of the OPC part number in the flight compartment or electrical and electronics compartment. If you do the test from the electrical and electronics compartment, you must use the headphones and the SELF TEST switch on the front panel of the ground proximity warning computer. The EGPWC level 3 self-test has aural annunciations of the current configuration which includes the OPC part number.

- (2) The EGPWC self-test can only be activated when the airplane is on the ground.

B. Location Zones

<u>Zone</u>	<u>Area</u>
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 203
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

D. Prepare for the Procedure

SUBTASK 34-49-00-840-010

- (1) Make sure that the parking brake is on.

SUBTASK 34-49-00-840-011

- (2) Make sure that the SYSTEM SELECT switch on the P61 panel is set to NORMAL.

SUBTASK 34-49-00-840-012

- (3) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	7	C00629	GND PROX WARN

SUBTASK 34-49-00-840-013

- (4) Set the FMC source select switch on the P5-28 panel to NORMAL.

SUBTASK 34-49-00-840-014

- (5) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-49-00-840-015

- (6) Make sure that the EGPWC front panel LEDs are as follows:

- (a) DATALOAD STATUS is green in color or is off.
- (b) COMPUTER STATUS LED is green in color.

E. Verify the Operational Program Configuration (OPC) Part Number

SUBTASK 34-49-00-840-016

- (1) Set the First Officer Right Inboard Display Unit (RIB DU) in Full Navigational Display:
- (a) Set the IRS mode select switches on the P5-69 aft overhead panel to the NAV position.
 - (b) Set the F/O EFIS mode control switch on the P7-2 glareshield to any position except PLN.
 - (c) Set the F/O display select panel PFD/MFD switch on the P3 F/O panel to NORM.
 - (d) Set the display source select switch to AUTO and the control panel switch to NORMAL on the instrument switching module on the P5-28 forward overhead panel.
 - (e) Push the SYS key on the multi-function panel P9-82 until the F/O RIB DU is in full navigation display mode.

SUBTASK 34-49-00-700-004

- (2) Push the SYS TEST switch on Ground Proximity Module (P3-7).
- (a) Make sure that the terrain display test pattern is shown on the Navigation Display (ND).

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 204
May 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-49-00-700-034

- (3) Push the SYS TEST switch for less than two seconds.

SUBTASK 34-49-00-700-035

- (4) Wait for the aural PRESS TO CONTINUE.

SUBTASK 34-49-00-700-036

- (5) Push the SYS TEST switch.

SUBTASK 34-49-00-970-001

- (6) Make sure that the OPC software part number is correct.

NOTE: The test pattern shows the OPC part number (OSS: BCGXX-XXXX-XXXX).

- (a) Record the OPC software part number displayed on the ND.

SUBTASK 34-49-00-470-024

- (7) If the OPC part number is not correct, then do this task: Install Software into the EGPWS Computer, TASK 34-49-00-470-801.

SUBTASK 34-49-00-840-017

- (8) If the OPC part number is correct, put the airplane in its usual condition:

- (a) Open and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

- (b) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— **END OF TASK** —————

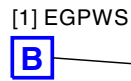
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 205
May 15/2022



ENHANCED GROUND PROXIMITY WARNING SYSTEM (EGPWS)



Enhanced Ground Proximity Warning Computer
Figure 201/34-49-00-990-805

— EFFECTIVITY
SIA ALL

34-49-00

Page 206
Sep 15/2021

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-49-00-470-804

5. Load the Terrain Database with USB Drive Load

(Figure 202)

A. General

- (1) This task has instructions to load the terrain database into the Ground Proximity Warning Computer (GPWC).
- (2) The terrain database load is inhibited when the airplane is in the air. The database will automatically load into the GPWC after you install the database USB 2.0 or 3.0 mass storage device into the USB port on the front panel. The GPWC is not compatible with USB hubs or encrypted drives.

B. References

Reference	Title
34-49-01-000-801	Ground Proximity Warning Computer Removal (P/B 401)
34-49-01-400-801	Ground Proximity Warning Computer Installation (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Loading

SUBTASK 34-49-00-860-100

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1
B	7	C00629	GND PROX WARN
D	5	C01044	AFCS MCP DC 1
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
D	1	C04030	DSP CAPT EFIS CONT PNL
D	5	C04023	DISPLAY DPC 1 PRI
E	2	C00412	INSTR XFR
E	5	C01204	SMYD-1 CMPTR DC
E	8	C00425	ADIRU LEFT EXC

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 207
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
B	5	C01206	SMYD-2 CMPTR DC
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	10	C04022	DISPLAY DPC 1 HOLDUP
D	11	C04025	DISPLAY DPC 2 PRI
D	13	C00120	WEATHER RADAR RT
E	13	C04031	DSP F/O EFIS CONT PNL

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01047	AFCS MCP DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	24	C00240	INTERPHONE POWER CAPT BAT
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 34-49-00-580-004

- (2) Make sure that the airplane is in a location where it can receive Global Positioning System (GPS) signals.

SUBTASK 34-49-00-700-057

- (3) Make sure that these systems are active as follows:
- (a) Make sure that the L and R ADIRS are in the NAV mode.
 - (b) Set the FMC transfer switch, on the P5 panel, to the NORMAL position.
 - (c) Make sure that the BELOW G/S lights are not illuminated, on the P1 and P3 panels.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 208
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (d) Make sure that the following messages are not displayed on the flight displays:
 - 1) PULL UP
 - 2) WINDSHEAR.
- (e) Make sure that the GPWS INOP indicator light, on the P3 panel, is not illuminated.
- (f) Set all switches, on the P3-7 ground proximity module, to the NORMAL (not inhibited or in override) position.
- (g) Make sure that the landing gear lever is in the DOWN position, on the P2 panel.
- (h) Make sure that the MASTER DIM TEST switch is set to the BRIGHT position, on the P1-3 panel.
- (i) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door
- (j) Open the Enhanced Ground Proximity Warning Computer (EGPWC) front panel.
- (k) Make sure that the COMPUTER STATUS light is green on the EGPWC.
- (l) Make sure that the EXTERNAL FAULT light is not illuminated on the EGPWC.

F. Load the Terrain Database with USB Drive Load

SUBTASK 34-49-00-010-003

- (1) Open the door on the front panel of the GPWC.

NOTE: A placard inside the door contains instructions for data loading.

SUBTASK 34-49-00-700-006

- (2) Make sure that the DATALOAD STATUS light is off.

SUBTASK 34-49-00-470-025

- (3) Do these steps to load the terrain database:

NOTE: If you install a version of the terrain database that is not compatible with the hardware memory, then the GPWC will not operate. Replacement of the GPWC will be necessary.

- (a) Insert the USB drive that contains the terrain database into the USB port on the GPWC.

NOTE: After the USB drive is inserted, the terrain database automatically starts to load into the GPWC.

- (b) Make sure that the DATALOAD STATUS light changes to yellow.
- (c) When the terrain database transfer is complete, the DATALOAD STATUS light changes to green.
- (d) If the DATALOAD STATUS light changes to red, do these steps to correct the fault:

NOTE: The terrain database load transfer failed.

- 1) Remove and apply power to the GPWC before the second attempt to load the terrain database.

NOTE: Reapplying power may be beneficial in recovering the computer.

- a) Open and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 209
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 2) Attempt to load the GPWC with a second USB terrain database drive, if it is available, to eliminate a corrupt USB drive as a cause of the transfer failure.
 - 3) If the terrain database load fails, replace the GPWC, M652, do these tasks:
 - Ground Proximity Warning Computer Removal, TASK 34-49-01-000-801,
 - Ground Proximity Warning Computer Installation, TASK 34-49-01-400-801.
 - 4) Load the terrain database into the new GPWC.
- (e) Remove the USB drive.
- NOTE: The GPWC will reboot automatically.
- (f) Make sure that the DATALOAD STATUS light is off.
- (g) Make sure that the COMPUTER STATUS light is GREEN.

SUBTASK 34-49-00-700-007

- (4) Do this task: Verify the Terrain Database Part Number, TASK 34-49-00-700-802.

———— **END OF TASK** ————

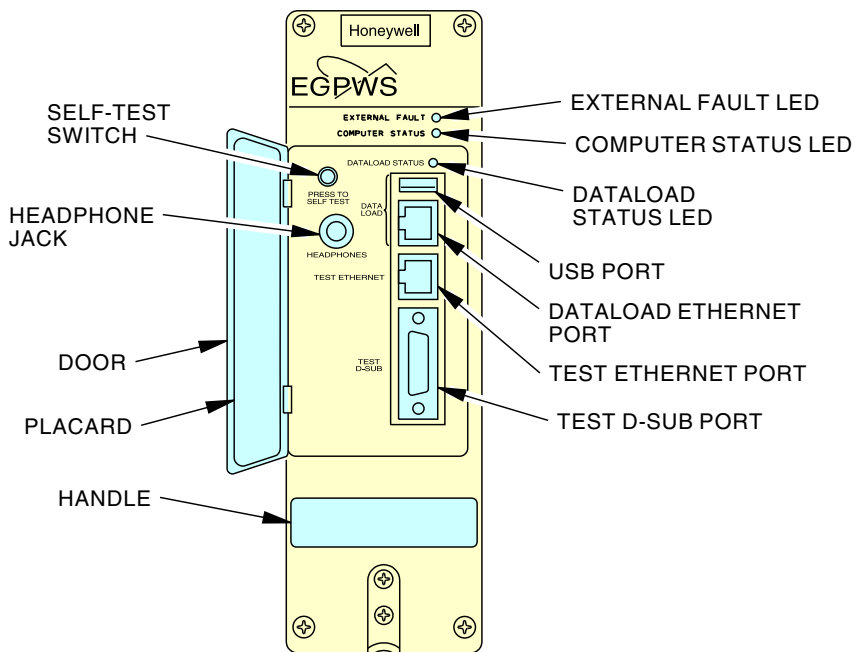
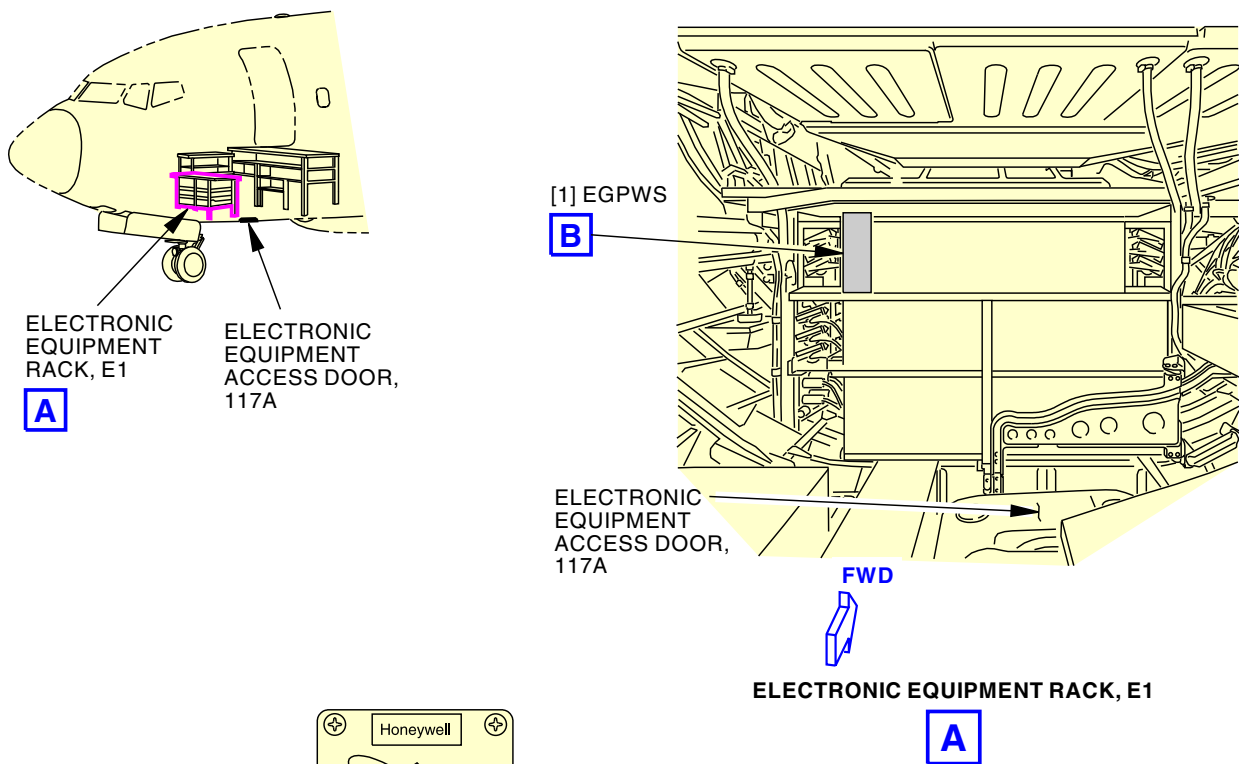
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 210
Sep 15/2023



EFFECTIVITY
SIA ALL

Ground Proximity Warning Computer
Figure 202/34-49-00-990-802

34-49-00



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-49-00-470-808

6. Load the Terrain Database with ARINC 615A Dataloader

(Figure 203)

A. General

- (1) This task provides the instructions to load the terrain database into the Enhanced Ground Proximity Warning System (EGPWS) with the ARINC 615A Dataloader.
- (2) The terrain database (TDB) for the EGPWS is inhibited when the airplane is in the air.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

C. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

D. Procedure

SUBTASK 34-49-00-010-009

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-49-00-860-044

- (2) Make sure the COMPUTER STATUS light on the front panel of the Enhanced Ground Proximity Warning Computer (EGPWC) shows GREEN in color.

SUBTASK 34-49-00-010-008

- (3) Open the door on the front panel of the EGPWC.

NOTE: A placard inside the door contains instructions for data loading.

SUBTASK 34-49-00-860-046

- (4) Make sure the DATALOAD STATUS light is off.

SUBTASK 34-49-00-470-031

- (5) Do these steps to load the terrain database:

NOTE: If you install a version of the terrain database that is not compatible with the hardware memory, then the EGPWS will not operate. Replacement of the EGPWS will be necessary.

- (a) Connect a Cat 5 Ethernet cable to the DLS and connect the other end of the Ethernet cable into the DATA LOAD Ethernet port at the front panel of the EGPWC.

NOTE: You can follow the manufacturer's instructions to energize and boot-up the DLS.

- (b) Navigate to the folder where the EGPWS terrain database files are located on the DLS.
- (c) Start the Download.
- (d) Make sure the DATALOAD STATUS light shows YELLOW in color.
- (e) If the DATALOAD STATUS light shows BLUE, the inserted device is unserviceable.
- (f) When the terrain database data transfer is completed, the DATALOAD STATUS light shows GREEN.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 212
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

Open and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

- 1) If the DATALOAD STATUS light shows RED, the terrain database data transfer failed.

NOTE: After the terrain database is finished loading, the EGPWS will reboot.

- (g) Make sure the COMPUTER STATUS light shows GREEN, after 25 seconds maximum.
- (h) Disconnect the Ethernet cable from the DATA LOAD Ethernet port on the EGPWC.

SUBTASK 34-49-00-410-003

- (6) Close the front panel door on the EGPWC.

SUBTASK 34-49-00-710-013

- (7) Make sure the EGPWC is serviceable.
 - (a) Make sure the COMPUTER STATUS light is GREEN.

SUBTASK 34-49-00-410-004

- (8) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-49-00-700-032

- (9) Do this task: Verify the Terrain Database Part Number, TASK 34-49-00-700-802.

———— **END OF TASK** ————

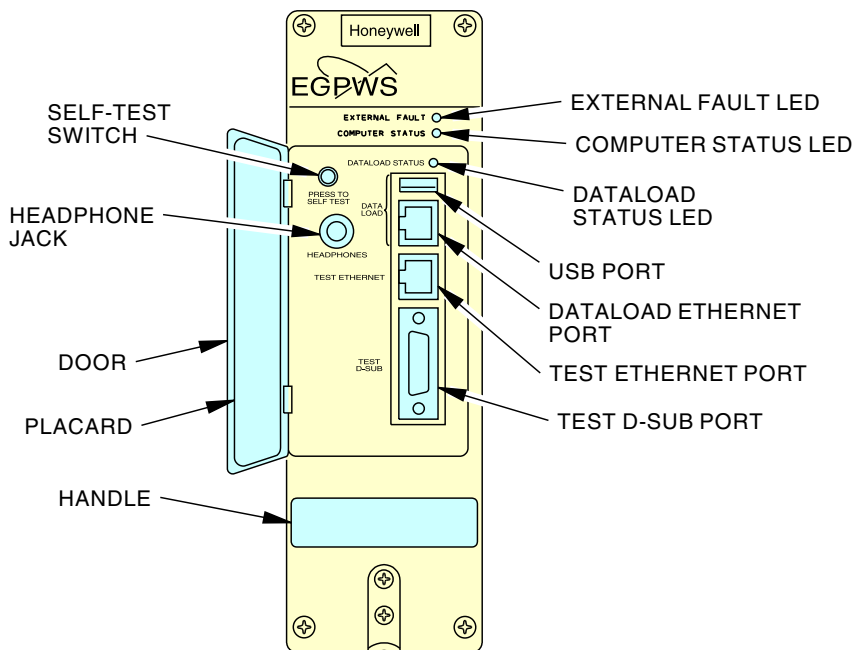
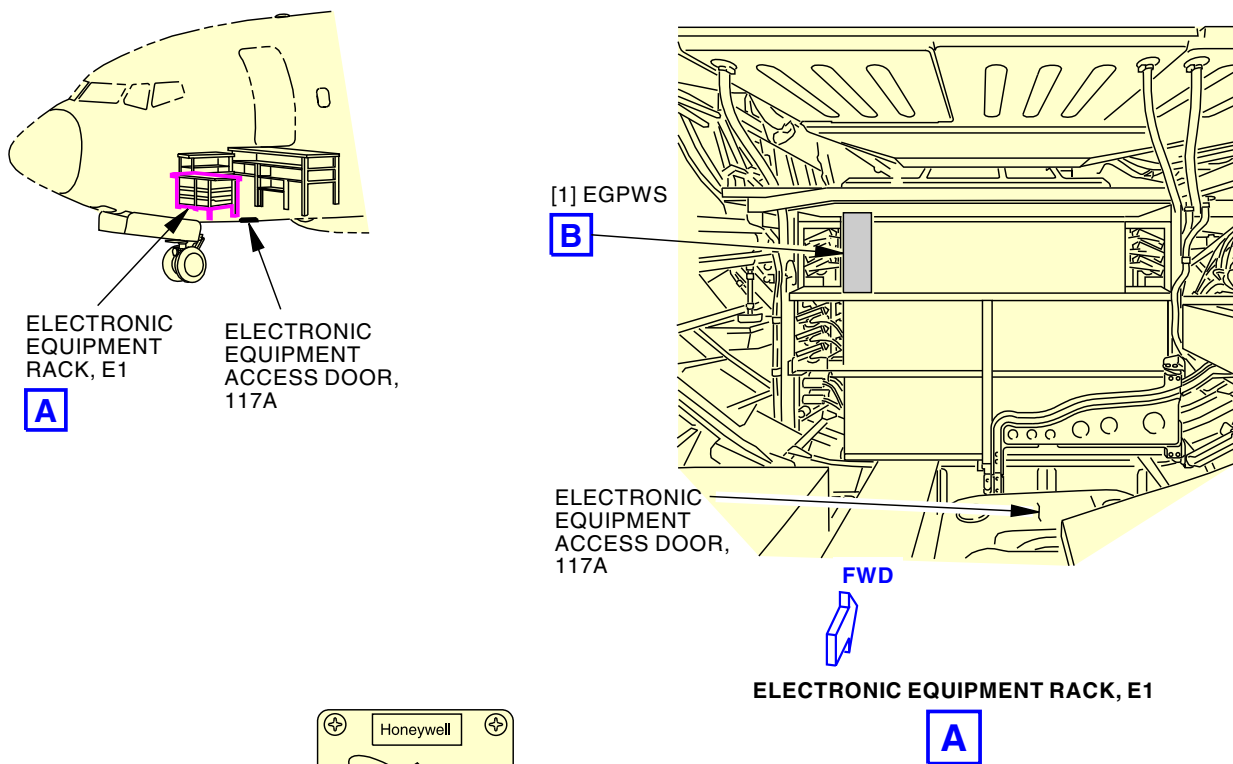
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 213
Sep 15/2023



ENHANCED GROUND PROXIMITY WARNING SYSTEM (EGPWS)

B

2414884 S00061536394_V2

Enhanced Ground Proximity Warning System
Figure 203/34-49-00-990-803

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 214
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-49-00-700-802

7. Verify the Terrain Database Part Number

(Figure 201)

A. General

- (1) This task gives instructions to make sure that the Terrain Database (TDB) part number is correct. You can use this task after all the different TDB installation dataload procedures and for all the different media types. The Enhanced Ground Proximity Warning Computer (EGPWC) self-test can be activated from the flight compartment.

NOTE: Check of the TDB part number in the flight compartment on the Navigation Display (ND) or electrical and electronics compartment can be done. If the test from the electrical and electronics compartment is done, use the headphones and the SELF TEST switch on the front panel of the ground proximity warning computer. The EGPWC level 3 self-test has aural annunciations of the current configuration that includes the TDB part number.

- (2) The EGPWC self-test can only be activated when the airplane is on the ground.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Check

SUBTASK 34-49-00-840-019

- (1) Make sure that the SYSTEM SELECT switch, on the P61 panel, is set to the NORMAL position.

SUBTASK 34-49-00-840-020

- (2) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	7	C00629	GND PROX WARN

D. Terrain Database (TDB) Part Number Check

SUBTASK 34-49-00-840-024

- (1) Set the First Officer Right Inboard Display Unit (RIB DU) in Full Navigation Display, do these steps:
 - (a) Set the Inertial Reference System (IRS) mode select switches, on the P5-69 aft overhead panel, to the NAV position.
 - (b) Set the first officer Electronic Flight Instrument System (EFIS) mode control switch, on the P7-2 glareshield, to any position except PLN.
 - (c) Set the first officers display select panel PFD/MFD switch, on the P3 first officer panel, to the NORM position.
 - (d) Set the display source select switch to the AUTO position and control panel switch to the NORMAL position on the instrument switching module on the P5-28 forward overhead panel.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 215
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (e) Push the SYS key, on the P9-82 multi-function panel, until the F/O RIB DU is in full navigation display mode.

SUBTASK 34-49-00-860-012

- (2) Push the SYS TEST switch on the P3-7 Ground Proximity Module.
- (a) Make sure that the terrain display test pattern is shown on the ND.

NOTE: The last four digits in TDBXXXX on the Displays, is the TDB version for the TDB part number.

SUBTASK 34-49-00-700-037

- (3) Push the SYS TEST switch for less than two seconds.

SUBTASK 34-49-00-700-038

- (4) Wait for the aural PRESS TO CONTINUE.

SUBTASK 34-49-00-700-039

- (5) Push the SYS TEST switch.

SUBTASK 34-49-00-970-002

- (6) Make sure that the TDB part number shows on the ND.
- (a) Record the TDB part number shown on the display.

NOTE: The test pattern shows the TDB part number (TDB: XXXX-XXX-XXX-XX or TDB: XXXX-XXX-XXXXX).

NOTE: The TDB version number is the last four numbers at the end of TDB part number.

SUBTASK 34-49-00-470-034

- (7) If the TDB part number is not correct, do this task: Install Software into the EGPWS Computer, TASK 34-49-00-470-801.

SUBTASK 34-49-00-840-025

- (8) If the TDB part number is correct, put the airplane back to its usual condition.
- (a) Open and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

————— **END OF TASK** —————

TASK 34-49-00-970-801

8. Flight History Data Download

A. General

- (1) This procedure gives the steps to download flight history data from the Enhanced Ground Proximity Warning Computer (EGPWC).
- (2) Use a USB 2.0 memory stick to download the flight history files from the Enhanced Ground Proximity Warning System (EGPWS). A text file that controls the download is copied onto the memory stick. Then the stick is installed into the USB port on the front panel of the EGPWC. The text file is made using a text editor or it can be downloaded from the vendor website. It is recommended to use a memory stick with no other files on it.
- (3) It is necessary to format the Flash memory drive before you do the download.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 216
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

B. Tools/Equipment

Reference	Description
STD-13649	Drive - Flash, USB (2GB Capacity Minimum)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

D. Prepare the Memory Stick

SUBTASK 34-49-00-480-001

- (1) Get the USB Flash Drive, STD-13649.

SUBTASK 34-49-00-970-003

- (2) Create .lst file with text editor as follows:
 - (a) Copy the four lines below and save it to a file named "FH.lst".

```
HONEYWELL-EGPWS-MKVA-DOWN: Comments
{
DLNVM,fh.dat
}
```

SUBTASK 34-49-00-970-004

- (3) Or, get the .lst file from the Honeywell website as follows:
 - (a) Enter this address.
<http://www51.honeywell.com/aero/common/documents/FH.zip>
When the "File Download" dialog box appear, click on "save" button to save the file to your PC.
A file named FH.lst will be created when using WinZip to Unzip the file.

SUBTASK 34-49-00-970-005

- (4) Make sure that the memory stick is formatted to a standard Windows/DOS FAT32 format, and it does not have other files on it.

SUBTASK 34-49-00-970-006

- (5) Copy the FH.lst file onto the memory stick.

E. Procedure

SUBTASK 34-49-00-700-011

- (1) Make sure that the "COMPUTER STATUS" LED on the front panel of the GPWC shows green in color.

SUBTASK 34-49-00-700-012

- (2) Make sure that the "EXTERNAL FAULT" LED on the front panel of the GPWC is off.

SUBTASK 34-49-00-010-004

- (3) Open the front panel door on the EGPWC.

NOTE: A placard inside the door has instructions for data loading.

SUBTASK 34-49-00-700-013

- (4) Make sure that the "DATALOAD STATUS" LED is off.

SUBTASK 34-49-00-970-007

- (5) Do these steps to download the flight history data:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 217
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Insert the USB drive, which has the FH.lst file, into the USB port on the EGPWC.
- (b) Make sure that the "DATALOAD STATUS" LED changes to show yellow in color.
- (c) If the "DATALOAD STATUS" LED shows blue in color, then the inserted device is unserviceable.
- (d) When the flight history data transfer is complete, the "DATALOAD STATUS" LED shows green in color.
 - 1) If the "DATALOAD STATUS" LED shows red in color, the flight history data transfer failed.
- (e) Remove the USB drive.

SUBTASK 34-49-00-410-002

- (6) Close the front panel door on the EGPWC.

SUBTASK 34-49-00-700-014

- (7) Make sure that the EGPWC is serviceable.
 - (a) Make sure that the "COMPUTER STATUS" LED is green in color.
 - (b) Make sure that the "EXTERNAL FAULT" LED is off.

SUBTASK 34-49-00-980-001

- (8) Send the USB memory stick with the flight history data to your engineering department.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 218
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

GROUND PROXIMITY WARNING SYSTEM - ADJUSTMENT/TEST

1. General

A. The EGPWC gives visual and aural warnings and alerts for the pilots. The warnings and alerts are associated with the following flight conditions:

- Mode 1 - Excessive Descent Rate
- Mode 2 - Excessive Closure Rate To Terrain
- Mode 3 - Altitude Loss After Take-off
- Mode 4 - Insufficient Terrain Clearance
- Mode 5 - Excessive Glideslope Deviation Below Beam
- Mode 6 - Altitude Callouts
- Mode 7 - Windshear Detection.

(1) Additional functionality includes:

- (a) Envelope Modulation
- (b) Look-Ahead Terrain alerting
- (c) Terrain Display

SIA 015-999

(d) Runway Situational Awareness Tools (RSAT).

SIA ALL

B. This procedure has these tasks:

- (1) Ground Proximity Warning System - Operational Test
- (2) Ground Proximity Warning System - System Test.

TASK 34-49-00-710-801

2. Ground Proximity Warning System Operational Test

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives the instructions to do the operational test of the Enhanced Ground Proximity Warning System (EGPWS).

B. References

Reference	Title
32-09-00-840-802	Return the Airplane Systems Back to Their Normal on Ground Condition (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 501
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Operational Test

SUBTASK 34-49-00-860-014

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1
B	7	C00629	GND PROX WARN
D	5	C01044	AFCS MCP DC 1
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
D	1	C04030	DSP CAPT EFIS CONT PNL
D	5	C04023	DISPLAY DPC 1 PRI
E	2	C00412	INSTR XFR
E	5	C01204	SMYD-1 CMPTR DC
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
B	5	C01206	SMYD-2 CMPTR DC
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	10	C04022	DISPLAY DPC 1 HOLDUP
D	11	C04025	DISPLAY DPC 2 PRI
D	13	C00120	WEATHER RADAR RT
E	13	C04031	DSP F/O EFIS CONT PNL

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	3	C01047	AFCS MCP DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	24	C00240	INTERPHONE POWER CAPT BAT

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 502
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 34-49-00-580-003

- (2) Make sure that the airplane is in a location where it can receive Global Positioning System (GPS) signals.

SUBTASK 34-49-00-700-015

- (3) Make sure that these systems are active as follows:
- (a) Make sure that the L and R ADIRS are in the NAV mode.
 - (b) Set the FMC transfer switch, on the P5 panel, to the NORMAL position.
 - (c) Make sure that the BELOW G/S lights are not illuminated, on the P1 and P3 panels.
 - (d) Make sure that the following messages are not displayed on the flight displays:
 - 1) PULL UP
 - 2) WINDSHEAR.
 - (e) Make sure that the GPWS INOP indicator light, on the P3 panel, is not illuminated.
 - (f) Set all switches, on the P3-7 ground proximity module, to the NORMAL (not inhibited or in override) position.
 - (g) Make sure that the landing gear lever is in the DOWN position, on the P2 panel.
 - (h) Make sure that the MASTER DIM TEST switch is set to the BRIGHT position, on the P1-3 panel.
 - (i) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door
 - (j) Open the Enhanced Ground Proximity Warning Computer (EGPWC) front panel.
 - (k) Make sure that the COMPUTER STATUS light is green on the EGPWC.
 - (l) Make sure that the EXTERNAL FAULT light is not illuminated on the EGPWC.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 503
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F. Air/Ground Discrete Test

SUBTASK 34-49-00-730-113

- (1) Do these steps to do a level 6 self-test:
 - (a) Push the Ground Proximity Warning System (GPWS) SYS TEST switch, on the P3-7 ground proximity warning module, for one second.
 - (b) After the level 1 self-test starts, push the GPWS SYS TEST switch, on the P3-7 ground proximity warning module, for one second to go to the level 2 self-test.
 - (c) After the level 2 self-test starts, push the GPWS SYS TEST switch, on the P3-7 ground proximity warning module, for one second to go to the level 3 self-test.
 - (d) After the level 3 self-test starts, push the GPWS SYS TEST switch, on the P3-7 ground proximity warning module, for one second to go to the level 4 self-test.
 - (e) After the level 4 self-test starts, push the GPWS SYS TEST switch, on the P3-7 ground proximity warning module, for one second to go to the level 5 self-test.
 - (f) After the level 5 self-test starts, push the GPWS SYS TEST switch, on the P3-7 ground proximity warning module, for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-114

- (2) Do this task to put SYS 1 in AIR mode: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.
 - (a) Make sure that the aural message "NOT ON GROUND" is annunciated.

SUBTASK 34-49-00-730-115

- (3) Do this task to put SYS 1 in GND mode: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.
 - (a) Make sure that the aural message "ON GROUND" is annunciated.

SUBTASK 34-49-00-730-116

- (4) Put the airplane systems back to their usual on-ground condition, do this task: Return the Airplane Systems Back to Their Normal on Ground Condition, TASK 32-09-00-840-802.

SUBTASK 34-49-00-730-117

- (5) Push and release the GPWS SYS TEST switch, on the P3-7 ground proximity warning module.
NOTE: This step will end the level 6 self-test.

G. Ground Proximity Warning System Operational Test

SUBTASK 34-49-00-860-015

- (1) Set the DISPLAYS - SOURCE switch, on the P5-28 instrument switching module, to the ALL ON 2 position.

SUBTASK 34-49-00-860-018

- (2) Set the TERR switch, on the two Electronic Flight Instrument System (EFIS) control panels, to the ON position.

SUBTASK 34-49-00-700-017

- (3) Make sure that the terrain data and blue TERR messages show on the displays.

SUBTASK 34-49-00-710-002

- (4) Set the DISPLAYS - SOURCE switch, on the P5-28 instrument switching module, to the ALL ON 1 position.

SUBTASK 34-49-00-860-051

- (5) Set the TERR switch, on the two EFIS control panels, to the ON position.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 504
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-710-003

- (6) Make sure that the terrain data and blue TERR messages show on the displays.

SUBTASK 34-49-00-700-018

- (7) Push and release the GPWS INOP light, on the P3-7 ground proximity warning module, to do a test of the light.
- (a) Make sure that the GPWS INOP light comes on while it is pushed and GPWS INOP light goes off when it is released.

SUBTASK 34-49-00-700-019

- (8) Push and hold for approximately 0.5 to 2 seconds the GPWS SYS TEST switch, on the P3-7 ground proximity warning module.
- (a) Make sure that the INOP light comes on within six seconds.

SUBTASK 34-49-00-710-001

- (9) Make sure that the aural indications are heard and visual indications are seen that follow:

NOTE: Other lights, messages, and aural may occur for several seconds. Verification of other lights, messages aural, or sequence are not required.

NOTE: Lights, messages, and aural may not appear/occur simultaneously.

Table 501/34-49-00-993-801

EGPWS INDICATIONS		
LIGHT/MESSAGE (ON)	LIGHT/MESSAGE (OFF)	AURAL SOUND FROM SPEAKERS
Amber GPWS INOP light; cyan TERR TEST on the displays		
	Amber GPWS INOP	
The two amber BELOW G/S lights		GLIDESLOPE
	The two amber BELOW G/S lights	
Red PULL UP message on Capt's and F/O's displays	Cyan TERR TEST on the displays	PULL UP
	Red PULL UP message on Capt's and F/O's displays	
Red WINDSHEAR message on Capt's and F/O's displays		Two tone siren WINDSHEAR, WINDSHEAR, WINDSHEAR
	Red WINDSHEAR message on Capt's and F/O's displays	
SIA 015-999		
		RUNWAY AWARENESS OK
SIA ALL		
		AIR SPEED LOW
		SINK RATE
		PULL UP
		TERRAIN

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 505
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

Table 501/34-49-00-993-801 (Continued)

EGPWS INDICATIONS		
LIGHT/MESSAGE (ON)	LIGHT/MESSAGE (OFF)	AURAL SOUND FROM SPEAKERS
		PULL UP
		DON'T SINK, DON'T SINK
		TOO LOW TERRAIN
		TOO LOW GEAR
		TOO LOW FLAPS
		TOO LOW TERRAIN
		GLIDESLOPE
		BANK ANGLE BANK ANGLE
		APPROACHING MINIMUMS
		MINIMUMS (DECISION HEIGHT OR MINIMUMS, MINIMUMS)
		TWENTY-FIVE HUNDRED (RADIO ALTITUDE)
		ONE THOUSAND
		FIVE HUNDRED
		FOUR HUNDRED
		THREE HUNDRED
		TWO HUNDRED
		ONE HUNDRED
		FIFTY
		FORTY
		THIRTY
		TWENTY
		TEN
		Two tone siren WINDSHEAR, WINDSHEAR, WINDSHEAR
		TOO LOW TERRAIN
		CAUTION TERRAIN CAUTION TERRAIN
		TERRAIN, TERRAIN-PULL UP
		CAUTION OBSTACLE CAUTION OBSTACLE

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 506
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 501/34-49-00-993-801 (Continued)

EGPWS INDICATIONS		
LIGHT/MESSAGE (ON)	LIGHT/MESSAGE (OFF)	AURAL SOUND FROM SPEAKERS
		OBSTACLE, OBSTACLE- PULL UP
	Test pattern on the displays	

SIA 015-999

SUBTASK 34-49-00-700-041

- (10) Make sure that the RUNWAY INOP light, on the P3-7 ground proximity warning module, turns on.

SIA ALL

SUBTASK 34-49-00-700-042

- (11) Allow approximately 30 seconds for the EGPWC to discontinue the self test process.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-49-00-410-005

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-49-00-860-019

- (2) Make sure that all applicable switches are in their normal positions.

————— **END OF TASK** —————

TASK 34-49-00-730-801

3. Ground Proximity Warning System - System Test

A. General

- (1) The system test does an internal Enhanced Ground Proximity Warning Computer (EGPWC) check and a check of system interfaces.
- (2) This test uses Global Positioning System (GPS) data. You must move the airplane to a position where the GPS antennas have a clear view of the GPS satellites.
- (3) Different systems interface with the EGPWC. Some systems send data. Some systems send one discrete signal.
- (4) The systems that send data have aural error messages. You check these signals when you turn off a system and hear an aural message annunciated.
- (a) Some systems supply two sources and are redundant. You turn off one system and hear an aural message. The EGPWC will still function with data from the redundant system. Then, you turn the second system off and look for the INOP light on the ground proximity warning module to come on.

B. References

<u>Reference</u>	<u>Title</u>
32-09-00-840-802	Return the Airplane Systems Back to Their Normal on Ground Condition (P/B 201)

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 507
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
32-31-00-730-801	System Test - Landing Gear Control System (P/B 501)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the System Test

SUBTASK 34-49-00-860-053

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1
B	7	C00629	GND PROX WARN
D	5	C01044	AFCS MCP DC 1
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
D	1	C04030	DSP CAPT EFIS CONT PNL
D	5	C04023	DISPLAY DPC 1 PRI
E	2	C00412	INSTR XFR
E	5	C01204	SMYD-1 CMPTR DC
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	7	C01678	WEATHER RADAR RT RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2
B	5	C01206	SMYD-2 CMPTR DC
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	10	C04022	DISPLAY DPC 1 HOLDUP

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 508
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C04025	DISPLAY DPC 2 PRI
D	13	C00120	WEATHER RADAR RT
E	13	C04031	DSP F/O EFIS CONT PNL

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	3	C01047	AFCS MCP DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	24	C00240	INTERPHONE POWER CAPT BAT
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 34-49-00-580-001

- (2) Make sure that the airplane is in a location where it can receive GPS signals.

SUBTASK 34-49-00-860-021

- (3) Set the left and right ADIRS mode select switches to the NAV position.

SUBTASK 34-49-00-860-022

- (4) Set the FMC transfer switch to the NORMAL position.

SUBTASK 34-49-00-700-022

- (5) Make sure that the captain's and first officer's BELOW G/S switch-lights, on the P1-1 and P3-1 panels, are not on.

SUBTASK 34-49-00-700-023

- (6) Make sure that these messages do not show on the captain's and first officer's NAV displays:
- (a) PULL UP
 - (b) WINDSHEAR

SUBTASK 34-49-00-700-024

- (7) Make sure that the INOP light on the ground proximity warning module is not on.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 509
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-700-025

- (8) Make sure that all switches, on the P3-7 ground proximity warning module, are in the NORMAL position.

SUBTASK 34-49-00-700-021

- (9) Make sure that the green COMPUTER STATUS light on the Ground Proximity Warning Computer (GPWC) front panel is on.

SUBTASK 34-49-00-700-020

- (10) Make sure that the yellow EXTERNAL FAULT light on the GPWC front panel is not on.

SUBTASK 34-49-00-700-026

- (11) Make sure that the landing gear lever is in the DOWN position.

SUBTASK 34-49-00-700-027

- (12) Make sure that the LIGHTS switch, on the P1-3 panel, is in the BRIGHT position.

E. System Configuration Status Test

SUBTASK 34-49-00-730-001

- (1) Push the Ground Proximity Warning System (GPWS) SYS TEST switch on the ground proximity warning module P3-7 for one second.

NOTE: You can do this test in the electrical and electronics compartment or in the flight compartment. If you do the test from the flight compartment, you do not need headphones. Use the GPWS SYS TEST switch on the ground proximity warning module. If you do the test from the electrical and electronics compartment, use the headphones and the SELF TEST switch on the front panel of the ground proximity warning computer.

SUBTASK 34-49-00-730-002

- (2) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

SUBTASK 34-49-00-730-003

- (3) After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.

NOTE: The level 3 self-test starts with the voice annunciation "SYSTEM CONFIGURATION".

- (a) Make sure that you hear these aural messages in the sequence that follows:

- 1) PART NUMBER XXX-XXXX-XXX-XXX-XXX
- 2) MOD STATUS X
- 3) SERIAL NUMBER XXX
- 4) SOFTWARE VERSION XXX
- 5) TERRAIN DATABASE VERSION XXX
- 6) ENVELOPE MOD DATABASE VERSION XXX
- 7) OSS CONFIGURATION FILE XXXX
- 8) BOOT CODE VERSION XXXX
- 9) AIRCRAFT TYPE SEVEN FOUR SIX
- 10) AUDIO MENU ZERO
- 11) ALTITUDE CALLOUT MENU XXX
- 12) OPTIONAL INPUTS SELECTED
- 13) DUAL GPS SELECTED

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 510
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- 14) DUAL ILS SELECTED
- 15) DUAL RADIO ALTIMETER SELECTED
- 16) WINDSHEAR CAUTION DISABLED
- 17) PWS OPTION 1 SELECTED
- 18) BANK ANGLE OPTION 2 SELECTED
- 19) PEAKS ENABLED
- 20) OBSTACLE AWARENESS ENABLED

SIA 015-999

- 21) RUNWAY AWARENESS ENABLED

SIA ALL

SUBTASK 34-49-00-730-004

- (4) When you hear the "PRESS TO CONTINUE", wait approximately 30 seconds for the EGPWC to stop the self-test mode.

F. System Interface Test

SUBTASK 34-49-00-860-055

- (1) Make sure that the VHF NAV switch is in the NORMAL position.

SUBTASK 34-49-00-860-056

- (2) Set a frequency of 109.00 MHz on the captain's and first officer's VHF NAV control panels.

SUBTASK 34-49-00-860-057

- (3) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

SUBTASK 34-49-00-750-001

- (4) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-740-001

- (5) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-860-058

- (6) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

- (a) Make sure that the aural message "RADIO ALTIMETER BUS 1 INACTIVE" is annunciated.

SUBTASK 34-49-00-860-059

- (7) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-49-00-750-002

- (8) Make sure that the INOP light on the ground proximity warning module shows in 20 seconds or less.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 511
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-860-060

- (9) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	4	C01384	RADIO NAVIGATION RADIO ALTM 1

SUBTASK 34-49-00-750-003

- (10) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-860-061

- (11) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	16	C01385	RADIO NAVIGATION RADIO ALTM 2

SUBTASK 34-49-00-750-004

- (12) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-860-062

- (13) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

SUBTASK 34-49-00-750-005

- (14) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-740-002

- (15) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-860-063

- (16) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.
- (a) Make sure that the aural messages "Inertial Reference System (IRS) BUS 1 INACTIVE" and "AIR DATA BUS 1 INACTIVE" are annunciated.

SUBTASK 34-49-00-860-064

- (17) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-49-00-750-006

- (18) Make sure that the INOP light on the ground proximity warning module shows in 20 seconds or less.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 512
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-860-065

- (19) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

SUBTASK 34-49-00-750-007

- (20) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-740-003

- (21) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-860-066

- (22) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.
- (a) Make sure that the aural messages "IRS BUS 2 INACTIVE" and "AIR DATA BUS 2 INACTIVE" are annunciated.

SUBTASK 34-49-00-860-067

- (23) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	17	C01010	ADIRU RIGHT DC

SUBTASK 34-49-00-750-008

- (24) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-710-015

- (25) Enter the IRS present position in the Inertial System Display Unit (ISDU).
- (a) Set the SYS DSPL switch on the ISDU to the PPOS position.
- (b) Enter the latitude on the ISDU.
- (c) Push the ENT key on the ISDU to send the latitude data.
- (d) Enter the longitude on the ISDU.
- (e) Push the ENT key on the ISDU to send the longitude data.

SUBTASK 34-49-00-860-068

- (26) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

SUBTASK 34-49-00-740-004

- (27) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-860-069

- (28) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 513
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the aural messages "Instrument Landing System (ILS) BUS 1 INACTIVE" and "GPS BUS 1 INACTIVE" are annunciated.

NOTE: Ignore the INOP light on the ground proximity warning module if it shows, and ignore all other aural messages that you hear.

SUBTASK 34-49-00-860-070

- (29) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-49-00-860-086

- (30) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

SUBTASK 34-49-00-740-009

- (31) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-750-016

- (32) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

- (a) Make sure that the aural message "ILS BUS 2 INACTIVE" and "GPS BUS 2 INACTIVE" is annunciated.

NOTE: Ignore the INOP light on the ground proximity warning module if it shows, and ignore all other aural messages that you hear.

SUBTASK 34-49-00-860-087

- (33) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-49-00-750-017

- (34) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-860-088

- (35) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

SUBTASK 34-49-00-750-018

- (36) Make sure that the INOP light on the ground proximity warning module shows in 6 seconds or less.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 514
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-860-089

- (37) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

SUBTASK 34-49-00-750-019

- (38) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-860-090

- (39) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01204	SMYD-1 CMPTR DC

SUBTASK 34-49-00-750-020

- (40) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-740-010

- (41) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-740-011

- (42) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

- (a) Make sure that the aural message "Stall Management Yaw Damper (SMYD) BUS 1 INACTIVE" is annunciated.

SUBTASK 34-49-00-860-091

- (43) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C01206	SMYD-2 CMPTR DC

SUBTASK 34-49-00-750-021

- (44) Make sure that the INOP light on the ground proximity warning module shows in 20 seconds or less.

SUBTASK 34-49-00-860-092

- (45) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01204	SMYD-1 CMPTR DC

SUBTASK 34-49-00-750-022

- (46) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-860-093

- (47) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C01206	SMYD-2 CMPTR DC

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 515
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-750-023

- (48) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-860-094

- (49) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

SUBTASK 34-49-00-740-012

- (50) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-740-013

- (51) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

- (a) Make sure that the aural message "Electronic Flight Instrument System (EFIS) BUS 1 INACTIVE" is annunciated.

SUBTASK 34-49-00-860-095

- (52) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C04025	DISPLAY DPC 2 PRI

SUBTASK 34-49-00-740-014

- (53) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-740-015

- (54) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

- (a) Make sure that the aural messages "EFIS BUS 1 INACTIVE" and "EFIS BUS 2 INACTIVE" are annunciated.

NOTE: Ignore the INOP light on the ground proximity warning module if it shows, and ignore all other aural messages that you hear.

SUBTASK 34-49-00-860-085

- (55) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C04023	DISPLAY DPC 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C04025	DISPLAY DPC 2 PRI

NOTE: The display may take several minutes to become operational.

SUBTASK 34-49-00-750-024

- (56) Make sure that the INOP light on the ground proximity warning module does not show.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 516
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-860-096

- (57) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-49-00-750-025

- (58) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-740-016

- (59) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.

SUBTASK 34-49-00-740-017

- (60) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

- (a) Make sure that the aural message "WEATHER RADAR HAZARD BUS 1 INACTIVE" is annunciated.

SUBTASK 34-49-00-860-097

- (61) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	13	C00120	WEATHER RADAR RT

SUBTASK 34-49-00-750-026

- (62) Make sure that the INOP light on the ground proximity warning module does not show.

SUBTASK 34-49-00-750-027

- (63) If terrain data does not show on the displays, push the TERR switch on the EFIS control panel to the on position.

SUBTASK 34-49-00-750-028

- (64) Make sure that the terrain data and the blue TERR messages show on the displays.

NOTE: Horizontal position data must be available to obtain the blue TERR message. The amber TERR POS message shows when there is not enough accuracy in the horizontal position data, or if the horizontal position data is not available.

NOTE: GPS data can be confirmed by selecting the FMC-CDU to the POS REF page.

G. Air/Ground Discrete Test

SUBTASK 34-49-00-730-073

- (1) Do these steps to do a level 6 self-test:
- Push the GPWS SYS TEST switch on the ground proximity warning module for one second.
 - After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.
 - After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.
 - After the level 3 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 4 self-test.
 - After the level 4 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 5 self-test.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-49-00

Page 517
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (f) After the level 5 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-075

- (2) Do this task to put SYS 1 in AIR mode: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

- (a) Make sure that the aural message "NOT ON GROUND" is annunciated.

SUBTASK 34-49-00-730-077

- (3) Do this task to put SYS 1 in GND mode: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

- (a) Make sure that the aural message "ON GROUND" is annunciated.

SUBTASK 34-49-00-730-080

- (4) Put the airplane systems back to their usual on-ground condition, do this task: Return the Airplane Systems Back to Their Normal on Ground Condition, TASK 32-09-00-840-802.

SUBTASK 34-49-00-730-081

- (5) Push and release the GPWS SYS TEST switch on the ground proximity warning module.

NOTE: This step will end the level 6 self-test.

H. Flap Inhibit Discrete Test

SUBTASK 34-49-00-730-082

- (1) Do these steps to do a level 6 self-test:
 - (a) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.
 - (b) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.
 - (c) After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.
 - (d) After the level 3 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 4 self-test.
 - (e) After the level 4 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 5 self-test.
 - (f) After the level 5 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-083

- (2) Set the FLAP INHIBIT switch on the ground proximity warning module to the INHIBIT position.

- (a) Make sure that the aural message "LANDING FLAPS" is annunciated.

SUBTASK 34-49-00-730-084

- (3) Set the FLAP INHIBIT switch on the ground proximity warning module to the NORMAL position.

- (a) Make sure that the aural message "NOT LANDING FLAPS" is annunciated.

SUBTASK 34-49-00-730-085

- (4) Push and release the GPWS SYS TEST switch on the ground proximity warning module.

NOTE: This step will end the level 6 self-test.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 518
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

I. Landing Gear Handle Discrete Test

SUBTASK 34-49-00-730-086

- (1) Do these steps to do a level 6 self-test:
 - (a) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.
 - (b) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.
 - (c) After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.
 - (d) After the level 3 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 4 self-test.
 - (e) After the level 4 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 5 self-test.
 - (f) After the level 5 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-087



WARNING

MAKE SURE THAT THE GROUND LOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR [BEFORE YOU MOVE THE CONTROL LEVER]. WITHOUT THE GROUND LOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (2) Set the landing gear lever to the UP position, do this task: System Test - Landing Gear Control System, TASK 32-31-00-730-801.
 - (a) Make sure that the aural message "LANDING GEAR UP" is annunciated.

SUBTASK 34-49-00-730-088

- (3) Set the GEAR INHIBIT switch on the ground proximity warning module to the INHIBIT position.
 - (a) Make sure that the aural message "LANDING GEAR DOWN" is annunciated.

SUBTASK 34-49-00-730-089

- (4) Set the GEAR INHIBIT switch on the ground proximity warning module to the NORMAL position.
 - (a) Make sure that the aural message "LANDING GEAR UP" is annunciated.

SUBTASK 34-49-00-730-090

- (5) Set the landing gear lever to the DOWN position.
 - (a) Make sure that the aural message "LANDING GEAR DOWN" is annunciated.

SUBTASK 34-49-00-730-091

- (6) Push and release the GPWS SYS TEST switch on the ground proximity warning module.

NOTE: This step will end the level 6 self-test.

J. Terrain Inhibit Discrete Test

SUBTASK 34-49-00-730-092

- (1) Do these steps to do a level 6 self-test:
 - (a) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.
 - (b) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 519
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.
- (d) After the level 3 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 4 self-test.
- (e) After the level 4 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 5 self-test.
- (f) After the level 5 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-093

- (2) Set the TERR INHIBIT switch on the ground proximity warning module to the INHIBIT position.
 - (a) Make sure that the aural message "TERRAIN OFF" is annunciated.

SUBTASK 34-49-00-730-094

- (3) Set the TERR INHIBIT switch on the ground proximity warning module to the NORMAL position.
 - (a) Make sure that the aural message "TERRAIN ON" is annunciated.

SUBTASK 34-49-00-730-095

- (4) Push and release the GPWS SYS TEST switch on the ground proximity warning module.
NOTE: This step will end the level 6 self-test.

K. Glideslope Cancel Test

SUBTASK 34-49-00-730-096

- (1) Do these steps to do a level 6 self-test:
 - (a) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.
 - (b) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test.
 - (c) After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.
 - (d) After the level 3 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 4 self-test.
 - (e) After the level 4 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 5 self-test.
 - (f) After the level 5 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-097

- (2) Push and hold the captain's BELOW G/S switch-light on the P1-1 panel.
 - (a) Make sure that the aural message "GLIDESLOPE CANCELED" is annunciated.

SUBTASK 34-49-00-730-098

- (3) Release the captain's BELOW G/S switch-light on the P1-1 panel.
 - (a) Make sure that the aural message "GLIDESLOPE ENABLED" is annunciated.

SUBTASK 34-49-00-730-099

- (4) Push and hold the first officer's BELOW G/S switch-light on the P3-1 panel.
 - (a) Make sure that the aural message "GLIDESLOPE CANCELED" is annunciated.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

Page 520
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-00-730-100

- (5) Release the first officer's BELOW G/S switch-light on the P3-1 panel.
 - (a) Make sure that the aural message "GLIDESLOPE ENABLED" is annunciated.

SUBTASK 34-49-00-730-101

- (6) Push and release the GPWS SYS TEST switch on the ground proximity warning module.

NOTE: This step will end the level 6 self-test.

SIA 015-999

L. RAAS/RSAT Discrete Test

SUBTASK 34-49-00-730-107

- (1) Do these steps to do a level 6 self-test:
 - (a) Push the GPWS SYS TEST switch on the ground proximity warning module for one second.
 - (b) After the level 1 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 2 self-test
 - (c) After the level 2 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 3 self-test.
 - (d) After the level 3 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 4 self-test.
 - (e) After the level 4 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 5 self-test.
 - (f) After the level 5 self-test starts, push the GPWS SYS TEST switch on the ground proximity warning module for one second to go to the level 6 self-test.

SUBTASK 34-49-00-730-108

- (2) Set the RUNWAY INHIBIT switch, on the P3-7 ground proximity warning module, to INHIBIT.

SUBTASK 34-49-00-730-109

- (3) Make sure that the following messages are annunciated:
 - (a) "OVERRUN WARNING INHIBITED"
 - (b) "TP 1B TRUE"

SUBTASK 34-49-00-730-110

- (4) Set the RUNWAY INHIBIT switch, on the P3-7 ground proximity warning module, to NORMAL.

SUBTASK 34-49-00-730-111

- (5) Make sure that the following messages are annunciated:
 - (a) "OVERRUN WARNING NOT INHIBITED"
 - (b) "TP 1B FALSE"

SUBTASK 34-49-00-730-112

- (6) Push and release the GPWS SYS TEST switch on the ground proximity warning module.

NOTE: This step will end the level 6 self-test.

SIA ALL

M. Master Dim Test

SUBTASK 34-49-00-730-102

- (1) Push and release the GPWS SYS TEST switch the ground proximity warning module.

EFFECTIVITY
SIA ALL

34-49-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 521
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the captain's and first officer's BELOW G/S switch-lights come on bright.

NOTE: Ignore the other self-test aural warnings and indications. Wait 30 seconds for the GPWC to stop the self-test.

SUBTASK 34-49-00-730-103

- (2) Set the LIGHTS switch, on the P1-3 panel, to the DIM position.

SUBTASK 34-49-00-730-104

- (3) Push and release the GPWS SYS TEST switch on the ground proximity warning module.

- (a) Make sure that the captain's and first officer's BELOW G/S switch-lights come on dim.

NOTE: Ignore the other self-test aural warnings and indications.

SUBTASK 34-49-00-730-105

- (4) Set the LIGHTS switch, on the P1-3 panel, to the BRIGHT position.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-00

Page 522
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

GROUND PROXIMITY WARNING COMPUTER - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) EGPWC removal
- (2) Enhanced Ground Proximity Warning Computer (EGPWC) installation.

B. The EGPWC is on the E1 electronic equipment rack, shelf No. 1, in the main equipment center.

TASK 34-49-01-000-801

2. **Ground Proximity Warning Computer Removal**

(Figure 401)

A. **General**

- (1) This task gives the instructions to remove the Enhanced Ground Proximity Warning Computer (EGPWC).

B. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

C. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Ground Proximity Warning Computer Removal**

SUBTASK 34-49-01-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	7	C00629	GND PROX WARN

SUBTASK 34-49-01-010-001

- (2) To get access to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-49-01-020-001



DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (3) To remove the EGPWC [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

————— **END OF TASK** —————

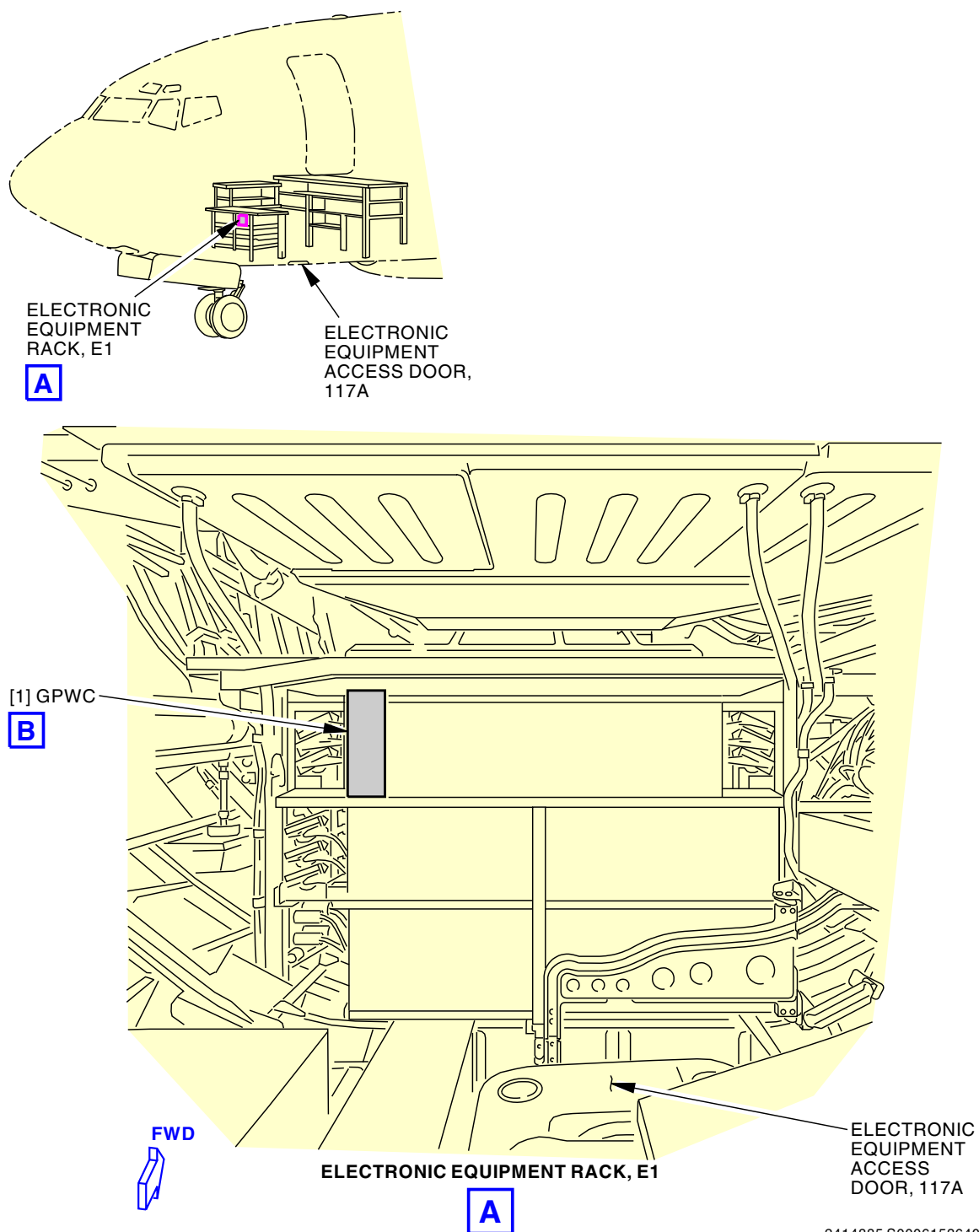
EFFECTIVITY
SIA ALL

34-49-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



2414885 S00061536402_V1

Ground Proximity Warning Computer Installation
Figure 401/34-49-01-990-801 (Sheet 1 of 2)

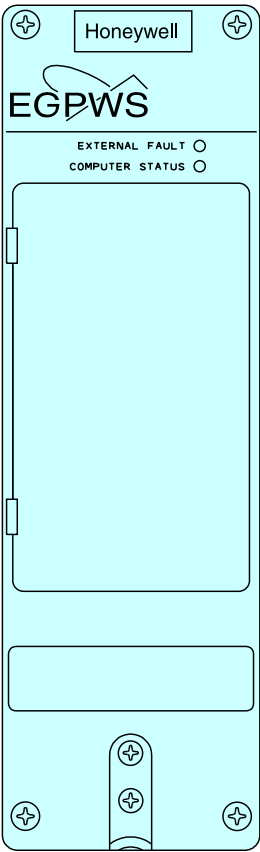
EFFECTIVITY
SIA ALL

34-49-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



GROUND PROXIMITY
WARNING COMPUTER

B

2414886 S00061536403_V1

Ground Proximity Warning Computer Installation
Figure 401/34-49-01-990-801 (Sheet 2 of 2)

EFFECTIVITY SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-01



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-49-01-400-801

3. Ground Proximity Warning Computer Installation

(Figure 401)

A. General

- (1) This task gives the instructions to install the Enhanced Ground Proximity Warning Computer (EGPWC).

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-49-00-470-804	Load the Terrain Database with USB Drive Load (P/B 201)
34-49-00-710-801	Ground Proximity Warning System Operational Test (P/B 501)
46-13-00-470-801	LRU Software Parts Installation (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	EGPWC	34-49-01-01-010	SIA ALL

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Ground Proximity Warning Computer Installation

SUBTASK 34-49-01-420-001

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (1) To install the EGPWC [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-49-01-860-003

- (2) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

G. Ground Proximity Warning Computer Installation Test

SUBTASK 34-49-01-860-004

- (1) Make sure that the airplane parking brake is on.

SUBTASK 34-49-01-700-001

- (2) Make sure that the green COMPUTER STATUS LED on the front panel of the EGPWC is on.

EFFECTIVITY
SIA ALL

34-49-01

D633AM101-SIA

Page 404
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-01-700-002

- (3) Do these steps to make sure the correct EGPWC Operational Program Configuration (OPC) and terrain database software is installed:
- (a) Push the SYS TEST switch on the Ground Proximity Module (P3-7 Panel).
 - 1) Make sure the terrain display test pattern shows on the Navigation Display (ND).
 - (b) Make a record of the OPC part number and the terrain database part number. Then, do a check with your engineering department to make sure that the software part numbers are correct.

NOTE: The test pattern shows magenta text for the OPC part number (OSSBCGXXXXXXXXXX).

NOTE: The test pattern shows magenta text for the terrain database part number (TDBXXXX).
 - (c) If the OPC part number is not correct, then do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.
 - (d) If the terrain database version is not correct, then do this task: Load the Terrain Database with USB Drive Load, TASK 34-49-00-470-804.

SUBTASK 34-49-01-710-001

- (4) Do this task: Ground Proximity Warning System Operational Test, TASK 34-49-00-710-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-49-01-410-001

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-01

Page 405
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

GROUND PROXIMITY WARNING MODULE - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Ground proximity warning module removal.
 - (2) Ground proximity warning module installation.
- B. The ground proximity warning module is on the first officer's instrument panel, P3.

TASK 34-49-02-000-801

2. Ground Proximity Warning Module Removal

(Figure 401)

A. General

- (1) This task gives the instructions to remove the ground proximity warning module.

B. References

Reference	Title
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Ground Proximity Warning Module Removal

SUBTASK 34-49-02-860-001

- (1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	7	C00629	GND PROX WARN

SUBTASK 34-49-02-020-001

- (2) Do these steps to remove the ground proximity warning module [1]:
 - (a) Loosen the quarter-turn fasteners [2] on the ground proximity warning module [1].
 - (b) Pull the ground proximity warning module [1] from the instrument panel until you can get to the electrical connector [3].



CAUTION

MAKE SURE ELECTRICAL CONNECTORS ARE CLEAN WHEN YOU DISCONNECT THEM. CONTAMINATION OF ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-02

Page 401
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

(CAUTION PRECEDES)



USE TEFLON-JAWED PLIERS TO LOOSEN ELECTRICAL CONNECTORS. DO NOT USE METAL-JAWED PLIERS. DAMAGE TO THE ELECTRICAL CONNECTORS COULD OCCUR.

- (c) Use a teflon-jawed pliers, STD-664 to disconnect the electrical connector [3] from the ground proximity warning module [1] (TASK 70-00-01-910-803-G00).
 - 1) Disconnect the electrical connector [3] from the ground proximity warning module [1].
- (d) Remove the ground proximity warning module [1].
- (e) Install the protective covers on the electrical receptacle of the ground proximity warning module [1] and the electrical connector [3].

———— **END OF TASK** ————

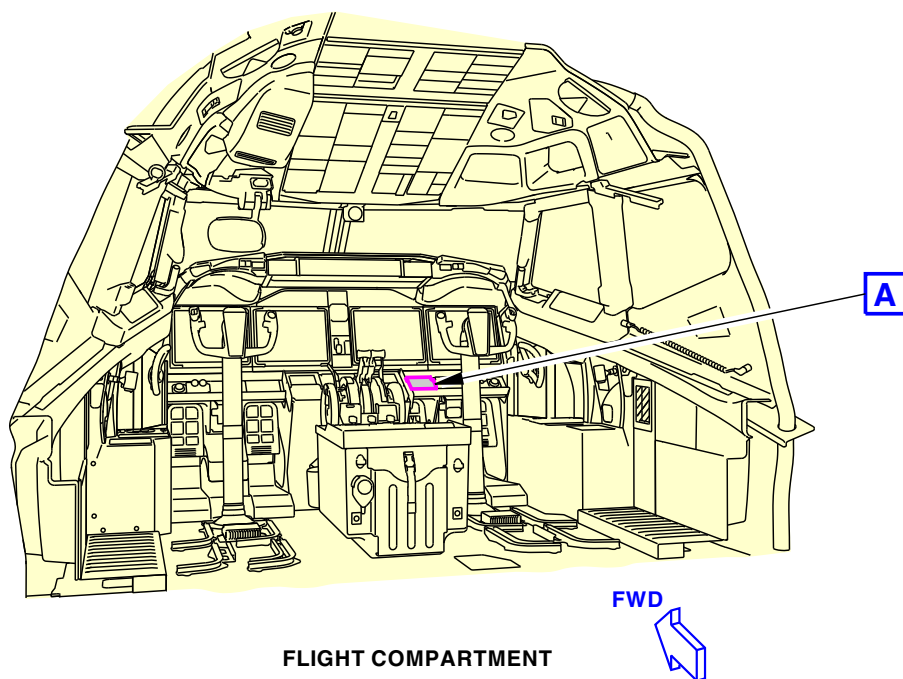
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-02

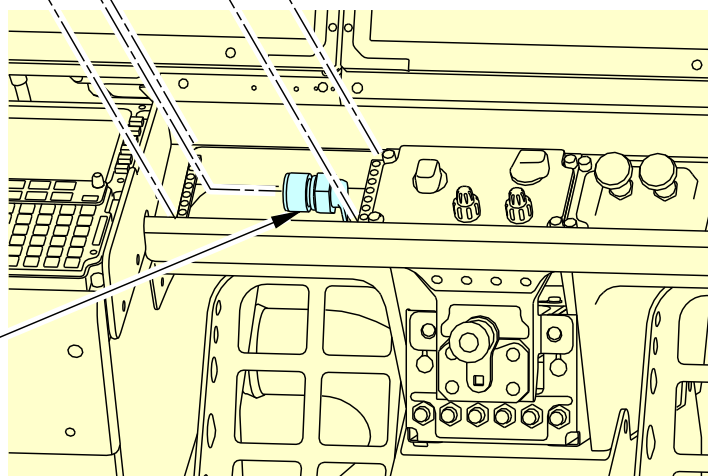
Page 402
Sep 15/2021



[1] GROUND PROXIMITY
WARNING MODULE
(EXAMPLE)

[2] QUARTER-TURN
FASTENER
(4 LOCATIONS)

[3] ELECTRICAL
CONNECTOR



2556162 S0000609448_V2

Ground Proximity Warning Module Installation
Figure 401/34-49-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-02

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-49-02-400-801

3. Ground Proximity Warning Module Installation

(Figure 401)

A. General

(1) This task gives the instructions to install the ground proximity warning module.

B. References

Reference	Title
34-49-00-710-801	Ground Proximity Warning System Operational Test (P/B 501)
70-00-01-910-803-G00	Electrical Connector Disconnection and Connection (P/B 201)

C. Tools/Equipment

Reference	Description
STD-664	Pliers - Teflon-jawed (or Equivalent Soft-Jawed)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Ground proximity warning module	34-49-02-01-050	SIA 001-014
		34-49-02-02-050	SIA 015-999

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Ground Proximity Warning Module Installation

SUBTASK 34-49-02-420-001

(1) Do these steps to install the ground proximity warning module [1]:



CAUTION

MAKE SURE THAT THE ELECTRICAL CONNECTOR AND RECEPTACLE ARE CLEAN WHEN YOU CONNECT THEM. DIRTY CONNECTORS CAN CAUSE DAMAGE TO EQUIPMENT.



CAUTION

DO NOT USE PLIERS THAT HAVE METAL JAWS TO TIGHTEN THE ELECTRICAL CONNECTOR. DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

- (a) Use the teflon-jawed pliers, STD-664 to connect the electrical connector [3] to the ground proximity warning module [1] (TASK 70-00-01-910-803-G00).
 - 1) Remove the protective covers from the electrical receptacle of the ground proximity warning module [1] and the electrical connector [3].
 - 2) Connect the electrical connector [3] to the ground proximity warning module [1].
 - a) Tighten the connector with the teflon-jawed pliers, STD-664.
- (b) Lightly push the ground proximity warning module [1] into the instrument panel.
- (c) Tighten the quarter-turn fasteners [2] that attach the ground proximity warning module [1] to the instrument panel.

EFFECTIVITY
SIA ALL

34-49-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-49-02-860-003

- (2) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00629	GND PROX WARN

G. Ground Proximity Warning Module Installation Test

SUBTASK 34-49-02-700-001

- (1) Make sure that the lights on the ground proximity warning module [1] are on.

SUBTASK 34-49-02-710-001

- (2) Do this task: Ground Proximity Warning System Operational Test, TASK 34-49-00-710-801.

SIA 015-999

SUBTASK 34-49-02-710-002

- (3) Do the Runway Inhibit Discrete Test as follows:

- (a) Press and release, as necessary, the GPWS SYS TEST button located on the ground proximity warning module [1] to place the GPWC in the level 6 self test.

NOTE: Pressing the Self Test switch for less than 2 seconds, while in any level of the self test will transition the test to the next step. Pressing the Self Test switch for longer than 2 seconds will either cancel the self test or "PRESS TO CONTINUE" is enunciated to allow continuation through the self test levels.

- (b) Set the RUNWAY INHIBIT switch on the ground proximity warning module [1] to INHIBIT.
(c) Make sure that the aural message "OVERRUN WARNING INHIBITED" is annunciated.
(d) Make sure that the aural message "TB 1B TRUE" is annunciated.
(e) Set the RUNWAY INHIBIT switch on the ground proximity warning module [1] to NORMAL.
(f) Make sure that the aural message "OVERRUN WARNING NOT INHIBITED" is annunciated.
(g) Make sure that the aural message "TB 1B FALSE" is annunciated.

SUBTASK 34-49-02-760-001

- (4) Do the RUNWAY INOP light test as follows:

- (a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC

EFFECTIVITY
SIA ALL

34-49-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SIA 015-999 (Continued)

(Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	17	C01010	ADIRU RIGHT DC

- (b) Make sure that the RUNWAY INOP light comes on.
(c) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

- (d) Make sure that the RUNWAY INOP light goes off.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-49-02

Page 406
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
VOR SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) VOR Deactivation
- (2) VOR Activation

TASK 34-51-00-040-801

2. VOR - Deactivation

A. **General**

- (1) This procedure removes electrical power to the VOR system.

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right
326	Vertical Fin - Fin Tip

C. **Procedure**

SUBTASK 34-51-00-860-001

- (1) Open these circuit breakers and install safety tags:

SIA 001-005

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	12	C01375	RADIO NAVIGATION VOR 2

Open these circuit breakers and install safety tags:

SIA 006-999

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SIA ALL

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-00

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

D. VOR - Tryout

NOTE: This tryout is to make sure that the VOR system is in a zero energy state.

SUBTASK 34-51-00-710-001

- (1) Tune the captain's and first officer's navigation control panels to a local VOR station.
 - (a) On the P5 panel Instrument switch module, set the VHF NAV switch to "NORMAL" position.
 - (b) Turn receiver volume control clockwise for NAV1 and/or NAV 2 on the Audio Control Panel.
 - 1) Make sure that you can not hear the station identification code over the flight interphone system.

————— **END OF TASK** —————

TASK 34-51-00-440-801

3. VOR - Activation

A. General

- (1) This procedure adds electrical power to the VOR system.

B. Location Zones

<u>Zone</u>	<u>Area</u>
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right
326	Vertical Fin - Fin Tip

C. Procedure

SUBTASK 34-51-00-860-003

- (1) Remove the safety tags and close these circuit breakers:

SIA 001-005

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SIA 001-005 (Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	12	C01375	RADIO NAVIGATION VOR 2

Remove the safety tags and close these circuit breakers:

SIA 006-999

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SIA ALL

Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-00

Page 203
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

VOR SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) An operational test of the VOR system.
- (2) A system test of the VOR system.

TASK 34-51-00-710-801

2. VOR System - Operational Test

A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

B. Prepare for the Operational Test

SUBTASK 34-51-00-710-002

(1) Do these steps to prepare for the operational test:

- (a) Set the VHF NAV switch on the navigation instrument switching module on the P5 forward overhead panel to the NORMAL position.
- (b) Set the Inertial Reference System (IRS) transfer switch on the navigation instrument switching module on the P5 forward overhead panel to the NORMAL position.
- (c) Set the mode selector on the Captain's and the First Officer's Electronic Flight Instrument System (EFIS) control panels P7-1 and P7-2 to the VOR position.
- (d) Set the ADF/VOR 1 and ADF/VOR 2 switches on the Captain's and the First Officer's EFIS control panels to VOR 1 and VOR 2 position.
- (e) Push the CTR button on the Captain's and the First Officer's EFIS control panels until full VOR display is present on the Captain's and First Officer's Navigation Display (ND).
- (f) Set the DISPLAY SOURCE switch on the navigation instrument switching module on the P5 forward overhead panel to the AUTO position.
- (g) Set the Captain's and First Officer's PFD/MFD switches on the P1 and P3 panels to NORM.
- (h) Set the L and R IRS mode select switches on the Mode Select Unit (MSU) on the P5 aft overhead panel to the ATT position.
- (i) Push H on the Inertial System Display Unit (ISDU) on the P5 aft overhead panel.
- (j) Push 000 on the ISDU for a heading of 0°.
- (k) Push the ENT key on the ISDU.
NOTE: It can take up to 30 seconds to set a valid heading.
- (l) Turn the course select controls on the Captain's and the First Officer's Digital Flight Control System (DFCS) Mode Control Panel (MCP) on the P7 panel until the COURSE windows show 000 degrees.
- (m) Make sure that the heading flag on the Captain's and First Officer's ND does not show.

C. VOR Receiver Self Test

SUBTASK 34-51-00-860-063

- (1) Set the active frequency display on the Captain's Navigation Control Panel (NCP) to VOR 108.00 MHz:

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 501
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Push the MODE key (V or reverse V) until "VOR" shows in the STBY (lower) window of the NCP.
- (b) Enter the number "108.00" using the NCP keypad.
- (c) Push the ACT/STBY transfer button.
 - 1) Make sure that "VOR 108.00" MHz shows in the ACT (upper) window of the NCP.

SUBTASK 34-51-00-710-003

- (2) Push and release the TEST button on the Captain's NCP.
 - (a) Make sure that these indications agree with the data in the Table 501:

SIA 006-999

NOTE: The LOC and G/S indications show at the same time as the VOR indications.

SIA ALL

- 1) The deviation bar is in view, the TO/FROM indication, and the VOR flag on the Captain's ND.
- 2) The No. 1 VOR narrow bearing pointers on the Captain's and the First Officer's ND.

Table 501/34-51-00-993-801

TIME (Approx.)	DISPLAY VOR FLAG IN VIEW	DISPLAY FROM INDICATOR IN VIEW	VOR BEARING POINTER	DISPLAY DEVIATION BAR IN VIEW
3 ±1 second	YES	NO	N/A	NO
After 3 seconds	NO	YES	180° ± 3°	Centered
After 16 - 45 seconds	NO	NO	N/A	NO

SUBTASK 34-51-00-860-006

- (3) Set the VHF NAV switch on the navigation instrument switching module on the P5 forward overhead panel to the BOTH ON 1 position.

SUBTASK 34-51-00-710-004

- (4) Push and release the TEST button on the Captain's NCP.
 - (a) Make sure that these indications agree with the data in the Table 501:

SIA 006-999

NOTE: The LOC and G/S indications show at the same time as the VOR indications.

SIA ALL

- 1) The deviation bar is in view, the TO/FROM indication, and the VOR flag on the Captain's and First Officer's ND.
- 2) The No. 1 VOR narrow bearing pointers on the Captain's and First Officer's ND.

SUBTASK 34-51-00-860-007

- (5) Set the VHF NAV switch on the navigation instrument switching module on the P5 forward overhead panel to the NORMAL position.

SUBTASK 34-51-00-860-064

- (6) Set the active frequency display on the First Officer's NCP to VOR 108.00 MHz.

SUBTASK 34-51-00-710-005

- (7) Push and release the TEST button on the First Officer's NCP.
 - (a) Make sure that these indications agree with the data in the Table 501:

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SIA 006-999

NOTE: The LOC and G/S indications show at the same time as the VOR indications.

SIA ALL

- 1) The deviation bar is in view, the TO/FROM indication, and the VOR flag on the First Officer's ND.
- 2) The No. 2 VOR wide bearing pointers on the Captain's and the First Officer's ND.

SUBTASK 34-51-00-860-009

- (8) Set the VHF NAV switch on the navigation instrument switching module on the P5 forward overhead panel to the BOTH ON 2 position.

SUBTASK 34-51-00-710-006

- (9) Push and release the TEST button on the First Officer's NCP.
 - (a) Make sure that these indications agree with the data in the Table 501:

SIA 006-999

NOTE: The LOC and G/S indications show at the same time as the VOR indications.

SIA ALL

- 1) The deviation bar is in view, the TO/FROM indication, and the VOR flag on the Captain's and First Officer's ND.
- 2) The No. 2 VOR wide bearing pointers on the Captain's and the First Officer's ND.

SUBTASK 34-51-00-860-010

- (10) Set the VHF NAV switch on the navigation instrument switching module on the P5 forward overhead panel to the NORMAL position.

D. Display Source Annunciator Test

SUBTASK 34-51-00-860-062

- (1) Make sure that the mode selector on the Captain's and First Officer's EFIS control panels are set to VOR.

SUBTASK 34-51-00-860-066

- (2) Make sure that the active frequency display on the Captain's NCP is VOR 108.00 MHz.

SUBTASK 34-51-00-860-068

- (3) Make sure that the active frequency display on the First Officer's NCP is VOR 108.00 MHz.

SUBTASK 34-51-00-710-007

- (4) Set the VHF NAV switch on the NCP to each position that shows in the Table 502.
 - (a) Make sure that the ND source annunciators agree with the data in the Table 502.

Table 502/34-51-00-993-802

CAPT & F/O NCP FREQUENCY	VHF NAV SWITCH	CAPT DISPLAY ANNUNCIATOR	F/O DISPLAY ANNUNCIATOR	EFIS CTRL PANEL MODE SELECTOR
108.00 MHz	NORMAL	VOR 1	VOR 2	VOR
108.00 MHz	BOTH ON 1	VOR 1	VOR 1	VOR
108.00 MHz	BOTH ON 2	VOR 2	VOR 2	VOR

SUBTASK 34-51-00-860-058

- (5) Set the mode selector on the Captain's and First Officer's EFIS control panels to APP.

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 503
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-51-00-860-070

- (6) Set the active frequency display on the Captain's NCP to ILS 108.10 MHz.

SUBTASK 34-51-00-860-069

- (7) Set the active frequency display on the First Officer's NCP to ILS 108.10 MHz.

SUBTASK 34-51-00-860-059

- (8) Set the VHF NAV switch on the NCP to each position that is in the Table 503.
(a) Make sure that the ND source annunciators agree with the data in the Table 503.

Table 503/34-51-00-993-805

CAPT & F/O NCP FREQUENCY	VHF NAV SWITCH	CAPT DISPLAY ANNUNCIATOR	F/O DISPLAY ANNUNCIATOR	EFIS CTRL PANEL MODE SELECTOR
108.10 MHz	NORMAL	ILS 1	ILS 2	APP
108.10 MHz	BOTH ON 1	ILS 1	ILS 1	APP
108.10 MHz	BOTH ON 2	ILS 2	ILS 2	APP

SUBTASK 34-51-00-860-071

- (9) Set the active frequency display on the Captain's NCP to VOR 108.00 MHz.

SUBTASK 34-51-00-860-072

- (10) Set the active frequency display on the First Officer's NCP to VOR 108.00 MHz.

SUBTASK 34-51-00-860-013

- (11) Set the mode selector on the Captain's and First Officer's EFIS control panels to the VOR position.

SUBTASK 34-51-00-860-014

- (12) Set the VHF NAV switch on the navigation instrument switching module on the P5 forward overhead panel to the NORMAL position.

SUBTASK 34-51-00-860-015

- (13) Open these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

SIA 001-005

A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

SIA ALL

A	2	C01479	RADIO NAVIGATION MMR 1
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

SIA 006, 007

A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1 (INOP)

SIA ALL

SUBTASK 34-51-00-710-008

- (14) Make sure that the indications that follow occur:
(a) The VOR 1 flag is in view on the Captain's ND (centered on VOR)

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 504
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) The VOR 1 bearing flag is in view on the Captain's and First Officer's ND (lower left corner)
- (c) The VOR 1 narrow bearing pointers are not in view on the Captain's and First Officer's ND.

SUBTASK 34-51-00-860-016

- (15) Open these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
SIA 001-005			
A	12	C01375	RADIO NAVIGATION VOR 2
SIA ALL			
A	13	C01480	RADIO NAVIGATION MMR 2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
SIA 006, 007			
A	12	C01375	RADIO NAVIGATION VOR 2 (INOP)

SIA ALL

SUBTASK 34-51-00-710-009

- (16) Make sure that the indications that follow occur:
- (a) The VOR 2 flag is in view on the First Officer's ND (centered on VOR)
 - (b) The VOR 2 bearing flag is in view on the Captain's and First Officer's ND (lower right corner)
 - (c) The VOR 2 wide bearing pointers are not in view on the Captain's and First Officer's ND.

E. Put the Airplane Back to its Usual Condition

SUBTASK 34-51-00-860-017

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
SIA 001-005			
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1
SIA ALL			
A	2	C01479	RADIO NAVIGATION MMR 1
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
SIA 001-005			
A	12	C01375	RADIO NAVIGATION VOR 2

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 505
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SIA 001-005 (Continued)

(Continued)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
SIA ALL			
A	13	C01480	RADIO NAVIGATION MMR 2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

These circuit breakers are inoperative and should remain open:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
SIA 006, 007			
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1 (INOP)

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	12	C01375	RADIO NAVIGATION VOR 2 (INOP)

SIA ALL

————— END OF TASK —————

TASK 34-51-00-730-801

3. VOR System - System Test

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

<u>Reference</u>	<u>Description</u>
COM-1913	Test Set - NAV/COMM Ramp Part #: 90000136 Supplier: 92606 Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 4000 Supplier: 51190 Opt Part #: 402AP-110 Supplier: 51190 Opt Part #: 972Q-4 Supplier: 4V792 Opt Part #: NAV-402AP-2 Supplier: 51190 Opt Part #: T-30C Supplier: 92606 Opt Part #: T-30D Supplier: 92606 Opt Part #: T-36C Supplier: 92606

B. Location Zones

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left
212	Flight Compartment - Right

C. VOR System Test

SUBTASK 34-51-00-710-011

(1) Do this task: VOR System - Operational Test, TASK 34-51-00-710-801.

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-51-00-860-073

- (2) Set the active frequency display on the captain's navigation control panel on the P8 panel to VOR 108.00 MHz:
 - (a) Push the MODE key (V or reverse V) until "VOR" shows in the STBY (lower) window of the navigation control panel.
 - (b) Enter the number "108.00" using the navigation control panel keypad.
 - (c) Push the ACT/STBY transfer button.
 - 1) Make sure that "VOR 108.00" MHz shows in the ACT (upper) window of the navigation control panel.

SUBTASK 34-51-00-730-001

- (3) Set up the NAV/COMM ramp test set, COM-1913, to supply a 180° bearing at a frequency of 108.00 MHz.

NOTE: Bearing is a signal that is along a line in the magnetic direction (to the station) shown by the number of the radial. For example, 180° bearing is north of the station.

 - (a) Make sure that the deviation bar shows on the captain's Navigation Display (ND).
 - (b) Make sure that the VOR flag does not show on the captain's ND.
 - (c) Make sure that the No. 1 bearing pointers on the captain's and the first officer's ND show $180 \pm 4^\circ$.

SUBTASK 34-51-00-730-002

- (4) Turn the captain's course select control on the Digital Flight Control System (DFCS) Mode Control Panel (MCP) until the deviation bar is in the center.
 - (a) Make sure that the COURSE window on the DFCS MCP shows 000 ± 002 .
 - 1) Do not use a COURSE window value of 180 to align the deviation bar.

NOTE: The deviation bar can also be in the center when the COURSE window shows 180.
 - (b) Make sure that a FROM indication shows on the captain's ND.

SUBTASK 34-51-00-730-003

- (5) Turn the captain's course select control on the DFCS MCP until the deviation bar on the captain's ND is on the second left dot.
 - (a) Make sure that the COURSE window on the DFCS MCP shows 350 ± 004 .

SUBTASK 34-51-00-730-004

- (6) Turn the captain's course select control on the DFCS MCP until the deviation bar on the captain's ND is on the second right dot.
 - (a) Make sure that the COURSE window on the DFCS MCP shows 010 ± 004 .

SUBTASK 34-51-00-860-020

- (7) Turn the captain's course select control on the DFCS MCP until the COURSE window shows 000.

SUBTASK 34-51-00-860-084

- (8) Set the VHF NAV switch on the instrument switching module to the NORMAL position.

SUBTASK 34-51-00-730-005

- (9) Set the VOR bearing selector on the NAV/COMM ramp test set, COM-1913, to the bearings shown in (Table 504).
 - (a) Make sure that these indications agree with the data in (Table 504):

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-00

Page 507
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) The No. 1 bearing pointers on the captain's and the first officer's ND
- 2) The TO-FROM indication and the deviation bar on the captain's and the first officer's ND.

Table 504/34-51-00-993-803

BEARING SELECTOR SETTING	BEARING POINTER INDICATION	TO - FROM FLAG INDICATION	DEVIATION BAR INDICATION
180°	180 ± 4°	FROM	Centered
150°	150 ± 4°	FROM	Moved full scale to the right
120°	120 ± 4°	FROM	Moved full scale to the right
90°	90 ± 4°	----	Moved full scale to the right
60°	60 ± 4°	TO	Moved full scale to the right
30°	30 ± 4°	TO	Moved full scale to the right
000°	000 ± 4°	TO	Centered
330°	330 ± 4°	TO	Moved full scale to the left
300°	300 ± 4°	TO	Moved full scale to the left
270°	270 ± 4°	----	Moved full scale to the left
240°	240 ± 4°	FROM	Moved full scale to the left
210°	210 ± 4°	FROM	Moved full scale to the left
180°	180 ± 4°	FROM	Centered
210°	210 ± 4°	FROM	Moved full scale to the left
240°	240 ± 4°	FROM	Moved full scale to the left
270°	270 ± 4°	----	Moved full scale to the left
300°	300 ± 4°	TO	Moved full scale to the left
330°	330 ± 4°	TO	Moved full scale to the left
000°	000 ± 4°	TO	Centered
30°	30 ± 4°	TO	Moved full scale to the right
60°	60 ± 4°	TO	Moved full scale to the right
90°	90 ± 4°	----	Moved full scale to the right
120°	120 ± 4°	FROM	Moved full scale to the right
150°	150 ± 4°	FROM	Moved full scale to the right
180°	180 ± 4°	FROM	Centered

SUBTASK 34-51-00-860-074

- (10) Set a frequency of VOR 108.00 MHz on the first officer's navigation control panel.
 - (a) Make sure that the No. 2 bearing pointers on the captain's and the first officer's ND show 180 ± 4°.

SUBTASK 34-51-00-730-007

- (11) Turn the first officer's course select control on the DFCS MCP until the deviation bar on the first officer's ND is in the center.

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 508
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the COURSE window on the DFCS MCP shows 000 ± 002 .
 - 1) Do not use a COURSE window value of 180 to align the deviation bar.

NOTE: The deviation bar can also be in the center when the COURSE window shows 180.
- (b) Make sure that a FROM indication shows on the first officer's ND.

SUBTASK 34-51-00-730-008

- (12) Turn the first officer's course select control on the DFCS MCP until the deviation bar on the first officer's ND is on the second left dot.
- (a) Make sure that the COURSE window on the DFCS MCP shows 350 ± 004 .

SUBTASK 34-51-00-730-009

- (13) Turn the first officer's course select control on the DFCS MCP until the deviation bar on the first officer's ND is on the second right dot.
- (a) Make sure that the COURSE window on the DFCS MCP shows 010 ± 004 .

SUBTASK 34-51-00-860-021

- (14) Turn the first officer's course select control on the DFCS MCP until the COURSE window shows 000.

SUBTASK 34-51-00-730-010

- (15) Set the VOR bearing selector on the NAV/COMM ramp test set, COM-1913, to the bearings shown in (Table 504).
 - (a) Make sure that these indications agree with the data in (Table 504):
 - 1) The No. 2 bearing pointers on the captain's and the first officer's ND
 - 2) The TO-FROM indication and the deviation bar on the captain's and the first officer's ND.

SUBTASK 34-51-00-860-022

- (16) Set the VHF NAV switch on the instrument switching module to the BOTH ON 1 position.

SUBTASK 34-51-00-860-075

- (17) Set a frequency of ILS 108.10 MHz on the first officer's navigation control panel.

SUBTASK 34-51-00-860-024

- (18) Turn the captain's course selector control on the DFCS MCP until the COURSE window shows 000.

SUBTASK 34-51-00-730-011

- (19) Set the VOR bearing selector on the NAV/COMM ramp test set, COM-1913, to a 330° bearing.
 - (a) Make sure that the No. 1 bearing pointers on the captain's and the first officer's ND show $330 \pm 4^\circ$.
 - (b) Make sure that the deviation bars on the captain's and the first officer's ND are full scale in the left direction.
 - (c) Make sure that a TO indication shows on the captain's and the first officer's ND.

SUBTASK 34-51-00-860-025

- (20) Set the VHF NAV switch on the instrument switching module to the BOTH ON 2 position.

SUBTASK 34-51-00-860-076

- (21) Set a frequency of VOR 108.00 MHz on the first officer's navigation control panel.

SUBTASK 34-51-00-860-077

- (22) Set a frequency of ILS 108.10 MHz on the captain's navigation control panel.

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 509
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-51-00-860-028

- (23) Turn the first officer's course selector control on the DFCS MCP until the COURSE window shows 000.

SUBTASK 34-51-00-730-012

- (24) Set the VOR bearing selector on the NAV/COMM ramp test set, COM-1913, to a 150° bearing.
- (a) Make sure that the No. 2 bearing pointers on the captain's and the first officer's ND show $150 \pm 4^\circ$.
 - (b) Make sure that the deviation bars on the captain's and the first officer's ND are full scale in the right direction.
 - (c) Make sure that a FROM indication shows on the captain's and the first officer's ND.

SUBTASK 34-51-00-860-078

- (25) Set a frequency of VOR 108.00 MHz on the captain's navigation control panel.

D. System Frequency Control and Aural Outputs Test

NOTE: It is not necessary to adjust the receiver gain squelch. The tone should be detected regardless of the noise level.

SUBTASK 34-51-00-860-056

- (1) Set the VHF NAV switch on the instrument switching module to the NORMAL position.

SUBTASK 34-51-00-860-079

- (2) Make sure that the captain's navigation control panel frequency is set to VOR 108.00 MHz.

SUBTASK 34-51-00-860-080

- (3) Set a frequency of ILS 108.10 MHz on the first officer's navigation control panel.

SUBTASK 34-51-00-860-031

- (4) Use the switches on the NAV/COMM ramp test set, COM-1913, to supply a signal of 1020 Hz.

SUBTASK 34-51-00-860-032

- (5) Push the receiver volume controls for NAV-2 on each audio selector panel on the P8 panel to set the volume to off.

SUBTASK 34-51-00-860-033

- (6) Push the receiver volume controls for NAV-1 on each audio selector panel on the P8 panel to set the volume to on.

SUBTASK 34-51-00-730-013

- (7) Turn the receiver volume controls clockwise for NAV-1 on each audio selector panel.
- (a) Make sure that you can hear a tone through the interphone system.
 - (b) Make sure that you can hear a tone at each audio selector panel with a headset.
 - (c) Make sure that you cannot hear the tone when you change the frequency on the NAV/COMM ramp test set, COM-1913, to a different frequency.

SUBTASK 34-51-00-860-034

- (8) Push the receiver volume controls for NAV-1 on each audio selector panel to set the volume to off.

SUBTASK 34-51-00-860-081

- (9) Set a frequency of VOR 108.00 MHz on the first officer's navigation control panel.

SUBTASK 34-51-00-860-082

- (10) Set a frequency of ILS 108.10 MHz on the captain's navigation control panel.

EFFECTIVITY
SIA ALL

34-51-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 510
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-51-00-860-037

- (11) Push the receiver volume controls for NAV-2 on each audio selector panel to set the volume to on.

SUBTASK 34-51-00-730-014

- (12) Turn the receiver volume controls clockwise for NAV-2 on each audio selector panel.
- (a) Make sure that you can hear a tone through the interphone system.
 - (b) Make sure that you can hear a tone at each audio selector panels with a headset.
 - (c) Make sure that you cannot hear the tone when you change the frequency on the NAV/COMM ramp test set, COM-1913, to a different frequency.

SUBTASK 34-51-00-860-038

- (13) Push the receiver volume controls for NAV-2 on each audio selector panel to set the volume to off.

SUBTASK 34-51-00-860-083

- (14) Set a frequency of VOR 108.00 MHz on the captain's navigation control panel.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-00

Page 511
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

VOR/MKR RECEIVER - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the VOR/MKR receiver.
 - (2) An installation of the VOR/MKR receiver.
- B. The two VOR/MKR receivers are in the main equipment center. The No. 1 VOR/MKR receiver is on the E1 electronics equipment rack, shelf No. 2. The No. 2 VOR/MKR receiver is on E1 electronics equipment rack, shelf No. 4.

TASK 34-51-01-000-801

2. VOR/MKR Receiver Removal

(Figure 401)

A. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

D. **VOR/MKR Receiver Removal**

SUBTASK 34-51-01-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	12	C01375	RADIO NAVIGATION VOR 2

SUBTASK 34-51-01-010-001

- (2) To get access to the VOR/MKR receiver, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-01

Page 401
May 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-51-01-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE VOR/MKR RECEIVER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE VOR/MKR RECEIVER.

- (3) Remove the No. 1 or No. 2 VOR/MKR receiver [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

———— **END OF TASK** ————

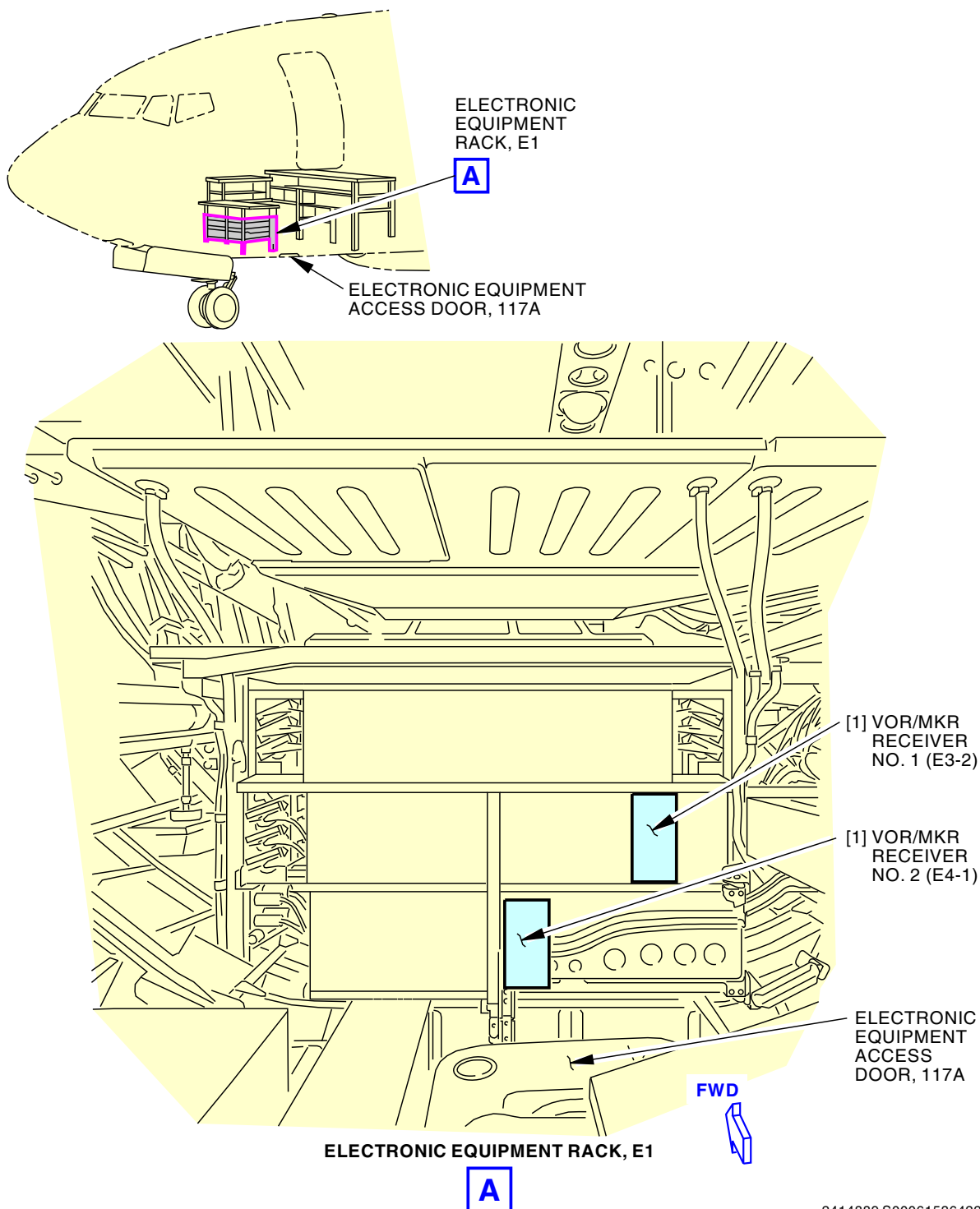
EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-01

Page 402
May 15/2023



2414889 S00061536422_V2

VOR/MKR Receiver Installation
Figure 401/34-51-01-990-801

EFFECTIVITY
SIA 001-005

34-51-01

Page 403
May 15/2023

D633AM101-SIA



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-51-01-400-801

3. VOR/MKR Receiver Installation

(Figure 401)

A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-32-00-710-801	Marker Beacon System - Operational Test (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Receiver	34-51-01-01-010	SIA 001-005
		34-51-01-02-005	SIA 001-005

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. VOR/MKR Receiver Installation

SUBTASK 34-51-01-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	12	C01375	RADIO NAVIGATION VOR 2

SUBTASK 34-51-01-420-001

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE VOR/MKR RECEIVER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE VOR/MKR RECEIVER.

- (2) Install the VOR/MKR receiver [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-51-01-860-003

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

EFFECTIVITY
SIA 001-005

34-51-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	12	C01375	RADIO NAVIGATION VOR 2

SUBTASK 34-51-01-410-001

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

F. Installation Test

SUBTASK 34-51-01-710-001

- (1) Tune the captain's and first officer's navigation control panels to a local VOR station.
- (2) On the P5 panel Instrument switch module, set the VHF NAV switch to the "NORMAL" position.
- (3) Push the receiver volume control clockwise for NAV1 and/or NAV 2 on the Audio Control Panel.
 - (a) Make sure that you can hear the station identification code over the flight interphone system.

SUBTASK 34-51-01-710-002

- (4) For the No. 1 VOR/MKR receiver, do this task: Marker Beacon System - Operational Test, TASK 34-32-00-710-801.

————— END OF TASK —————

EFFECTIVITY
SIA 001-005

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-01

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

VOR/LOC ANTENNA - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the VOR/LOC antenna
- (2) An installation of the VOR/LOC antenna.

B. The VOR/LOC antenna (M41) is installed at the top of the vertical stabilizer (fin).

TASK 34-51-02-000-801

2. VOR/LOC Antenna Removal

(Figure 401)

A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
326	Vertical Fin - Fin Tip

B. Removal Procedure

SUBTASK 34-51-02-020-001

(1) Remove the VOR/LOC ANTENNA [2] :

- (a) Remove the SCREWS [6] that attach the LEADING EDGE [1] to the VOR/LOC ANTENNA [2] and the vertical stabilizer.
- (b) Remove the LEADING EDGE [1] of the fin tip from the VOR/LOC ANTENNA [2].
- (c) Disconnect the ELECTRICAL CONNECTORS [7].
- (d) Put protective covers on the ELECTRICAL CONNECTORS [7].
- (e) Remove the SCREWS [5] that attach the VOR/LOC ANTENNA [2] to the vertical stabilizer.

NOTE: Do not remove the screws that attach the trailing edge to the VOR/LOC ANTENNA [2]. The trailing edge can be removed with the VOR/LOC ANTENNA [2].

- (f) Remove the VOR/LOC ANTENNA [2] and the attached trailing edge from the vertical stabilizer.

SUBTASK 34-51-02-020-002

(2) Remove the STATIC DISCHARGERS [3].

- (a) Remove the SCREWS [4] from the STATIC DISCHARGERS [3].
- (b) Remove the STATIC DISCHARGERS [3] from the trailing edge.

NOTE: Keep the STATIC DISCHARGERS [3] for installation on new VOR/LOC ANTENNA [2] assembly.

————— **END OF TASK** —————

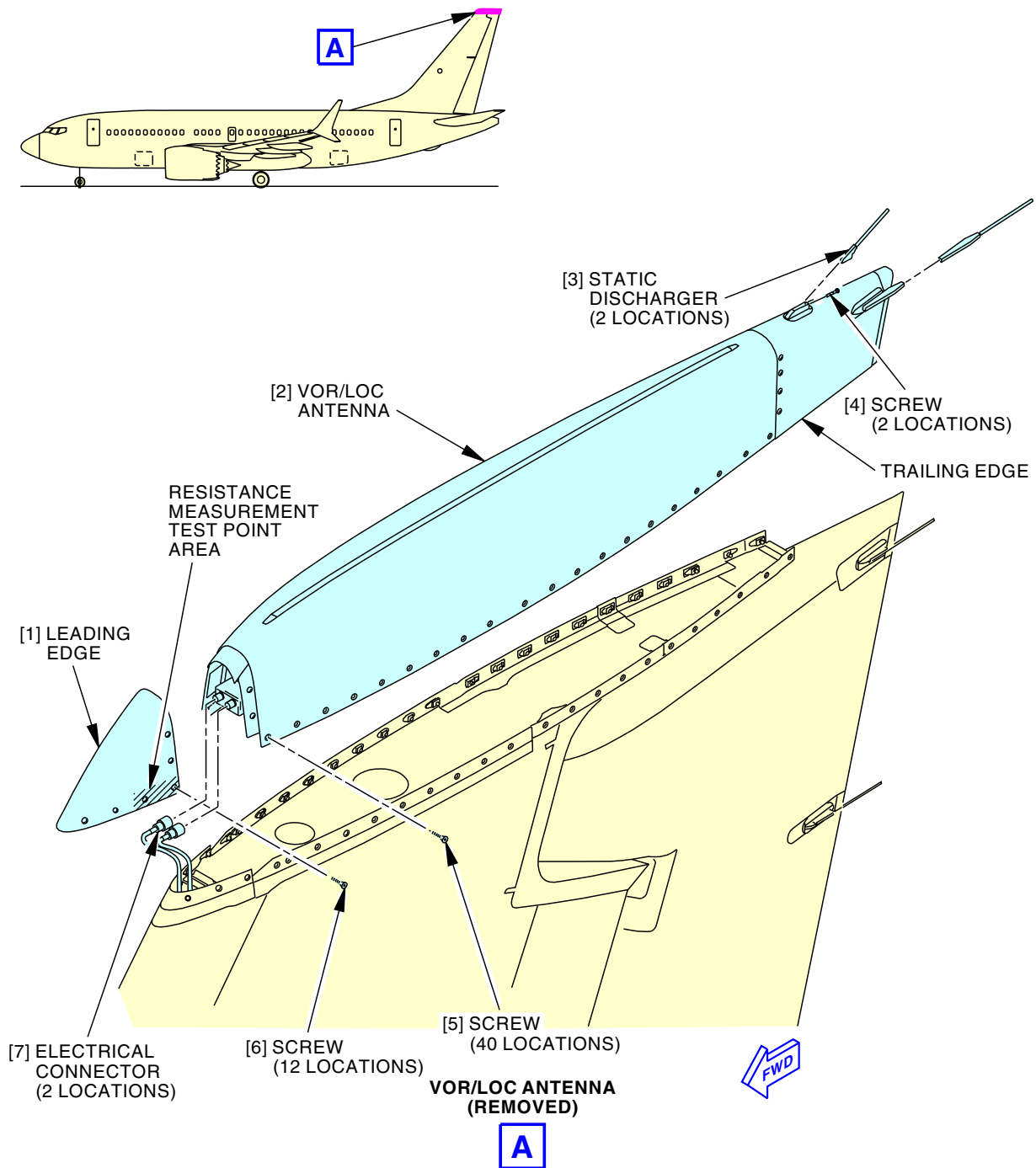
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-51-02

Page 401
Sep 15/2021



2414890 S00061536427_V1

VOR/LOC Antenna Installation
Figure 401/34-51-02-990-801

EFFECTIVITY
SIA ALL

34-51-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-51-02-400-801

3. VOR/LOC Antenna Installation

(Figure 401)

A. References

Reference	Title
23-61-00-400-801	Static Discharger Installation (P/B 401)
24-22-00-860-801	Supply Electrical Power (P/B 201)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-21-91-620-802	Application of Corrosion Inhibiting Compound (P/B 701)

B. Consumable Materials

Reference	Description	Specification
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	VOR/LOC ANTENNA	34-51-02-01-025	SIA ALL

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
326	Vertical Fin - Fin Tip

E. Installation Procedure

SUBTASK 34-51-02-100-001

- (1) Clean the mating surfaces of the VOR/LOC ANTENNA [2] and the airplane structure. To clean the surfaces, do this task: Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution, TASK 51-21-41-370-802.

SUBTASK 34-51-02-420-001

- (2) If the trailing edge is not installed, attach the trailing edge to the VOR/LOC ANTENNA [2].

SUBTASK 34-51-02-420-002

- (3) Install the STATIC DISCHARGERS [3]. Do this task: Static Discharger Installation, TASK 23-61-00-400-801.

SUBTASK 34-51-02-420-003

- (4) Install the VOR/LOC ANTENNA [2]:
- (a) Align the VOR/LOC ANTENNA [2] to the screw holes that hold the to the vertical stabilizer.
 - (b) Remove the protective covers from the ELECTRICAL CONNECTORS [7].
 - (c) Examine the ELECTRICAL CONNECTORS [7] for bent or broken pins, dirt, and damage.
 - (d) Connect the ELECTRICAL CONNECTORS [7].
 - (e) Align the LEADING EDGE [1] with the screw holes on the top of the vertical stabilizer.
 - (f) Apply corrosion preventive compound, C00308 to the SCREWS [6] threads. To apply it, do this task: Application of Corrosion Inhibiting Compound, TASK 51-21-91-620-802.

EFFECTIVITY
SIA ALL

34-51-02

D633AM101-SIA

Page 403
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (g) Apply corrosion preventive compound, C00308 to the SCREWS [5] threads. To apply it, do this task: Application of Corrosion Inhibiting Compound, TASK 51-21-91-620-802.
- (h) Install the SCREWS [6] that attach the LEADING EDGE [1] to the VOR/LOC ANTENNA [2] and the vertical stabilizer.
- (i) Install the SCREWS [5] that attach the VOR/LOC ANTENNA [2] to the vertical stabilizer.

SUBTASK 34-51-02-760-001

- (5) Do a check of the resistance between VOR/LOC ANTENNA [2] and the airplane skin.

NOTE: Refer to (Figure 401) for resistance test point locations.

- (a) Make sure the resistance is not more than 0.001 ohm.

F. Installation Test

SUBTASK 34-51-02-860-003

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-801.

SUBTASK 34-51-02-860-004

- (2) Set a local VOR frequency on the captain's navigation control panel.

NOTE: To set the frequency, turn the frequency selector until the frequency shows in the STANDBY display window. Then push the TFR button. The frequency will show in the ACTIVE display window.

SUBTASK 34-51-02-860-005

- (3) Push the receiver volume controls for NAV-1 and NAV-2 on each audio selector panel to set the volume to off.

SUBTASK 34-51-02-860-006

- (4) Push the receiver volume controls for NAV-1 on the captain's audio selector panel to set the volume to on.

SUBTASK 34-51-02-730-001

- (5) Turn the receiver volume controls clockwise for NAV-1 on the captain's audio selector panel.
 - (a) Make sure you can hear the station identification tone through the interphone system.

SUBTASK 34-51-02-860-007

- (6) Push the receiver volume controls for NAV-1 on the captain's audio selector panel to set the volume to off.

SUBTASK 34-51-02-860-008

- (7) Set a local VOR frequency on the first officer's navigation control panel.

SUBTASK 34-51-02-860-009

- (8) Push the receiver volume controls for NAV-2 on the first officer's audio selector panel to set the volume to on.

SUBTASK 34-51-02-730-002

- (9) Turn the receiver volume controls clockwise for NAV-2 on the first officer's audio selector panel.
 - (a) Make sure you can hear the station identification tone through the interphone system.

SUBTASK 34-51-02-860-010

- (10) Push the receiver volume controls for NAV-2 on the first officer's audio selector panel to set the volume to off.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

34-51-02

D633AM101-SIA

Page 404
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR TRAFFIC CONTROL (ATC) SYSTEM - MAINTENANCE PRACTICES

1. **General**

- A. This procedure has these tasks:
- (1) Air Traffic Control (ATC) System Deactivation.
 - (2) Air Traffic Control (ATC) System Activation.

TASK 34-53-00-040-801

2. **Air Traffic Control System - Deactivation**

(Figure 34-53-02-990-801)

A. General

- (1) This procedure removes power to the ATC system.

B. References

Reference	Title
34-53-02-990-801	Figure: ATC Transponder Installation (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Procedure

SUBTASK 34-53-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

F. Air Traffic Control System - Tryout

NOTE: This tryout is to make sure the ATC system is in a zero energy state.

SUBTASK 34-53-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-00-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-53-00-860-003

- (3) Make sure the lights on the front panel of both ATC transponders are not illuminated.

SUBTASK 34-53-00-860-004

- (4) Push and release the TEST switch on the front panel of both ATC Transponders and make sure none of the lights come on.

————— END OF TASK —————

TASK 34-53-00-440-801

3. Air Traffic Control System - Activation

(Figure 34-53-02-990-801)

A. General

- (1) This Procedure adds electrical to the ATC System.

B. References

<u>Reference</u>	<u>Title</u>
34-53-02-990-801	Figure: ATC Transponder Installation (P/B 401)

C. Location Zones

<u>Zone</u>	<u>Area</u>
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

E. Procedure

SUBTASK 34-53-00-860-005



KEEP ALL PERSONNEL AT A SAFE DISTANCE FROM THE ANTENNA. RF ENERGY CAN CAUSE INJURIES TO PERSONNEL.

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-00-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— END OF TASK —————

TASK 34-53-00-860-801

4. ATC Program Switch Module Switch Settings

(Figure 201)

A. General

- (1) This task includes the steps to set the DIP switches on the Air Traffic Control (ATC) Program Switch Module (PSM)s, M01987 and M01988. The PSMs are located at the E1-3 electronics shelf.
- (2) This procedure is used to change the Mode S code when required as a result of an airplane registry change.

B. References

<u>Reference</u>	<u>Title</u>
34-53-00-710-801	ATC System - Operational Test (P/B 501)
WDM 34-53-11, 34-53-21	D000534523

C. Location Zones

<u>Zone</u>	<u>Area</u>
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

E. ATC Program Switch Module Switch Settings

SUBTASK 34-53-00-860-047

- (1) When necessary, set the ATC program switch module switch settings as follows:

NOTE: See WDM 34-53-11, 34-53-21 for specific airplane switch settings.

- (a) Look at the M1987 and M1988 coding tables in WDM 34-53-11, 34-53-21 and find the airplane you are performing this task on.
- (b) Look at the airplane identification placard in the flight compartment (pilots' instrument panels) to make sure that the Mode S code is same.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 203
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Open this access panel:

<u>Number</u>	<u>Name/Location</u>

117A	Electronic Equipment Access Door

- (d) Loosen the two screws [4] and washers [5] to remove the security cover [3] from the Programmable Switch Module [1].
- (e) Remove the switch seals [2] to get access to the DIP switches [6].
- (f) Find the same Mode S code in WDM 34-53-11, 34-53-21 and read across all columns to find all switch settings.
- (g) Move the DIP switches [6] to the ON/OFF position according to the WDM 34-53-11, 34-53-21 .
- For each switch where you find a “1”, set the switch to ON.
 - For each switch where you find a “0”, set the switch to OFF.
- 1) If it is necessary to convert the Mode S code from the Octal code to the Binary code, see the Octal to Binary conversion table in WDM 34-53-11, 34-53-21.
 - 2) Make sure that all the DIP switches [6] are set correctly.
- (h) Install the switch seals [2] to cover the DIP switches [6].
- (i) Put the security cover [3] on the Programmable Switch Module [1].
- (j) Tighten the two screws [4] and washers [5] to attach the security cover [3] to the Programmable Switch Module [1].
- (k) Close this access panel:

<u>Number</u>	<u>Name/Location</u>

117A	Electronic Equipment Access Door

F. Operational Test

SUBTASK 34-53-00-710-005

- (1) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

————— **END OF TASK** —————

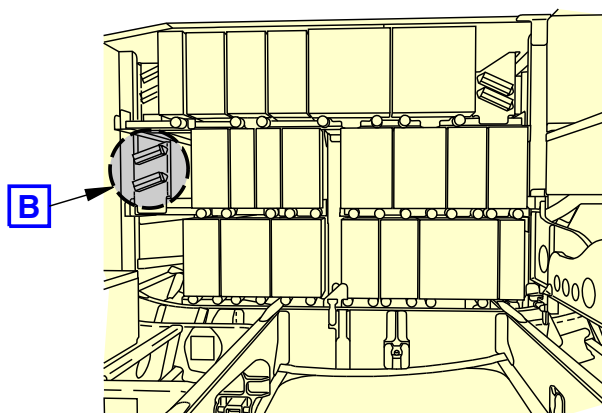
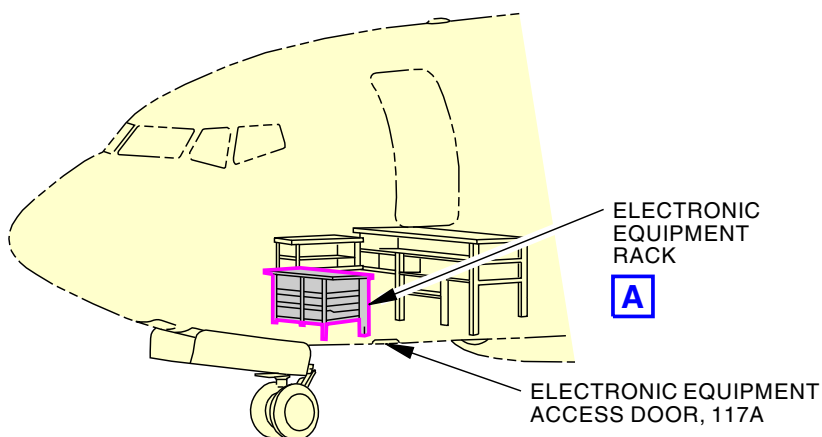
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

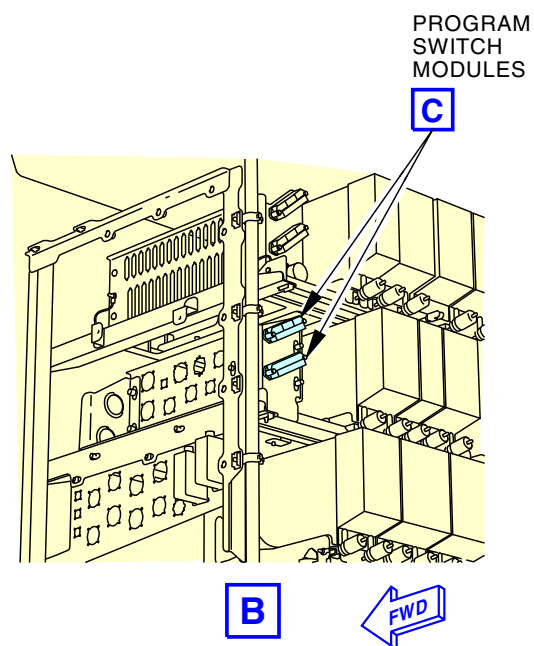
34-53-00

Page 204
Sep 15/2023



ELECTRONIC EQUIPMENT RACK
(VIEW IN THE FORWARD DIRECTION)

[A]



2940710 S0000717148_V1

ATC Program Switch Modules
Figure 201/34-53-00-990-803 (Sheet 1 of 2)

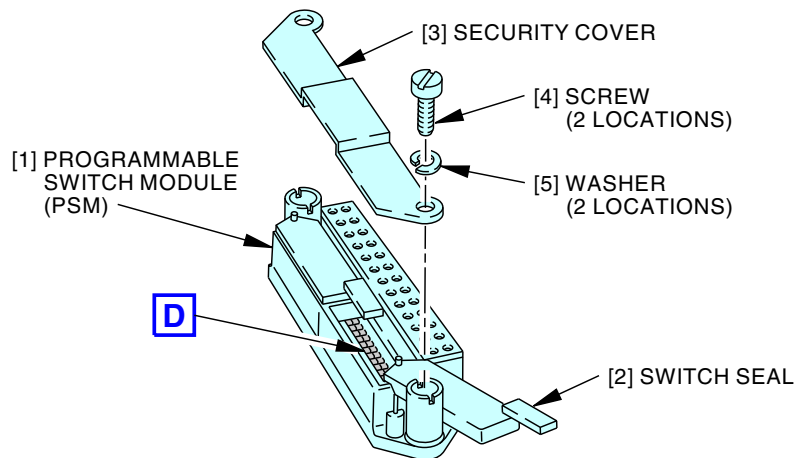
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

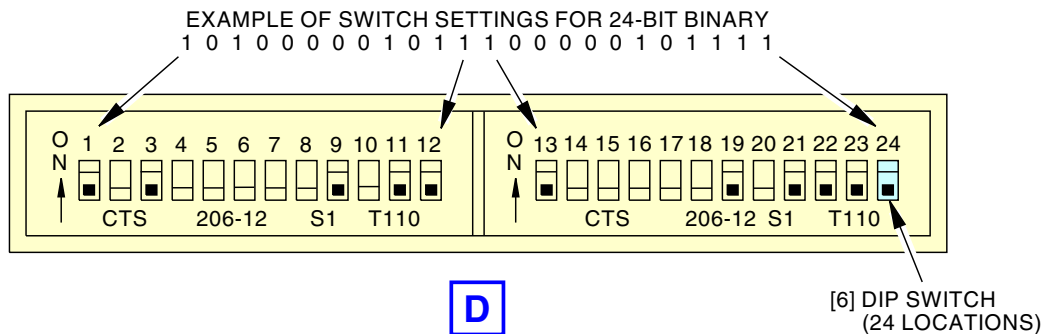
34-53-00

737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL



PROGRAMMABLE SWITCH MODULE
(EXAMPLE)

C



NOTE:

"1" = SWITCH ON

"0" = SWITCH OFF

2940716 S0000717151_V1

ATC Program Switch Modules
Figure 201/34-53-00-990-803 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-00

Page 206
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR TRAFFIC CONTROL (ATC) SYSTEM - ADJUSTMENT/TEST

1. **General**

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks for the ATC system:
 - (1) Air Traffic Control System - Operational Test
 - (2) Air Traffic Control System - System Test (With the IFR ATC-601 Series Test Set)
 - (3) Air Traffic Control System - System Test (With the TIC 48 or T-49 Series Test Set)
 - (4) Air Traffic Control System - System Test (With the TR-220 Test Set)
 - (5) Air Traffic Control System - System Test (With the IFR 6000 Test Set)
- C. The operational test is a fast check of the ATC system that uses the ATC system BITE function. No test equipment is needed.
- D. The system test is a complete test of the ATC system. It does an operational test first then it uses test equipment to examine the ATC code reception, altitude reporting, transponder sensitivity, side lobe suppression, transmitter frequency and diversity.
- E. Because the ATC transponder responds to signals from the antenna with the strongest signal strength, it is necessary to put the test set antenna close to the airplane antenna.

TASK 34-53-00-710-801

2. **ATC System - Operational Test**

A. **General**

- (1) The operational test is a fast check of the Air Traffic Control (ATC) system. It uses only the system's BITE function. No special test or ground equipment is necessary.
- (2) The ATC transponder BITE circuitry does a self-test on all internal circuitry. This includes the injection of Mode S signals into the receiver unit to examine if the signals are processed properly. If the Mode S function fails, the red fail LED indicator comes on.

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

D. **ATC System Operational Test**

SUBTASK 34-53-00-860-050



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Make sure that the ATC transponders are in standby mode.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 501
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Set the Mode Reply switch on the ATC control panel to STBY.

SUBTASK 34-53-00-860-007

- (2) On the P8 ATC control panel, do these steps:

- (a) Set the ATC transponder select switch to the No. 1 position.
- (b) Set the ALT source switch to the No. 1 (or No. 2) air data source position.
- (c) Set the Mode Select switch to the XPNDR position.
- (d) Set the Mode Reply Switch to the AUTO position.
- (e) Make sure that the XPNDR FAIL light is not illuminated.
- (f) Open this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

- (g) Make sure that the XPNDR FAIL light is illuminated.
- (h) Set the XPNDR select switch to the No. 2 position.
- (i) Set the ALT SOURCE select switch to the No. 2 position.
- (j) Make sure that the XPNDR FAIL light is no longer illuminated.
- (k) Open this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

- (l) Make sure that the XPNDR FAIL light is illuminated again.
- (m) Close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

- (n) Make sure that the XPNDR FAIL light is no longer illuminated.

NOTE: It may take up to 2 minutes for the XPNDR FAIL light to extinguish after resetting the MMR C/B's.

SUBTASK 34-53-00-010-002

- (3) To get access to the main equipment center, open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-53-00-860-008

- (4) Do the left ATC transponder (No. 1) BITE test:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 502
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Push and hold the TEST switch on the front panel of the left ATC transponder (No. 1) at the E1-2 shelf.

NOTE: Do not hold the TEST switch for more than five seconds. If the TEST switch is pushed for more than five seconds, the non volatile memory fault data for the last four flights is read and the applicable fault light LED comes on.

- 1) Make sure that the sequence that follows occurs:

a) All LED indicators turn red for 2 seconds.

b) The LRU STATUS LED turns green.

NOTE: The other LED indicators stay red for 2 seconds.

c) All LED indicators go off for 2 seconds.

d) The test results show for 30 seconds at the end of the test.

NOTE: If the self-test passes, the green LRU STATUS LED comes on and all other LED indicators go off. If the self-test fails, the red LRU STATUS LED comes on and the applicable LED indicator turns red.

e) All the LED indicators go off.

SUBTASK 34-53-00-860-009

- (5) Put the ATC transponder select switch to the No. 2 position.

SUBTASK 34-53-00-860-010

- (6) Do the right ATC transponder (No. 2) BITE test:

- (a) Push and hold the TEST switch on the front panel of the right ATC transponder (No. 2) at the E1-5 shelf.

NOTE: Do not hold the TEST switch for more than five seconds. If the TEST switch is pushed for more than five seconds, the non volatile memory fault data for the last four flights is read and the applicable fault light LED comes on.

- 1) If the TEST switch is pushed for less than five seconds:

a) All LED indicators turn red for 2 seconds.

b) The LRU STATUS LED turns green.

NOTE: The other LED indicators stay red for 2 seconds.

c) All LED indicators go off for 2 seconds.

d) The test results show for 30 seconds at the end of the test.

NOTE: If the self-test passes, the green LRU STATUS LED comes on and all other LED indicators go off. If the self-test fails, the red LRU STATUS LED comes on and the applicable LED indicator turns red.

e) All the LED indicators go off.

SUBTASK 34-53-00-410-002

- (7) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 503
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-00-860-049



MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (8) Put the ATC transponders in standby mode.
 - (a) Set the Mode Reply switch to the STBY position.

————— END OF TASK —————

TASK 34-53-00-730-801

3. ATC System - System Test (With the ATC-601 Test Set)

NOTE: This procedure is a scheduled maintenance task.

A. General



USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (1) This system test is a more complete check of the ATC system. The system test first does the ATC - Operational Test, then it uses ground test equipment to examine the left and right ATC systems.
- (2) The ATC system can be tested with the ATC-601 Series ramp test set, COM-4113, by one of these two methods: Flat Antenna or Direct Connect.
- (3) The ATC-601 can test ATCRBS Mode A, Mode C and Mode S transponders. ATC-601 test sets with software version 3.0 or higher can also test Mode S Transponders with Enhanced Surveillance (ELS, EHS, ES and ADS-B) capabilities.
- (4) The ATC-601 can test the ADS-B functions to the EASA AMC 20-24 requirements for DO-260 compliant transponders. But it can not do tests of DO-260A or DO-260B compliant transponders to the EASA AMC 20-24 requirements.
- (5) The ATC-601 Series ramp test set, COM-4113, uses thirty-nine (39) different tests to check the functionality of the ATC transponder. All thirty-nine (39) tests can be run automatically in the AUTO mode, or individually in the single test mode.

NOTE: The AUTO Test is the preferred test.

- (6) In the AUTO mode, the test set will determine the correct set of tests, either Mode A/C or Mode S upon receiving the transponder RF signal, and will automatically run the tests.

NOTE: A passed AUTO test on the ATC-601-series test set meets the requirements in FAR Part 43, Appendix F for all classes of ATCRBS transponders and for classes 1B, 2B, and 3B Mode S transponders. The ATC-601-series test set only verifies a reply frequency range of 1090 +/- 3 MHz.

NOTE: The ATC-601-series test set does not meet the requirements in FAR Part 43, Appendix F for classes 1B, 2B, and 3B Mode S transponders that incorporate the optional 1090 +/- 1 MHz reply frequency. And, this test set does not meet the requirements for classes 1A, 2A, 3A, and 4 Mode S transponders.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 504
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (7) The details of individual tests conducted during the AUTO TEST are stored in memory and may be reviewed by using the SELECT keys. The PASSED/FAILED indication is shown on top of the page.
- (8) If a test section fails or more data is necessary, use the Single Test Sequence. This lets the user do each test individually or see the individual test results.
- (9) To do a single test, use the SELECT keys to get to the desired test and push the RUN/STOP key. The test will continue until the RUN/STOP key is pushed again.
- (10) Results from the last test done, Auto Test or Single Test, show on the display.

B. References

Reference	Title
22-11-00	DIGITAL FLIGHT CONTROL SYSTEM
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34-21-00	AIR DATA INERTIAL REFERENCE SYSTEM
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
34-31-00	INSTRUMENT LANDING SYSTEM
34-58-00	GLOBAL POSITIONING SYSTEM
34-58-00-710-801	Global Positioning System - Operational Test (P/B 501)
34-61-00	FLIGHT MANAGEMENT COMPUTER SYSTEM
WDM 34-53-11	D000534521
WDM 34-53-21	D000534522
WDM 34-53-31	D000534520

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-4113	Test Set - Ramp, ATC-601 Series Opt Part #: ATC-601 Supplier: 51190 Opt Part #: ATC-601-2 Supplier: 51190
COM-18775	Antenna Coupler - Universal Transponder, UC-584 Part #: 112350 Supplier: 51190

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 505
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the System Test

SUBTASK 34-53-00-580-001

- (1) If the ADS-B tests will be run as part of the ATC System test the airplane location must let the GPS antennas have a clear view of the GPS satellites.

SUBTASK 34-53-00-710-001

- (2) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

SUBTASK 34-53-00-480-001

- (3) For the Direct Connect method, do these steps to connect the test set antenna cable to the ATC antenna switch:

- (a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

- (b) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

- (c) For ATC antenna (coax) switch, S942, disconnect connector D2703 (ATC Top Antenna) (WDM 34-53-31).
- (d) For ATC antenna (coax) switch, S943, disconnect connector D2707 (ATC Bottom Antenna) (WDM 34-53-31).
- (e) Connect the ATC-601 Series ramp test set, COM-4113, antenna cable to ATC antenna (coax) switch, S942, or ATC antenna (coax) switch, S943.
- (f) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-00-860-012

- (4) Make sure that these systems are operational:
- (a) DIGITAL FLIGHT CONTROL SYSTEM, SUBJECT 22-11-00
- (b) AIR DATA INERTIAL REFERENCE SYSTEM, SUBJECT 34-21-00

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 506
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) INSTRUMENT LANDING SYSTEM, SUBJECT 34-31-00
- (d) GLOBAL POSITIONING SYSTEM, SUBJECT 34-58-00
- (e) FLIGHT MANAGEMENT COMPUTER SYSTEM, SUBJECT 34-61-00.

SUBTASK 34-53-00-860-013

- (5) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

SUBTASK 34-53-00-860-014

- (6) Set the captain's and first officer's altimeter to 29.92 in/Hg (101.32 kPa).

SUBTASK 34-53-00-860-015

- (7) Set a selected altitude.
 - (a) Set a desired altitude in the DFCS MCP Selected Altitude window.

SUBTASK 34-53-00-860-016

- (8) Select a Flight ID.
 - (a) Select the RTE mode key on the FMCS CDU.
 - (b) Make sure that page 1 is shown.

NOTE: If needed, push the next page function key on the CDU until page 1 is shown.
 - (c) Enter the first 8 characters of the company name in the FLT NO field. This should be the name of the company that conducts the test.
 - (d) Select LSK 2R on the CDU.

SUBTASK 34-53-00-860-017

- (9) Do these steps at the ATC control panel, P8:
 - (a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.
 - (b) Set the ATC transponder select switch to the No. 1 position.
 - (c) Set the ALT source switch to the No. 1 (or No. 2) air data source position.
 - (d) Set the Mode Reply Switch to the STBY position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 507
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-00-840-001

- (10) For the Direct Connect method, do these steps to prepare the ATC-601 Series ramp test set, COM-4113, to test the ATC transponder:

NOTE: The ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

NOTE: Refer to the ATC-601 Operating Manual for detailed information on setup, test screens, and interpreting results of the tests.

NOTE: It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

- (a) Connect the test set antenna cable to the ATC-601 Series ramp test set, COM-4113, RF I/O connector.

- (b) Make sure that the antenna connector cover is installed.

NOTE: The connector cover provides the 50 ohm load required when connecting the test set antenna cable to the RF I/O connector.

- (c) Push the POWER button on the ATC-601 Series ramp test set, COM-4113.

NOTE: This is a source of interference for radio and L-band radar equipment operating on the airplane and located near the test set. Turn the test set off as soon as the test is completed or when you must perform other radio checks on the airplane.

- 1) The Start-Up screen will show.

- 2) Make sure that the software version shown on the screen is 3.0 or higher if you are to do Enhanced Surveillance Tests.

- (d) Push the SELF TEST key on the test set.

- (e) Push the RUN/STOP key to start the self-test.

- 1) Make sure that the test set display shows PASSED.

- (f) Push the SETUP key to enter the data in the SETUP #1 MENU. If the SETUP #1 MENU does not show, continue to push the SETUP key until the SETUP #1 MENU shows.

NOTE: The ATC-601 has four Setup Menus. Refer to the ATC-601 Operation Manual for detailed information on the Setup Menus.

- 1) Use the SLEW key to change the values.

- 2) Use the SELECT keys to change the items.

- 3) Use the SELECT keys to select the antenna under test.

- (g) In the RANGE field for the TOP and BOTTOM antennas, enter 0 feet.

- (h) In the HEIGHT field for the TOP antenna, enter 17 feet.

- (i) In the HEIGHT field for the BOTTOM antenna, enter 3 feet.

- (j) Set the SELECTED field, enter the UUT antenna, TOP or BOTTOM.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

- (k) Enter the cable loss listed on the cable in the LOSS field.

NOTE: The cable loss can be found on the direct connect cable for the test set.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 508
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (l) Press any key to exit SETUP #1 MENU.
- (m) Enter the required setup data for the ADS-B tests into the Setup #3 MENU.

NOTE: Refer to the ATC-601 Operation Manual for detailed Setup information.

- 1) Push the SETUP key until the SETUP #3 MENU shows.
- 2) Select POS: Set to LOCAL.
- 3) Select LLAT: Set the local latitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, TASK 34-58-00-710-801), if not, use the IRS position.

- 4) Select LLONG: Set the local longitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, TASK 34-58-00-710-801), if not, use the IRS position.

- 5) Select SPEC SERV: Set to DF17.

SUBTASK 34-53-00-840-002

- (11) For the Flat Antenna method, do these steps to prepare the ATC-601 Series ramp test set, COM-4113, to test the ATC transponder:

NOTE: The ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

NOTE: Refer to the ATC-601 Operating Manual for detailed information on setup, test screens, and interpreting results of the tests.

NOTE: It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.



CAUTION

KEEP THE REMOTE TEST SET ANTENNA MORE THAN 15 INCHES (0.40 METERS) FROM THE AIRCRAFT ANTENNA WITH THE TEST SET ON. IF THE REMOTE TEST SET ANTENNA IS TOO NEAR THE AIRCRAFT ANTENNA, YOU CAN CAUSE DAMAGE TO THE TEST SET.

- (a) Put the test set flat antenna approximately 30 ft (9.14 m) from and in the line of sight of the ATC antenna.

NOTE: The flat antenna must be in the line of sight of the ATC antenna and positioned towards the antenna.

NOTE: For the DIVERSITY test, the test set must be at a distance of less than 50 ft (15.24 m) from the airplane ATC antenna.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 509
Sep 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (b) Install the UC-584 universal transponder antenna coupler, COM-18775, over the antenna under test.
- NOTE: Refer to the IFR 6000 Operation Manual for the antenna coupler mounting procedure.
- (c) Insert the Antenna Shield over the ATC antenna not under test.
- NOTE: Refer to the ATC-601 Operation Manual for the Antenna Shield mounting procedure.
- NOTE: When testing the bottom antenna and shielding the top antenna is not possible or practical, move the Test Set so that it is not in the line of sight of the top ATC antenna.
- (d) Connect the test set antenna cable to the ATC-601 Series ramp test set, COM-4113, ANTENNA connector.
- (e) Push the POWER button on the ATC-601 Series ramp test set, COM-4113.
- NOTE: This is a source of interference for radio and L-band radar equipment operating on the airplane and located near the test set. Turn the test set off as soon as the test is completed or when you must perform other radio checks on the airplane.
- 1) The Start-Up screen will show.
 - 2) Make sure that the software version shown on the screen is 3.0 or higher if you are to do Enhanced Surveillance Tests.
- (f) Push the SELF TEST key on the test set.
- (g) Push the RUN/STOP key to start the self test.
- 1) Make sure that the test set display shows PASSED.
- (h) Push the SETUP key to enter the data in the SETUP #1 MENU. If the SETUP #1 MENU does not show, continue to push the SETUP key until the SETUP #1 MENU shows.
- NOTE: The ATC-601 has four Setup Menus. Refer to the ATC-601 Operation Manual for detailed information on the Setup Menus.
- 1) Use the SLEW keys to change the values.
 - 2) Use the SELECT keys to change the items.
 - 3) Use the SLEW keys to select the necessary antenna.
- (i) In the RANGE field for the TOP and BOTTOM antennas, enter the distance between the tester antenna and the ATC antennas.
- (j) In the HEIGHT field for the TOP antenna, enter 17 feet.
- (k) In the HEIGHT field for the BOTTOM antenna, enter 3 feet.
- (l) In the SELECTED field, enter the UUT antenna, TOP or BOTTOM.
- NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (m) Enter the gain listed on the ATC-601 Series ramp test set, COM-4113, antenna into the GAIN_1030 and GAIN_1090 field.
- (n) Enter the cable loss listed on the cable in the LOSS field.
- (o) Press any key to exit SETUP #1 MENU.
- (p) Enter the required setup data for the ADS-B tests into the Setup #3 MENU.

NOTE: Refer to the ATC-601 Operation Manual for detailed Setup information.

- 1) Push the SETUP key until the SETUP #3 MENU shows.
- 2) Select POS: Set to LOCAL.
- 3) Select LLAT: Set the local latitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, TASK 34-58-00-710-801), if not, use the IRS position.

- 4) Select LLONG: Set the local longitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, TASK 34-58-00-710-801), if not, use the IRS position.

- 5) Select SPEC SERV: Set to DF17.

SUBTASK 34-53-00-862-001

- (12) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-018



OBEY THE PROCEDURE THAT PUTS THE AIRPLANE IN THE AIR MODE. IF YOU DO THE PROCEDURE INCORRECTLY, INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (13) Put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU), do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 34-53-00-860-019

- (14) On the ATC control panel, P8, do these steps:
 - (a) Set the Mode Select switch to the XPNDR position.
 - (b) Set the Mode Reply Switch to the AUTO position.

G. ATC System Test - Mode A/C and Mode S Transponders

SUBTASK 34-53-00-730-001

- (1) You can select to do the transponder tests in either the Auto Test or Single Test sequence.

NOTE: The AUTO TEST sequence is the preferred method.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 511
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-00-730-002

- (2) Do these steps to do the Auto Test sequence:

NOTE: The ATC-601 Series ramp test set, COM-4113, will automatically determine the capabilities of the transponder and select the tests to run. The results of tests done during the AUTO TEST are stored in memory. The SELECT keys are used to show the test results.

NOTE: Refer to the ATC-601 Operation Manual for detailed information.

- (a) Push the AUTO TEST key on the ATC-601 Series ramp test set, COM-4113.
- (b) Use the RUN/STOP key to start the Auto Test.

NOTE: During the Auto Test, TEST RUNNING, will show at the bottom of the display.

- 1) The Auto Test will run until it is finished. The results are stored in the tester memory for review.
- 2) Make sure that an AUTO TEST - PASSED indication shows at the top of the display after the Auto Test.

NOTE: For ATC transponders with enhanced surveillance capabilities, the ATC-601 ramp test set includes the Tests for Enhanced Surveillance in the AUTO TEST sequence. If the Flight ID is not directly entered into the ATC transponder or supplied by the FMC, a failure will occur.

NOTE: The Frequency, Power measurements and Diversity Isolation are also shown on the Auto Test screen.

NOTE: No reply to the UF16, UF20 or UF21 test is not a failure of the ATC system.

NOTE: "NOT AVAIL" is not a failure of the ATC system. Currently, Boeing aircraft are not using Uplink Extended Length Message (UELML) or Downlink Extended Length Message (DELM) and do not require Airborne Data Link Process (ADLP). An ADLP is necessary for the UELML or DELM function and results in a NOT AVAIL test result when not present.

- 3) Make sure that the AA (aircraft address) field shows the correct Mode S Address. Refer to WDM 34-53-11 or WDM 34-53-21 for the Mode S Address code.
- 4) If a test section fails or more data is necessary, do the Single Test procedure to view or to do individual tests.

SUBTASK 34-53-00-730-003

- (3) If necessary, do these steps to do the Single Test sequence:

- (a) Use the SELECT key to select each test on the ATC-601 Series ramp test set, COM-4113.
- (b) Use the RUN/STOP key to start or stop the individual tests.

NOTE: Each Single Test continues until stopped. Use the RUN/STOP key to stop the test.

- (c) Make sure that the display shows PASSED for each test.
- (d) Review the test results.

NOTE: Refer to the ATC-601 Operation Manual for detailed information on test screens and interpreting results of the tests.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 512
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

H. ATC System Test - Tests for Enhanced Surveillance

SUBTASK 34-53-00-730-004

- (1) For airplanes with Enhanced Surveillance capabilities, the ATC-601 Series ramp test set, COM-4113, will include the Enhanced Surveillance tests in the AUTO TEST sequence. Use the SELECT keys to see the test results after the AUTO TEST is completed.

NOTE: ATC-601 test sets with software version 3.0 or higher must be used to do the Enhanced Surveillance tests.

- (2) The SINGLE TEST sequence can also be used to do the Enhanced Surveillance tests. Use the SELECT keys to select the test to do and view the test results.

Make sure that the display shows PASSED for each test.

NOTE: Results from the last test run, Auto Test or Single Test, are shown on the display.

NOTE: Refer to the ATC-601 Operation Manual for detailed setup and test information.

- (3) The tests that follow are for Elementary Surveillance:

- Flight ID BDS 2,0
- Data Link Capability Report BDS 1,0 Part 1
- Data Link Capability Report BDS 1,0 Part 2
- Common Usage GICB Cap Report BDS 1,7
- ACAS Resolution Advisory BDS 3,0

- (4) The tests that follow are for Enhanced Surveillance:

- Selected Vert Intent Report BDS 4,0 Part 1
- Selected Vert Intent Report BDS 4,0 Part 2
- Track & Turn Report BDS 5,0
- Heading & Speed Report BDS 6,0

I. ATC System Test - Tests for ADS-B

SUBTASK 34-53-00-730-005

- (1) For airplanes with ADS-B capabilities, the ATC-601 Series ramp test set, COM-4113, will include the ADS-B tests in the AUTO TEST sequence. Use the SELECT keys to see the test results after the AUTO TEST is completed.

NOTE: Refer to the ATC-601 Operation Manual for detailed setup and test information.

- (2) The SINGLE TEST sequence can also be used to do the ADS-B tests. Use the SELECT keys to select the test to do and view the test results.

NOTE: Results from the last test run, Auto Test or Single Test, are shown on the DISPLAY.

- (3) The tests that follow are for ADS-B:

- Ext Squitter Airborne Position BDS 0,5
- Ext Squitter Ident & Category BDS 0,8

- (4) Do a check of the ADS-B test results.

NOTE: The test results that follow satisfy the EASA AMC 20-24 requirements for ADS-B.

- (a) Do a check of the Airborne Position:

- 1) Use the SELECT keys to select the Ext Squitter Airborne Position test.
- 2) Make sure that the LAT and LONG fields show the present position of the airplane.

- (b) Do a check of the Pressure Altitude.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 513
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Use the SELECT keys to select the Ext Squitter Airborne Position test.
 - 2) Make sure that the BARO PR ALT field shows the airplane Barometric Pressure Altitude ± 125 ft (38 m).
- (c) Do a check of the Surveillance Status.
- 1) Notify local ATC facilities that transponder testing of the Surveillance Status will be performed.
 - 2) Use the SELECT keys to select the Ext Squitter Airborne Position test.
 - 3) On the ATC control panel, change the code switches to a different ATC ID code.
 - 4) Make sure that the SURVL STAT field changes to TEMP ALERT.
NOTE: Current Boeing aircraft do not have an Airborne Data Link Processor (ADLP) installed and the transponders do not have an embedded ADLP. The SURVL STAT should show NO INFO.
 - 5) Set code switches on the ATC control panel back to the original code.
 - 6) Push the IDENT switch on the ATC Control Panel.
 - 7) Make sure that the SURVL STAT field shows SPI.
NOTE: Current Boeing aircraft do not have an Airborne Data Link Processor (ADLP) installed and the transponders do not have an embedded ADLP. The SURVL STAT should show NO INFO.
- (d) Do a check of the Position Quality Indicator.
- 1) Use the SELECT keys to select the Ext Squitter Airborne Position test.
 - 2) Make sure that the TYPE field does not show 0 or 18.
NOTE: If TYPE shows 0 the transponder does not receive position data from the IRS or MMR. A TYPE of 18 indicates the transponder receives position data but not from the MMR.
- (e) Do a check of the Aircraft Identity.
- 1) Use the SELECT keys to select the Ext Squitter Ident & Category test.
 - 2) Make sure that the correct data is shown in the following fields:
 - a) The AA (aircraft address) field shows the Mode S Address. Refer to (WDM 34-53-11 and WDM 34-53-21) for the Mode S Address code.
 - b) The FLIGHT ID field shows the same Flight ID entered into the FMC.

J. Repeat ATC System Tests

SUBTASK 34-53-00-730-006

- (1) Repeat the System Test for the other antenna.
 - (a) For the Direct Connect method.
 - 1) Change the ATC-601 Series ramp test set, COM-4113, antenna cable to connect to the other ATC antenna switch.
 - 2) Change the ATC-601 Series ramp test set, COM-4113, SELECTED field in the SETUP #1 MENU to test the other antenna.
 - (b) For the Flat Antenna method.
 - 1) Change the ATC-601 Series ramp test set, COM-4113, SELECTED field in the SETUP #1 MENU to test the other antenna.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 514
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (2) Do the ATC System Tests again for the right or No. 2 system.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

- (a) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2

- (b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

- (c) To test the right or No. 2 system, put the ATC select switch to the No. 2 position and use the No. 2 (or No. 1) air data source.

K. Put the Airplane Back to Its Usual Condition

SUBTASK 34-53-00-860-020

- (1) Set the Mode Reply Switch to the STBY position.

SUBTASK 34-53-00-080-001

- (2) For the Flat Antenna method, remove the antenna shield cover and coupler, if installed.

SUBTASK 34-53-00-080-002

- (3) For the Direct Connect method, do these steps to disconnect the antenna cable from the ATC antenna switch:

- (a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

- (b) Disconnect and remove the ATC-601 Series ramp test set, COM-4113, antenna cable.
- (c) For ATC antenna (coax) switch, S942, connect connector, D2703 (ATC Top Antenna) (WDM 34-53-31).
- (d) For ATC antenna (coax) switch, S943, connect connector, D2707 (ATC Bottom Antenna) (WDM 34-53-31).
- (e) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 515
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-00-840-003

- (4) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-902-001

- (5) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-53-00-700-001

- (6) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

SUBTASK 34-53-00-860-021

- (7) Set the ADIRU switches to the OFF position, if the ADIRUs are not necessary.

SUBTASK 34-53-00-840-004

- (8) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— END OF TASK —————

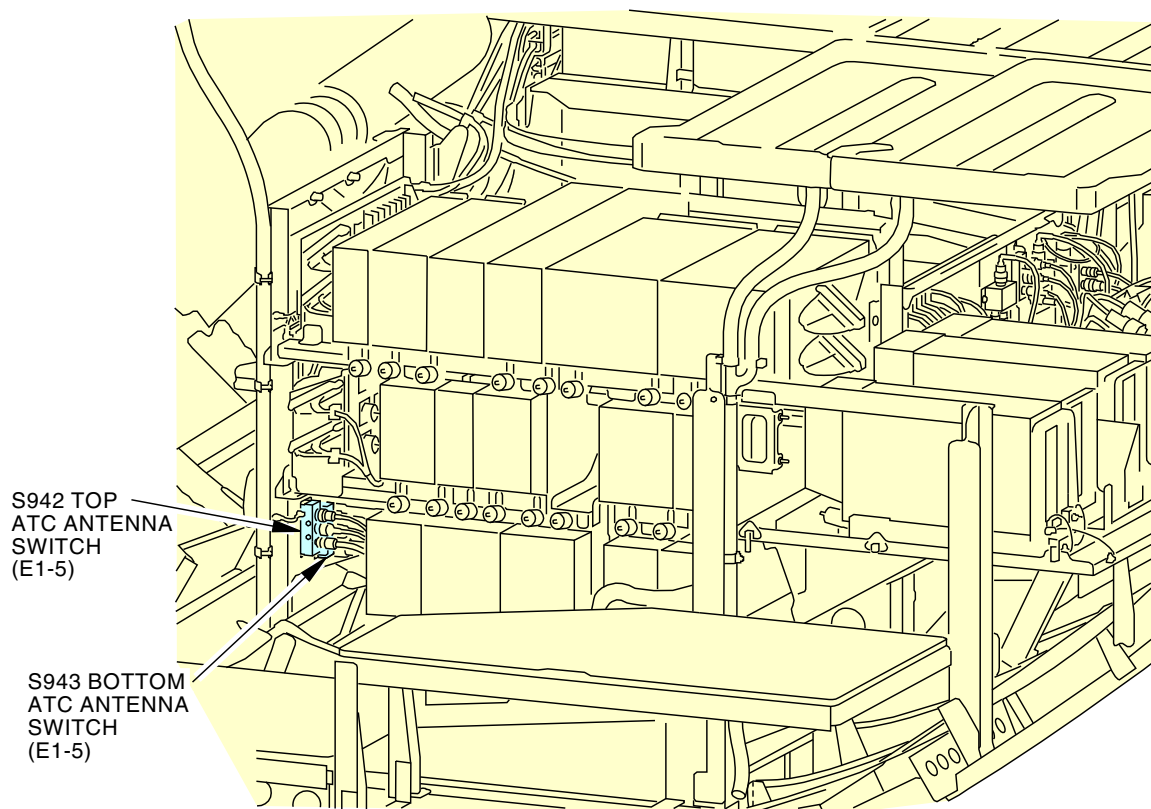
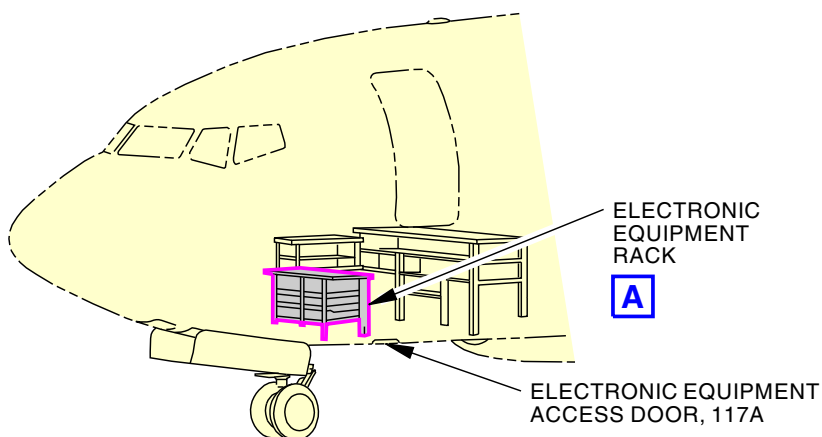
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 516
Sep 15/2023



ELECTRONIC EQUIPMENT RACK

A

2414892 S00061536438_V2

**ATC Antenna Switch Location
Figure 501/34-53-00-990-802**

EFFECTIVITY
SIA ALL

34-53-00

Page 517
Jan 15/2022

D633AM101-SIA



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-53-00-730-802

4. ATC System - System Test (With the TIC T-48 or T-49 Series Test Set)

NOTE: This procedure is a scheduled maintenance task.

A. General



WARNING

USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (1) This system test is a full check of the ATC system. The system test first does the ATC - Operational Test and then uses the T-48/-49 ramp test set, COM-10730, to examine the left and right ATC systems.
- (2) The ATC-601 can test the ADS-B functions to the EASA AMC 20-24 requirements for DO-260 compliant transponders. But it can not do tests of DO-260A or DO-260B compliant transponders to the EASA AMC 20-24 requirements.
- (3) The test set can do all of the tests automatically except the DIVERSITY CHECK, the MAX TRUE AIRSPEED TEST and the IDENT BUTTON CHECK. You must do these tests manually with the TEST button on the test set. If a test has failed, the automatic test sequence will stop and a failed message will show. At the end of the automatic test all data will show.
- (4) You can manually do each test individually. Push the TEST button to do each test individually. The test results will show after each test is done.
- (5) The test set accessory, the antenna coupler, TAP-115, TAP 118, TAP 119, TAP 125 or TAP 135 used with the applicable test set, is necessary to do a check of the output power, receiver, sensitivity and radio frequency. For the diversity check, the TAP 125 or TAP 135 is necessary.

B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
WDM 34-53-11	D000534521
WDM 34-53-21	D000534522

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1617	Meter - RF Power Part #: MODEL 43 Supplier: 70998 Part #: MODEL 43P Supplier: 70998
COM-1920	Element - RF Power, 500 Watt, 950-1260 Mhz Part #: 500J-950 Supplier: 70998
COM-10730	Test Set - Ramp, T-48/-49 Opt Part #: T-48D Supplier: 92606 Opt Part #: T-49C Supplier: 92606

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 518
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
143	Area Below Aft Cargo Compartment - Left
144	Area Below Aft Cargo Compartment - Right
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the System Test

SUBTASK 34-53-00-710-002

- (1) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

SUBTASK 34-53-00-940-001



USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (2) Prepare the T-48/-49 ramp test set, COM-10730 and the antenna coupler for the ATC system test:

NOTE: Refer to the applicable test set operational manual for detailed setup information when using the antenna couplers.

NOTE: The test set accessory, the antenna coupler, TAP-115, TAP 118, TAP 119, TAP 125 or TAP 135 used with the applicable test set, is necessary to do a check of the output power, receiver, sensitivity and radio frequency. For the diversity check, the TAP 125 or TAP 135 is necessary.

- (a) Pull the pull-ring on the antenna coupler to separate the spring loaded clamp.
- (b) Insert the antenna coupler over the necessary ATC antenna.
NOTE: Make sure that the antenna coupler is centered.
- (c) Push and hold antenna coupler so the EMI gasket compresses to the airplane skin.
- (d) Release the pull-ring to keep the coupler in its correct position.
- (e) Connect the antenna coupler coax connector to the test set ANTENNA connector.

NOTE: If you use the T-48/-49 ramp test set, COM-10730, accessory, the TAP 125 or TAP 135, the unused coupler cable does not need to be connected to the test set. You test only one antenna at a time.

- (f) Push the INTERROGATE button.

NOTE: To read the display push and hold the INTERROGATE switch.

- 1) The test set will momentarily display:

Table 501/34-53-00-993-801

TEL Instrument

T-4X Rev.XX

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 519
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 2) After the test set has determined the type of transponder under test (Mode S, Mode A, Mode C, etc) the display will change to: No Reply from XPNDR.

SUBTASK 34-53-00-860-022

- (3) Put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU) TASK 32-09-00-860-801.

SUBTASK 34-53-00-860-023

- (4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-024

- (5) Set the captain's and first officer's altimeter to 29.92 in/Hg (101.32 kPa).

F. ATC System Test

SUBTASK 34-53-00-860-025

- (1) On the ATC control panel, P8, do these steps:

- (a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.

- (b) Set the ATC transponder select switch to the No. 1 position.
- (c) Set the ALT source switch to the No. 1 (or No. 2) air data source position.
- (d) Set the Mode Select switch to the XPNDR position.
- (e) Set the Mode Reply Switch to the AUTO position.

SUBTASK 34-53-00-730-007

- (2) Push the INTERROGATE switch.

- (a) Make sure that the test set shows the correct transponder type.

NOTE: If the test set shows "no reply from xpdr", do a check on the test antenna connections. Also, make sure that the ATC system is operational.

SUBTASK 34-53-00-730-008

- (3) Push the INTERROGATE switch on the test set.

- (a) The test set will determine the transponder type.

SUBTASK 34-53-00-860-026

- (4) Push the INTERROGATE button again and the test set will initiate a sequence of tests on the transponder.

- (a) These tests must be done to complete the ATC system test:

- 1) ATCRBS/A & SLS
- 2) ATCRBS/C
- 3) ATCRBS/A Mode S All
- 4) ATCRBS/C Mode S All
- 5) ATCRBS/A only
- 6) ATCRBS/C only

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 520
Jan 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- 7) Mode S Surv Identity
- 8) Mode S Surv Altitude
- 9) Mode S Surv Short
- 10) Undesired Replies
- 11) Squitter
- 12) Diversity

NOTE: This test is only available for test sets with the TAP 125 or TAP 135 accessory and must be done manually.

- 13) MAX TRUE AIRSPEED

NOTE: This test must be done manually.

SUBTASK 34-53-00-210-001

- (5) Make sure that the display is as follows when the test is complete:

Table 502/34-53-00-993-802

CCCC	XXXXXX	YYYYY'
ZZZ W	mmm dbm	nnn MHZ

- (a) CCCC is code selected.
- (b) XXXXXX is airplane registry number.

NOTE: This may appear as the mode S address in hexadecimal. The code may be translated from hexadecimal to tail number on (WDM 34-53-11 or WDM 34-53-21).

- (c) YYYYYY is airplane altitude in feet (must be $\pm 125'$ of the Capt's and F/O's altimeter).
- (d) ZZZ is the transmitter power output (must be > 125 and < 500 Watts).
- (e) mmm is the receiver sensitivity (must be between -77 to -71 dbm).
- (f) nnn is the frequency deviation (± 1 MHz maximum allowed).

SUBTASK 34-53-00-730-009

- (6) Do the DIVERSITY CHECK that follows for the test sets with the TAP 125 or TAP 135 couplers:

NOTE: This test can only be done with the TAP 125 or TAP 135 coupler. If you do not have the TAP 125 or TAP 135 coupler, do the test that uses the Bird RF through-line wattmeter.

- (a) Push the TEST button on the test set until you get to the DIVERSITY CHECK.
 - 1) Make sure to pause between each push of the TEST button to allow the test set to do that test step.
- (b) The test set will show DIVERSITY and then either PASS or FAIL.

NOTE: If the test shows "Diversity Fail", repeat the test since this may be the result of an interrogation from a near-by radar or other interference, or placement of the coupler on the ATC blade antenna.

SUBTASK 34-53-00-730-010

- (7) Do the Diversity Check that follows for the test set without the TAP 125 or TAP 135 coupler:

- (a) Disconnect the antenna cable at the top antenna switch connector, D2703, and connect the RF through-line watt element, COM-1920, in its place.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-00

Page 521
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Make a note of the maximum power output and the minimum power output measured by the RF through-line watt meter, COM-1617, during the mode S squitter transmission period.
 - 1) Make sure that the minimum power output is 100 times or 20 db lower than the maximum power output.
- (c) Disconnect the RF through-line watt element, COM-1920.
- (d) Connect the antenna cable at the top antenna switch connector, D2703.

SUBTASK 34-53-00-760-001

- (8) Do these steps that follow for the MAX TRUE AIRSPEED TEST:
 - (a) Push the TEST button on the test set until you get to the MAX TRUE AIRSPEED TEST.
 - 1) Make sure to pause between each push of the TEST button to allow the test set to do that test step.
 - (b) The test set will show the max true airspeed that has been pin programmed at each transponder.
 - 1) The test set display must be:

Table 503/34-53-00-993-803

MAX TRUE AIRSPEED

GT 300 & LE 600 kts

SUBTASK 34-53-00-730-011

- (9) Do the steps that follow for the IDENT BUTTON CHECK:
 - (a) On the ATC control panel do these steps:
 - 1) Set the code switches to a desired ATC ID code.
NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.
Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.
 - 2) Set the ATC transponder select switch to the No. 1 position.
 - 3) Set the ALT source switch to the No. 1 (or No. 2) air data source position.
 - 4) Set the Mode Select switch to the XPNDR position.
 - 5) Set the Mode Reply Switch to the AUTO position.
 - (b) Make sure that the test set displays the desired ATC ID code.
 - (c) Turn the test set off.
 - (d) Wait a moment, then push the INTERROGATE button.
 - 1) Allow the test set to determine the type of transponder under test.
 - (e) At the same time push the control panel IDENT button and the test set TEST button.
 - (f) Make sure that the message IDENT is displayed on the test set.

SUBTASK 34-53-00-730-012

- (10) Do the test again as necessary, for the right system.
 - (a) To test the right system, put the ATC select switch to the No. 2 position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 522
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

G. Put the airplane back to its Usual Condition.

SUBTASK 34-53-00-860-027

- (1) Set the Mode Reply Switch to the STBY position.

SUBTASK 34-53-00-840-005

- (2) Disconnect and remove the antenna coupler.

SUBTASK 34-53-00-840-006

- (3) Disconnect and remove the ATC test set.

SUBTASK 34-53-00-840-007

- (4) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-53-00-860-028

- (5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

————— END OF TASK —————

TASK 34-53-00-730-803

5. ATC System - System Test (With the IFR 6000 Test Set)

NOTE: This procedure is a scheduled maintenance task.

A. General



WARNING

USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (1) This system test is a full check of the Air Traffic Control (ATC) system. The system test first does the ATC - Operational Test and then uses the IFR-6000 ramp test sets, COM-10727, to examine the left and right ATC systems.
- (2) The XPDR Mode of the IFR 6000 provides flight line test capability for the Air Traffic Control Radar Beacon System (ATCRBS), Mode S transponders. The auto test satisfies the 24 month ATC transponder maintenance check requirements.
- (3) The IFR-6000 ramp test sets, COM-10727, can also test airplanes with Automatic Dependent Surveillance - Broadcast (ADS-B) function for DO 260, DO 260A, and DO 260B compliant transponders. The ADS-B tests are not included with the AUTO TEST. These tests satisfy the ADS-B Out 24 month ATC transponder maintenance check requirements.
- (4) Details of individual tests conducted during the AUTO TEST are stored in memory in the Test Sets TEST LIST. The tests in the TEST LIST can be run individually with the DATA and SELECT keys.
- (5) Different classes of transponders are tested to built-in test limits by selection of configuration files. If the class of transponder is unknown, generic configuration files are provided for ATCRBS and Mode S transponders that apply the widest system limits.
- (6) Mode S Transponder level is automatically determined when running a test.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 523
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (7) The test is applicable to the left and the right ATC system. Set the transponder select switch on the ATC control panel to the applicable position to do a test of that system.

B. References

Reference	Title
22-11-00 P/B 501	DIGITAL FLIGHT CONTROL SYSTEM - ADJUSTMENT/TEST
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34-21-00 P/B 501	AIR DATA INERTIAL REFERENCE SYSTEM - ADJUSTMENT/TEST
34-31-00 P/B 501	INSTRUMENT LANDING SYSTEM - ADJUSTMENT/TEST
34-58-00-710-801	Global Positioning System - Operational Test (P/B 501)
34-61-00 P/B 501	FLIGHT MANAGEMENT COMPUTER SYSTEM - ADJUSTMENT/TEST
WDM 34-53-11	D000534521
WDM 34-53-11, 34-53-21	D000534523
WDM 34-53-21	D000534522

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-10727	Test Set - Ramp, IFR-6000 Part #: IFR 6000 Supplier: 51190
COM-18775	Antenna Coupler - Universal Transponder, UC-584 Part #: 112350 Supplier: 51190

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the System Test

SUBTASK 34-53-00-580-002

- (1) If the ADS-B tests will be run as part of the ATC System test the airplane location must let the Global Positioning System (GPS) antennas have a clear view of the GPS satellites.

SUBTASK 34-53-00-860-029

- (2) Make sure that these systems are operational:
- (a) DFCS - DIGITAL FLIGHT CONTROL SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 22-11-00/501
 - (b) ADIRS - AIR DATA INERTIAL REFERENCE SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 34-21-00/501

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 524
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) MMR - INSTRUMENT LANDING SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 34-31-00/501
- (d) ATC - AIR TRAFFIC CONTROL (ATC) SYSTEM - ADJUSTMENT/TEST, 34-53-00/501
- (e) FMCS - FLIGHT MANAGEMENT COMPUTER SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 34-61-00/501.

SUBTASK 34-53-00-710-003

- (3) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

SUBTASK 34-53-00-860-030

- (4) Set the captain's and First Officer (F/O)'s altimeter to 29.92 in/Hg (101.32 kPa).

SUBTASK 34-53-00-860-048

- (5) Set a desired heading on the Digital Flight Control System (DFCS) Mode Control Panel (MCP) HEADING window.

SUBTASK 34-53-00-860-031

- (6) Set a selected altitude.
 - (a) Set a desired altitude in the DFCS MCP Selected Altitude window.

SUBTASK 34-53-00-860-032

- (7) Select a Flight ID.
 - (a) Select the RTE function key on the Flight Management Computer (FMC) Control Display Unit (CDU).
 - (b) Make sure that page 1 is shown.
 - 1) If it is necessary, push the next page function key on the CDU until page 1 is shown.
 - (c) Enter a Flight ID on the CDU scratchpad (i.e. BOE1234).
 - (d) Select LSK 2R on the CDU.

SUBTASK 34-53-00-860-033

- (8) On the ATC control panel do these steps:
 - (a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.
 - (b) Set the ATC transponder select switch to the No. 1 position.
 - (c) Set the ALT source switch to the No. 1 (or No. 2) air data source position.



WARNING

YOU MUST NOT SIMULATE ALTITUDE WITH AN AIR DATA TESTER (COM-1914) OR EQUIVALENT. IF YOU DO NOT OBEY, YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (d) Set the Mode Select switch to the XPNDR position.
- (e) Set the Mode Reply Switch to the AUTO position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 525
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-00-865-001

- (9) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-034

- (10) Put the airplane in the air mode with the Built-In-Test Equipment (BITE) in the Proximity Switch Electronic Unit (PSEU) (TASK 32-09-00-860-801).

SUBTASK 34-53-00-840-009

- (11) Prepare the IFR-6000 ramp test set, COM-10727, for the ATC system test.

NOTE: The IFR-6000 ramp test set, COM-10727 has an “auto test” function which checks more parameters of the transponder under test, than are required by FAR 43, Appendix F. Ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results and compliance with FAR 43, Appendix F.

NOTE: The software version for the IFR-6000 ramp test set, COM-10727 should be version 2.09.00 or higher for the ATC system test.

- (a) For the flat antenna connection, mount the Directional Antenna on the Test Sets friction hinge and connect the Directional Antenna ANT Connector to the Test Set ANT Connector via the 12 in. (30 cm) coaxial cable.

NOTE: You can use the direct cable connection procedure to perform this test. If you do the direct cable connection, follow the instructions in the ramp test set operations manual.



USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (b) For the antenna coupler method connection, install the UC-584 universal transponder antenna coupler, COM-18775 over the antenna under test.

NOTE: Refer to the IFR 6000 Operation Manual for the antenna shield and antenna coupler mounting procedure.

- (c) Push the POWER Key to energize the Test Set On.

NOTE: The IFR-6000 ramp test set, COM-10727 is equipped with a Self Test for quick performance evaluation. An abbreviated Self Test is run at Power-Up. The full Self Test is initiated manually. Refer to the IFR 6000 Operation Manual for the full Self Test procedure.

- (d) Push the SETUP Control Key to show the setup screens. Continue pushing the SETUP Control Key to cycle to the SETUP-GENERAL Screen. Use the NEXT PARAM and PREV PARAM Soft Keys to set each parameter.

NOTE: Refer to the IFR 6000 Operation Manual for detailed information on setup.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 526
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (e) Push the SETUP Control Key to show the setup screens. Continue pushing the SETUP Control Key to cycle to the SETUP-XPDR Screen. Use the NEXT PARAM and PREV PARAM Soft Keys to set each parameter.

NOTE: Setup XPDR Screen contains parameters which determine operational characteristics of the XPDR Functional Mode. Unless otherwise stated, last used values are retained on Power-up.

- 1) For the flat antenna connection, do these steps:
 - a) Select ANTENNA: Set to TOP or BOTTOM depending on which aircraft antenna is under test.
 - b) Select RF PORT: Set to ANTENNA.
 - c) Select ANT RANGE: Set to setup range from IFR 6000 antenna to the Unit Under Test (UUT) Antenna.
 - d) Select ANT HEIGHT: Set to setup height from IFR 6000 antenna to the UUT Antenna.

NOTE: The lower antenna is approximately 4 ft (1.2 m) above ground level.
The upper antenna is approximately 18 ft (5.5 m) above ground level.

- e) Select ANT CABLE LOSS: Set to cable loss found on cable.
 - f) Select ANT GAIN (dBi): set 1.03 GHz and 1.09 GHz antenna gain to figures marked on supplied Directional Antenna.
- 2) For the antenna coupler connection, do these steps:
 - a) Select RF PORT: Select DIR W/COUPLER.
 - b) Select CPL CABLE LOSS: Set to loss found on cable.
 - c) Select COUPLER LOSS: Set to loss found on coupler.
- 3) Select UUT ADDRESS: Set to AUTO (defaults to AUTO on power-up). AUTO selection Mode S address is obtained via ATCRBS/Mode S All Call (FAR Part 43, Appendix F approved method).

NOTE: Refer to the IFR 6000 Operation Manual for more detailed information on UUT Address selection.

- 4) Select DIVERSITY: Set to ON.

NOTE: If Diversity Isolation Test is enabled, make sure that the Antenna Shield is installed to the top or bottom UUT antenna prior to running the test. Refer to IFR 6000 Operation Manual for the Antenna Shield mounting procedure.

NOTE: For the DIVERSITY test, the test set must be at a distance of less than 50 ft (15.2 m) from the airplane antenna.

- 5) Select CHECK CAP: Set to YES.
- 6) Select PWR LIM: Set to FAR 43.



CAUTION

DO NOT OPERATE THE TEST SET WHEN ITS ANTENNA IS LESS THAN 15 IN. (381 MM) FROM THE AIRPLANE ANTENNA. DAMAGE TO THE TEST SET CAN OCCUR.

- (f) For the flat antenna connection, position the Test Set ≤50 feet from and in line of sight with the UUT antenna.
- (g) For the flat antenna connection, put a second UC-584 universal transponder antenna coupler, COM-18775, over the ATC antenna not under test.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-00

Page 527
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 1) If it is necessary, move the Test Set so that it is not in the line of sight of the top ATC antenna.

NOTE: This step is optional if testing the bottom antenna and using the coupler on the top antenna is not possible or practical.

- (h) For the antenna coupler connection, put a second UC-584 universal transponder antenna coupler, COM-18775, over the ATC antenna not under test.

- 1) Add a 50-ohm load on the Radio Frequency (RF) connector of the coupler.

F. ATC System Test

SUBTASK 34-53-00-730-013

- (1) Do the ATC System Test:

NOTE: When first powered-up, the Test Set displays blank data fields. The last test results are displayed while Test Set remains powered on.

- (a) Push the XPDR Mode Key on the IFR-6000 ramp test set, COM-10727, to return to XPDR Auto Test Screen.

- (b) Push the CONFIG Soft Key to show the XPDR CONFIG Screen. Use the Data Keys to select the desired configuration file. Push the RETURN Soft Key to confirm the selection.

NOTE: Eight predefined Configurations are provided to determine the PASS/FAIL limits applied to ERP, Frequency and MTL measurements. Configurations are named by class and option. Refer to the IFR 6000 Operation Manual for predefined Configuration details.

NOTE: If the transponder class is not known, select the GENERIC ATCRBS or GENERIC MODE S configuration file.

- (c) To do the Auto Test, push the RUN TEST Soft Key. When the Auto Test completes, a PASS or FAIL indication is shown at the top of the Auto Test screen.

NOTE: The Auto Test Screen is the primary test screen and displays most UUT parameters requiring user verification.

NOTE: A passed Auto Test complies with the Federal Aviation Regulation (FAR) Part 43 Appendix F test requirements.

NOTE: Refer to the IFR 6000 Operation Manual for detailed information on test screens and interpreting results of the tests.

- (d) Make sure that the Aircraft Address (AA) field shows the correct Mode S Address. Refer to WDM 34-53-11 or WDM 34-53-21 for the Mode S Address code.

- (e) Push the TEST LIST Soft Key to show the complete Auto Test List. Tests may be reviewed or run individually by use of the DATA and SELECT keys.

NOTE: When a Mode S configuration is selected the test list is displayed over two screens. When an ATCRBS configuration is selected the test list is displayed on one screen.

- (f) To do the tests individually in the Test List, do these steps:

- 1) Use the DATA Keys to select desired test. Push the SELECT TEST Soft Key to show the selected test.
- 2) Push the RETURN Soft Key to show the XPDR Auto Test Screen.
- 3) Push the RUN TEST Soft Key to the start test.

NOTE: The test runs until stopped. Each pass through the test sequence updates the PASS/FAIL indication.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 528
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 4) Push the STOP TEST Soft Key to the stop test.
- 5) Push the NEXT TEST Soft Key to show the next test.
- 6) Push the PREV TEST Soft Key to show the previous test.
- 7) Push the RETURN Soft Key to show the test list and select desired test.

SUBTASK 34-53-00-730-014

(2) To do the tests for ADS-B, do the following:

(a) Do the ADS-B test setup.

NOTE: Refer to the IFR 6000 Operation Manual for detailed information on ADS-B test setup.

- 1) Push the SETUP Key until the SETUP-XPDR Screen is shown.
- 2) Push the ADS-B SETUP Soft Key.
- 3) Set the parameters by pushing the NEXT PARAM soft key. Push the PREV PARAM to select the field. Use DATA Keys to slew the data.
 - a) Select POS DECODE: Set to LOCAL.
 - b) Select LAT: Set the local latitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use the GPS position if GPS antennas have a clear view of the GPS satellites (TASK 34-58-00-710-801). If not, use the Inertial Reference System (IRS) position.

- c) Select LONG: Set the local longitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use the GPS position if GPS antennas have a clear view of the GPS satellites (TASK 34-58-00-710-801). If not, use the IRS position.

- d) Select ADS-B MON: Set to DF17.
 - e) Select GICB: Set to DF20.

(b) Do the ADS-B tests.

NOTE: Refer to the IFR-6000 Operation Manual for detailed information on test screens and interpreting results of the tests.

- 1) Push the XPDR mode key twice to show the ADS-B/GICB Main Menu.
- 2) Push the ADS-B MON Soft Key to show the ADS-B MON list screen.
 - a) The ADS-B MON list screen will show the following extended squitter BDSs:
 - 0,5 AIRBORNE POS
 - 0,6 SURFACE POS
 - 0,8 IDENT & CAT
 - 0,9 AIRBORNE VEL
 - 6,1 A /C STATUS
 - 6,2 TARG STATE
 - 6,5 A /C OP STATUS

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 529
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 3) Push the RUN TEST soft key to start the test. When a specific extended squitter BDS is captured, AVAIL will be shown to the right of the BDS name.

NOTE: Indications are AVAIL (squitter has been captured), NO SQTR (Squitter available but not captured), NOT CAP (transponder has identified squitter is not supported by transponder/subsystem).

NOTE: The test will continue to run until the STOP TEST soft key is pushed.

NOTE: Airplane must be in the Ground Mode to capture the 0,6 SURFACE POS BDS. Only the top ATC antenna will transmit the 0,6 SURFACE POS BDS.

- 4) You can use the Data Keys to select a specific BDS and push the BDS DATA soft key to show the selected BDS screen.

NOTE: To show the next or previous BDS screen, push the NEXT TEST or PREV TEST soft keys.

- 5) Push the RETURN soft key to return to the ADS-B MON list screen.

- (c) Do a check of the ADS-B test results.

NOTE: The test results that follow satisfy the European Aviation Safety Agency (EASA) AMC 20-24 requirements for ADS-B.

- 1) Do a check of the Airborne Position.

- a) Select the 0,5 BDS with the BDS Data soft key.
- b) Make sure that the LAT and LONG fields show the position data entered in the ADS-B setup screen.

- 2) Do a check of the Pressure Altitude.

- a) Select the 0,5 BDS with the BDS Data soft key.
- b) Make sure that the BARO PRESS ALT field shows the airplane Barometric Pressure Altitude ± 125 ft (38.1 m).
- c) Make sure that the International Civil Aviation Organization (ICAO) ID matches the code matches that assigned to the airplane.
- d) Select the 6,2 ST1 BDS with the BDS Data soft key.
- e) Make sure that the displayed altitude agrees with the airplane selected altitude on the MCP ± 125 ft (38 m).
- f) Make sure that the barometric pressure setting (minus 800 Hectopascal (HPA)) agrees with the airplane barometric pressure setting.

- 3) Do a check of the Surveillance Status.

- a) Notify local ATC facilities that transponder testing of the Surveillance Status will be performed.
- b) Select the 0,5 BDS with the BDS Data soft key.
- c) On the P8 ATC control panel, change the code switches to a different ATC ID code.
- d) Make sure that the SURVEILLANCE STATUS field changes to TEMP ALERT.
- e) Set code switches, on the P8 ATC control panel, back to the original code.
- f) Push the IDENT switch on the P8 ATC control panel.
- g) Make sure that the SURVEILLANCE STATUS field shows SPI.

- 4) Do a check of the Position Quality Indicator.

- a) Select the 0,5 BDS with the BDS Data soft key.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 530
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- b) Make sure that the TYPE field does not show 0 or 18.

NOTE: If TYPE shows 0 the transponder does not receive position data from the IRS or Multi-Mode Receiver (MMR). A TYPE of 18 indicates the transponder receives position data but not from the MMR.

- 5) Do a check of the Aircraft Identity.

- a) Select the 0,8 BDS with the BDS Data soft key.

- b) Make sure that the correct data is shown in the following fields:

<1> The AA field shows the Mode S Address. Refer to WDM 34-53-11, 34-53-21 for the Mode S Address code.

<2> The FLIGHT ID field shows the same Flight ID entered into the FMC (SUBTASK 34-53-00-860-032).

G. Repeat System Tests

SUBTASK 34-53-00-730-015

- (1) Repeat the System Test for the other antenna.

SUBTASK 34-53-00-730-016

- (2) Repeat the System Test for the No. 2 or right system on the upper and lower antennas.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

H. Put the Airplane Back to its Usual Condition

SUBTASK 34-53-00-080-006

- (1) Set the Mode Reply Switch to the STBY position.

SUBTASK 34-53-00-080-007

- (2) Do the following steps to remove the IFR-6000 ramp test set, COM-10727, using the ground test method.

- (a) If you simulated altitude and used the UC-584 universal transponder antenna coupler, COM-18775, do these steps:

- 1) Disconnect the UC-584 universal transponder antenna coupler, COM-18775, from the RF I/O connector on the IFR-6000 ramp test set, COM-10727.
- 2) Remove the UC-584 universal transponder antenna coupler, COM-18775, from the ATC antenna.

- (b) Remove the IFR-6000 ramp test set, COM-10727.

SUBTASK 34-53-00-080-008

- (3) Remove the antenna shield and coupler, if installed.

SUBTASK 34-53-00-860-035

- (4) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-53-00-865-002

- (5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 531
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-53-00-730-804

6. ATC System - System Test (With the TR-220 Test Set)

NOTE: This procedure is a scheduled maintenance task.

A. General



WARNING

USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (1) This system test is a full check of the Air Traffic Control (ATC) system. The system test first does the ATC - Operational Test and then uses the test set to examine the left and right ATC systems.
- (2) The TR-220 ramp test set, COM-10728, is capable of testing ATCRBS Mode A, Mode C and Mode S transponders. The operator can select between an Automatic series of tests and a Manual series of tests. The Test Set will determine the correct set of tests, either Mode A/C or Mode S upon receiving the transponder Radio Frequency (RF) signal. The TR-220 ramp test set, COM-10728 can also test Mode S Transponders with EHS (Enhanced Surveillance) capabilities.
 - (a) The test set can do all of the tests automatically except the IDENT BUTTON CHECK. You must do this test manually with the test set.
 - (b) If a test has failed, the automatic test sequence will stop and a failed message will show. At the end of the automatic test all data will show.
 - (c) Completion of these tests satisfy the 24 month ATC transponder maintenance check requirements.
- (3) The TR-220 ramp test set, COM-10728, with software version 5.30 or higher can also test the Automatic Dependent Surveillance - Broadcast (ADS-B) functions for DO-260, DO-260A, and DO-260B compliant transponders. These tests satisfy the ADS-B Out 24 month ATC transponder maintenance check requirements.
- (4) To do the tests manually, set the AUTO/TEST/MANUAL switch to the MANUAL position. The test results will show after each test is done. After each test is completed, you must toggle the MANUAL switch to advance to the next test in the series.
- (5) Operation with the UC-584 universal transponder antenna coupler, COM-18775, (preferred) or coupler TAP-200 used with the test set, reduces RF emissions from the transponder being tested.
- (6) If it is necessary to simulate the aircraft at altitude, notify the local ATC that the transponder testing is in progress.

B. References

Reference	Title
22	AUTOFLIGHT
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
34	NAVIGATION
34-58-00-710-801	Global Positioning System - Operational Test (P/B 501)
WDM 34-53-11	D000534521

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

Page 532
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Title
WDM 34-53-11, 34-53-21	D000534523
WDM 34-53-21	D000534522

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-10728	Test Set - Ramp, TR-220 Part #: TR-220 Supplier: 92606
COM-18775	Antenna Coupler - Universal Transponder, UC-584 Part #: 112350 Supplier: 51190

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the System Test

SUBTASK 34-53-00-580-003

- (1) If the ADS-B tests will be run as part of the ATC System test the airplane location must let the Global Positioning System (GPS) antennas have a clear view of the GPS satellites.

SUBTASK 34-53-00-860-036

- (2) Make sure that these systems are operational:
 - (a) Digital Flight Control System (AUTOFLIGHT, CHAPTER 22)
 - (b) Air Data Inertial Reference System (NAVIGATION, CHAPTER 34)
 - (c) Instrument Landing System (NAVIGATION, CHAPTER 34)
 - (d) Air Traffic Control System (NAVIGATION, CHAPTER 34)
 - (e) Flight Management Computer System (NAVIGATION, CHAPTER 34)

SUBTASK 34-53-00-710-004

- (3) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

SUBTASK 34-53-00-860-037

- (4) On the ATC control panel, P8, do these steps:
 - (a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.
Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.
 - (b) Set the ATC transponder select switch to the No. 1 system.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 533
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- (c) Set the ALT source switch to the primary (1) or secondary (2) air data source position.

NOTE: The primary air data source for transponder #2 is ADIRU #2.

- (d) Set the Mode Select switch to the XPNDR position.
(e) Set the Mode Reply Switch to the AUTO position.

SUBTASK 34-53-00-860-038

- (5) Set the captain's and first officer's altimeter to 29.92 in/Hg (101.32 kPa).

SUBTASK 34-53-00-860-039

- (6) Set a selected altitude.
(a) Set a desired altitude in the Digital Flight Control System (DFCS) Mode Control Panel (MCP) Selected Altitude window.

SUBTASK 34-53-00-860-040

- (7) Select a Flight ID.
(a) Select the RTE function key on the Flight Management Computer (FMC) Control Display Unit (CDU).
(b) Make sure that page 1 is shown.
NOTE: If needed push the next page function key on the CDU until page 1 is shown.
(c) Enter a Flight ID on the CDU scratchpad (i.e. BOE1234).
(d) Select LSK 2R on the CDU.

SUBTASK 34-53-00-860-041



OBEY THE PROCEDURE THAT PUTS THE AIRPLANE IN THE AIR MODE. IF YOU DO THE PROCEDURE INCORRECTLY, INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (8) Put the airplane in the air mode with the Built-In-Test Equipment (BITE) in the Proximity Switch Electronic Unit (PSEU) (TASK 32-09-00-860-801).

SUBTASK 34-53-00-860-042

- (9) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 534
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-00-860-043



USE AN ANTENNA COUPLER WITH THE RAMP TESTER TO SIMULATE AN AIR MODE. IF YOU DO NOT OBEY, THE AIRPLANE WILL TRANSMIT ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIRCRAFT IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO AIRCRAFT.

- (10) Prepare the TR-220 ramp test set, COM-10728, and the antenna coupler for the ATC system test:

NOTE: The TR-220 ramp test set, COM-10728 has an "auto test" function which checks more parameters of the transponder under test, than are required by FAR 43, Appendix F. Ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results and compliance with FAR 43, Appendix F.

NOTE: Refer to the TR-220 Operating Manual for detailed information on setup, test screens, and interpreting results of the tests.

NOTE: Refer to the IFR 6000 Operation Manual for information on the UC-584 universal transponder antenna coupler, COM-18775.

- (a) Connect the test set antenna, or antenna coupler, coax connector to the test set ANTENNA connector.

NOTE: You can use the direct cable connection procedure to perform this test. If you do the direct cable connection, follow the instructions in the ramp test set Operating Manual.

- (b) Put the TEST SET switch in the ON position.

1) The test set will display a startup screen, then do a self test.

a) Make sure that the display indicates SELF TEST PASS.

- (c) Turn the UUT FUNCTION switch on the test set to the XPDR position.

1) The test set will determine the transponder type and display the correct Start Page.

a) Make sure that the test set shows the correct transponder type.

NOTE: If the test set shows "no reply from xpdr", do a check on the test antenna connections. Also, make sure that the ATC system is serviceable.

- (11) Put the antenna shield on top of the ATC antenna not under test.

F. ATC System Test - Mode A/C and Mode S Transponders

SUBTASK 34-53-00-730-017

- (1) You can select to do these Mode A/C or Mode S tests in either an Automatic or Manual Test sequence.

NOTE: You can consult FAR 91.413 and PART 43 Appendix F for test requirements and acceptable results.

NOTE: The TR-220 Operating Manual also contains information about the tests.

- (a) Mode A/C test sequence.

• Mode A Test

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-00

Page 535
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- Mode C Test
 - Mode A SLS Test
 - Sensitivity Test
 - Power and Frequency Test
- (b) Mode S test sequence.
- Mode A Test
 - Mode C Test
 - Mode A SLS Test
 - Mode A All Call Test
 - Mode C All Call Test
 - Mode A Only Test
 - Mode C Only Test
 - Mode S Surveillance Identity Test
 - Mode S Surveillance Altitude Test
 - Mode S Short Air to Air Surveillance Test
 - Mode S Communication Identity Test
 - Mode S Communication Altitude Test
 - Undesired Replies Test
 - Squitter Test
 - Max True Airspeed Test
 - Diversity Test
 - Sensitivity Test
 - Power and Frequency Test

NOTE: For airplanes with Enhanced Surveillance functions, the TR-220 ramp test set, COM-10728 includes the Flight ID test in the MODE S test sequence.

SUBTASK 34-53-00-730-018

- (2) Do these steps to run the Automatic Test sequence.
- (a) Toggle the AUTO/TEST/MANUAL switch to the AUTO position. The test set starts an automatic sequence of tests on the transponder.
 - (b) When the Automatic Test sequence completes with no failures, the display window shows two alternating sets of data.
 - (c) Make sure that the Aircraft Address (AA) field shows the correct Mode S Address. Refer to WDM 34-53-11 or WDM 34-53-21 for the Mode S Address code.
 - (d) If a test fails during the Automatic Test sequence, the test set stops at that test. The display window shows FAIL along with the framing pulses, pulse width and separation in microseconds.
 - 1) You can override and skip to the next test in the sequence by toggling the AUTO/TEST/MANUAL switch to the AUTO position.

NOTE: It is recommended that the cause of the failure be determined before you do the next test.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-00

Page 536
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 2) To repeat a failed test, toggle the AUTO/TEST/MANUAL switch to the MANUAL position.

SUBTASK 34-53-00-730-019

- (3) Do these steps to run the Manual Test sequence.
 - (a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the first test of the transponder. The display window shows the name of the test and the word Testing.
 - (b) When the test is complete the display window shows the test name and the test results.
 - (c) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the next test in the sequence.

SUBTASK 34-53-00-730-020

- (4) Do these steps to do the IDENT TEST.

NOTE: The IDENT function can only be tested in the Manual Test sequence for either the Mode A/C or Mode S transponder.

- (a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the first test of the transponder. The display window shows the name of the test and the word Testing.
- (b) Wait until the display window shows the test results.
- (c) Push the IDENT switch on the ATC control panel, P8.
 - 1) IDENT should show on the TR-220 ramp test set, COM-10728, display window for 20 seconds to make sure that the SPI pulse is received from the transponder.

SUBTASK 34-53-00-730-021

- (5) Do these steps to do the Mode S Surveillance Altitude Test.
 - (a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position until M S SURV ALT is shown.
 - (b) Make sure that the altitude value shown on the TR-220 ramp test set, COM-10728, display agrees with the altitude on the captain's and first officer's altimeter within ± 125 ft (38.1 m).

G. ATC System Test - Additional Tests for Enhanced Surveillance

SUBTASK 34-53-00-730-022

- (1) You can use the manual test sequence to do any additional tests required for enhanced surveillance.

NOTE: The TR-220 Operating Manual contains information about the tests.

- (a) Mode S Enhanced Surveillance Test Sequence
 - BDS5 Roll Angle
 - BDS5 True Track Angle and Track Angle Rate
 - BDS5 True Airspeed and Ground Speed
 - BDS6 Indicated Airspeed, Heading and Mach Number
 - BDS6 Barometric Altitude Rate and Inertial Vertical Velocity
 - BDS 10 Datalink
 - BDS1 Subnet Network Number
 - BDS1 Mode S Specific Services Capability
 - BDS1 Aircraft Identification Capability
 - BDS1 Uplink UELM/Downlink DELM Capability

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 537
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- BDS 1,7
- BDS 1,8
- BDS 1,9
- BDS3 Resolution Advisory
- BDS4 Selected Altitude
- BDS4 Barometric Pressure and Target Altitude
- BDS4 VNAV, ALT Hold, and Approach Modes

SUBTASK 34-53-00-730-023

- (2) To check the Flight ID function, do the steps that follow:

NOTE: The TR-220 ramp test set, COM-10728 includes the Flight ID test in the MODE S test sequence.

- (a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position until the M S Comm ID test shows.
- (b) Make sure that the Flight ID field shows the same Flight ID entered into the FMC.

NOTE: The Flight ID also shows on one of the two alternating displays at the end of the MODE S automatic test sequence.

SUBTASK 34-53-00-730-024

- (3) To do the remaining Enhanced Surveillance tests, do these steps at the test set TR-220 ramp test set, COM-10728:

- (a) Push the TO/START - FROM/STOP switch to the TO position to show the EHS menu.

- 1) Make sure that the display window shows the Mode S Enhanced Surveillance menu.

- (b) Push the UP/FWD - DOWN/REV switch to the UP position to select the applicable uplink/downlink format, UF5/DF21 or UF0/DF16. The recommended selection is UF0/DF16.

- (c) Toggle the AUTO/TEST/MANUAL switch to MANUAL to start the first test.

NOTE: Test sequence starts at test previously run.

- 1) When the test is complete, the results are shown on the display window.

- 2) Make sure that the data field shown is not blank.

- (d) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the next test in the sequence.

- (e) Continue until the required tests are completed.

- 1) Make sure that the data fields shown are not blank.

H. ATC System Test - Additional Tests for ADS-B

NOTE: The TR-220 ramp test set, COM-10728 requires Software Version 5.30 or higher to preform the following ADS-B tests. The test results satisfy the European Aviation Safety Agency (EASA) AMC 20-24 ADS-B requirements.

SUBTASK 34-53-00-730-025

- (1) You can use the manual test sequence to do any additional tests required for ADS-B.

- (a) The ADS-B Test Sequence is as follows:

NOTE: Airplane must be in the Ground Mode to display the BDS 0,6 Surface Position Report. Only the top ATC antenna will transmit the 0,6 SURFACE POS BDS.

EFFECTIVITY
SIA ALL

34-53-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 538
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

- Airborne Position Report
- Surface Position Report
- Aircraft Identification and Type Report
- Airborne Velocity Report
- Velocity Hex
- Mode S Address
- Latitude & Longitude
- Airborne Surveillance Status
- Position Hex
- Type 28 Decoded
- Type 28 Hex
- Type 29 Decoded
- Type 29 Hex
- Type 31 Hex
- Horizontal Position Integrity
- Position Accuracy
- Airborne Velocity and System Design Accuracy
- ADS-B IN Capability
- Length and Width
- GPS Antenna Offset

SUBTASK 34-53-00-730-026

- (2) Do the ADS-B test setup.

NOTE: Refer to the TR-220 Operating Manual for detailed information on the ADS-B test setup.

- (a) Set the test set UUT FUNCTION switch to the SETUP position.
- (b) Toggle the AUTO/TEST/MANUAL switch to MANUAL to select the LAT/LON screen.
- (c) Set the local latitude and longitude positions.
 - 1) Use the TO/START-FROM/STOP switch to select to the field that needs to be set.
 - 2) Use the UP/FWD-DOWN/REV switch to change the values.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, TASK 34-58-00-710-801), if not, use the Inertial Reference System (IRS) position.

SUBTASK 34-53-00-730-027

- (3) Do the ADS-B tests.

NOTE: The test results that follow satisfy the EASA AMC 20-24 requirements for ADS-B.

- (a) Set the UUT FUNCTION switch to ADS-B TX position.

NOTE: When the UUT FUNCTION switch is set to ADS-B TX, the display will first show the Position screen.

- (b) Do a check of the Airborne Position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-00

Page 539
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) On the Airborne Position screen, make sure that the Latitude/Longitude field shows the present position.
- (c) Do a check of the Pressure Altitude.
 - 1) On the Airborne Position screen, make sure that the Altitude field shows the airplane barometric pressure altitude ± 125 ft (38.1 m).
- (d) Do a check of the Aircraft Identity.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position to show the Identification screen.
 - 2) Make sure that the Flight ID field shows the same Flight ID entered into the FMC.
- (e) Do a check of the Mode S Address.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until Mode S Address screen shows.
 - 2) Make sure that the Mode S Address field shows the correct Mode S Address. Refer to WDM 34-53-11, 34-53-21 for the Mode S Address code.
- (f) Do a check of the Airborne Surveillance Status.
 - 1) Notify local ATC facilities that transponder testing of the Surveillance Status will be performed.
 - 2) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Airborne Surveillance Status screen shows.
 - 3) On the ATC control panel, P8, change the code switches to a different ATC ID code.
 - 4) Make sure that the SURV STAT field changes to TEMP ALERT.
 - 5) Set code switches on the ATC control panel back to the original code.
 - 6) Push the IDENT switch on the ATC Control Panel.
 - 7) Make sure that the SURV STAT field shows SPI.
- (g) Do a check of the Airborne Position Quality Indicator.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Position Hex screen shows.
 - 2) Make sure that the TYPE field does not show 0 or 18.

NOTE: If TYPE shows 0 the transponder does not receive position data from the IRS or Multimode Receiver (MMR). A TYPE of 18 indicates the transponder receives position data but not from the MMR.
- (h) Do a check of the Type 28 Decoded.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Type 28 Decoded screen shows.
 - 2) Make sure that NO EMERGENCY is displayed.
- (i) Do a check of the Horizontal Position Integrity.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Horizontal Position Integrity screen shows.
 - 2) Make sure that the DO260B shows in the HZ POS field.
 - 3) Make sure that the display shows SIL = 3.
 - 4) Make sure that the display shows NACp = 8 or higher.
 - 5) Make sure that the display shows NIC = 7 or higher.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 540
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (j) Do a check of the Airborne Velocity Accuracy and System Design Accuracy.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Air Vel Acc and the Sys Des Acc screen shows.
 - 2) Make sure that the display shows NACv = 1 or higher.
 - 3) Make sure that the display shows SDA = 2.
- (k) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802
- (l) Do a check of the Airplane Length/Width.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Length/Width screen shows.
 - 2) Make sure that the Len and Width shows the applicable data:
 - Len = < 45 m, Width = < 39.5 m
- (m) Do a check of the GPS Antenna Offset.
 - 1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the GPS Antenna Offset screen shows.
 - 2) Make sure that the Lat Axis shows Right 0 m.
 - 3) Make that the Long Axis shows < 10 m.

I. Repeat ATC System Tests

SUBTASK 34-53-00-730-028

- (1) Repeat the System Test for the other antenna.
- (2) Do the ATC System Tests again for the right or No. 2 system on the upper and lower antennas.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.
- (a) To test the right system, put the ATC select switch to the No. 2 position.

J. Put the Airplane Back to Its Usual Condition.

SUBTASK 34-53-00-840-010

- (1) Set the Mode Reply Switch to the STBY position.

SUBTASK 34-53-00-080-004

- (2) Disconnect and remove the antenna coupler, if installed.

SUBTASK 34-53-00-080-005

- (3) Disconnect and remove the ATC test set.

SUBTASK 34-53-00-860-044

- (4) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-53-00-860-045

- (5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C00451	LANDING GEAR AURAL WARN

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-00

Page 541
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR TRAFFIC CONTROL (ATC) ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Removal of the ATC antenna.
 - (2) Installation of the ATC antenna.
- B. The bottom ATC antenna is installed at STA 355, and the top antenna at STA 430.

TASK 34-53-01-000-801

2. ATC Antenna Removal

(Figure 401)

A. General

- (1) This task has instructions to remove the ATC antenna.

B. Tools/Equipment

Reference	Description
STD-7394	Cap - Dust, Electrical Connector

C. Location Zones

Zone	Area
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. ATC Antenna Removal

SUBTASK 34-53-01-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-01-020-001

- (2) Remove the ATC antenna [3]:
 - (a) Remove the bolts [4] that attach the ATC antenna [3] to the airplane structure.



CAUTION

MOVE THE ANTENNA ONLY AS FAR AS NECESSARY TO DISCONNECT THE CABLES. DAMAGE TO THE ANTENNA CABLES CAN OCCUR IF YOU PULL THE CABLES.

- (b) Move the ATC antenna [3] away from the airplane structure to get access to the coaxial connector [1].

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-01

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Disconnect the coaxial connector [1] from the ATC antenna [3].

NOTE: Do not let the coaxial connector [1] retract into the fuselage.

- (d) Remove the ATC antenna [3].

- (e) Remove and discard the O-ring [2].

- (f) Put a dust cap, STD-7394, over the electrical connector on the ATC antenna [3].

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

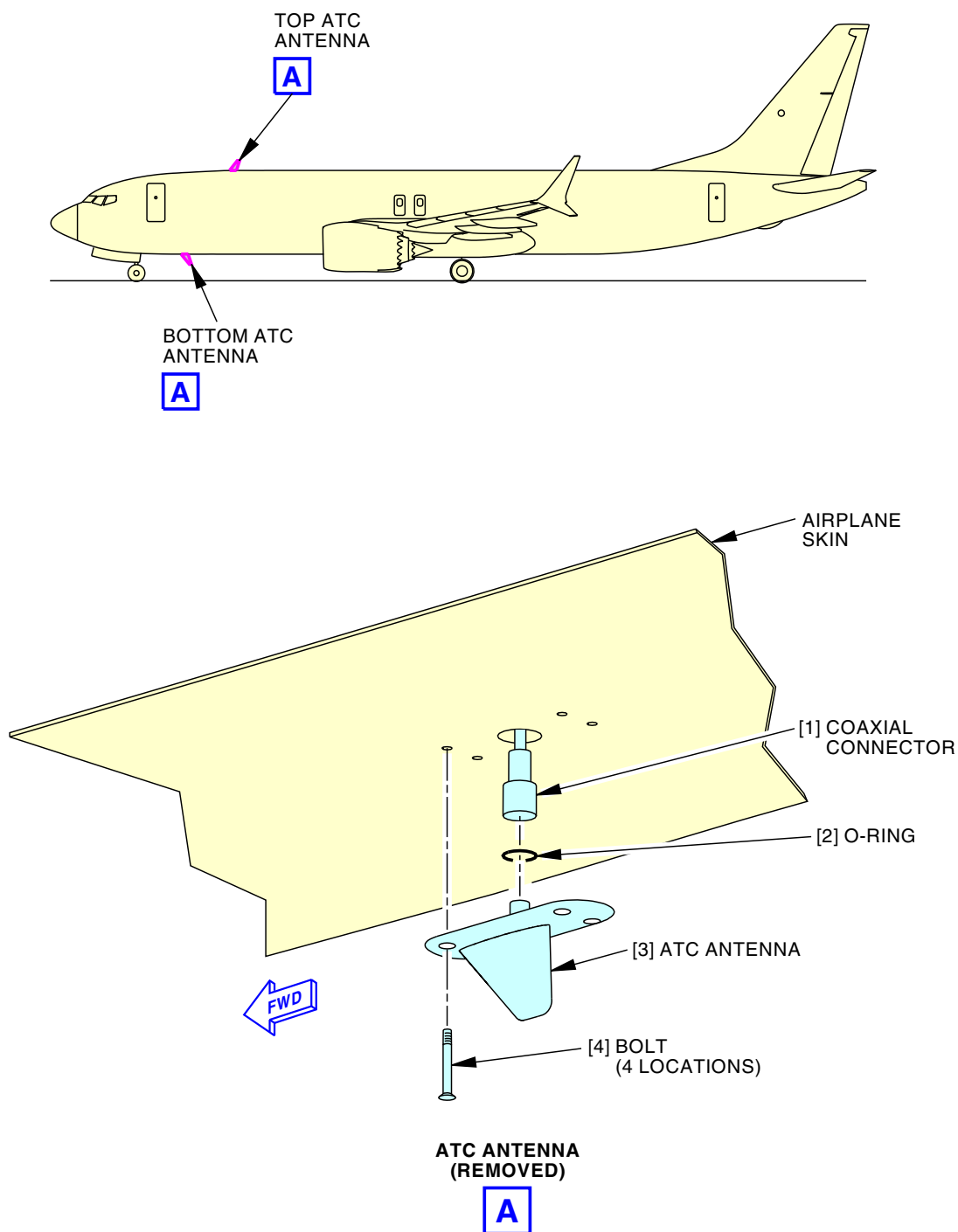
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-01

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414893 S00061536445_V1

ATC Antenna Installation
Figure 401/34-53-01-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-01

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-53-01-400-801

3. ATC Antenna Installation

(Figure 401)

A. General

(1) This task has instructions to install the ATC antenna.

B. References

Reference	Title
51-21-31-350-801	Removal and Control of Corrosion for Aluminum and Aluminum Alloys (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
STD-7394	Cap - Dust, Electrical Connector

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
B00062	Solvent - Acetone (99.5% Grade)	ASTM D 329 (Supersedes O-A-51)
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CLA)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	O-ring	34-53-01-04-015	SIA ALL
		34-53-01-04-115	SIA ALL
3	ATC antenna	34-53-01-04-005	SIA ALL
		34-53-01-04-105	SIA ALL

EFFECTIVITY
SIA ALL

34-53-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

F. Location Zones

Zone	Area
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

G. Prepare for the Installation

SUBTASK 34-53-01-110-001



DO NOT GET SOLVENTS IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. PUT ON A RESPIRATOR, PROTECTIVE SPLASH GOGGLES, AND GLOVES WHEN YOU USE SOLVENTS. KEEP THE SOLVENTS AWAY FROM SPARKS, FLAME, AND HEAT. SOLVENTS ARE POISONOUS AND FLAMMABLE. SOLVENTS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (1) Clean the airplane mating surface with solvent, B00062, or solvent, B00184.
 - (a) Make a cotton wiper, G00034, moist (not soaked) with solvent.
 - (b) Rub the airplane mating surface with the cotton wiper, G00034, until the surface is clean.

SUBTASK 34-53-01-300-001

- (2) If the airplane mating surface has corrosion or unwanted material, do these steps to prepare the airplane mating surface:
 - (a) Remove the corrosion or unwanted material from the airplane mating surface (TASK 51-21-31-350-801).
 - (b) Apply a layer of alodine coating to the airplane mating surface (TASK 51-21-41-370-802).

H. ATC Antenna Installation

SUBTASK 34-53-01-420-001

- (1) Install the ATC antenna [3].
 - (a) Remove the dust cap, STD-7394, from the electrical connector.
 - (b) Install the new O-ring [2] on the ATC antenna [3].
 - (c) Apply sealant, A00247, to the threads of the bolts [4].
 - (d) Examine the coaxial connector [1] for bent or broken pins, dirt, and damage.
 - (e) Connect the coaxial connector [1] to the ATC antenna [3].
 - (f) Put the ATC antenna [3] in the correct position on the airplane surface.
 - (g) Install three of the four bolts [4].

SUBTASK 34-53-01-760-001

- (2) Measure the resistance between the ATC antenna [3] baseplate and the airplane skin with an intrinsically safe approved bonding meter, COM-1550.
 - (a) Use the empty bolt hole to get access to the antenna baseplate.
 - (b) Make sure that the resistance is less than 0.001 ohm (1 milliohm).

SUBTASK 34-53-01-420-002

- (3) Install the last bolt [4].

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-53-01

Page 405
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-01-390-001

- (4) Apply aerodynamic sealant.

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (a) Apply an aerodynamic fillet seal around the base of the ATC antenna [3] with sealant, A00247 (TASK 51-22-00-390-809).
- (b) Let the sealant dry for the correct cure time.

I. ATC Antenna Test

SUBTASK 34-53-01-860-004

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-01-420-003

- (2) Do these steps to do a test of the ATC antenna [3]:
- (a) Set the transponder select switch on the ATC control panel to the left (No. 1) position.
- (b) Push and release the TEST switch on the left (No. 1) ATC transponder.
- 1) Make sure that the self-test passes and no faults are detected.
- (c) Set the transponder select switch on the ATC control panel to the right (No. 2) position.
- (d) Push and release the TEST switch on the right (No. 2) ATC transponder.
- 1) Make sure that the self-test passes and no faults are detected.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

34-53-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR TRAFFIC CONTROL (ATC) TRANSPONDER - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has these tasks:
- (1) A removal of the ATC transponder
 - (2) An installation of the ATC transponder.
- B. The two ATC transponders are installed in the main equipment center on the E1 rack. The left ATC transponder (No. 1), M163, is installed on shelf No. 2 and the right ATC transponder (No. 2), M381, is installed on shelf No. 5.

TASK 34-53-02-020-801

2. **ATC Transponder Removal**

(Figure 401)

A. General

- (1) This task has instructions to remove the ATC transponder.

B. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. ATC Transponder Removal

SUBTASK 34-53-02-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2

SUBTASK 34-53-02-010-001

- (2) To get access to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-02

Page 401
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-53-02-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ATC TRANSPONDERS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ATC TRANSPONDERS.

- (3) To remove the ATC transponder [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

———— **END OF TASK** ————

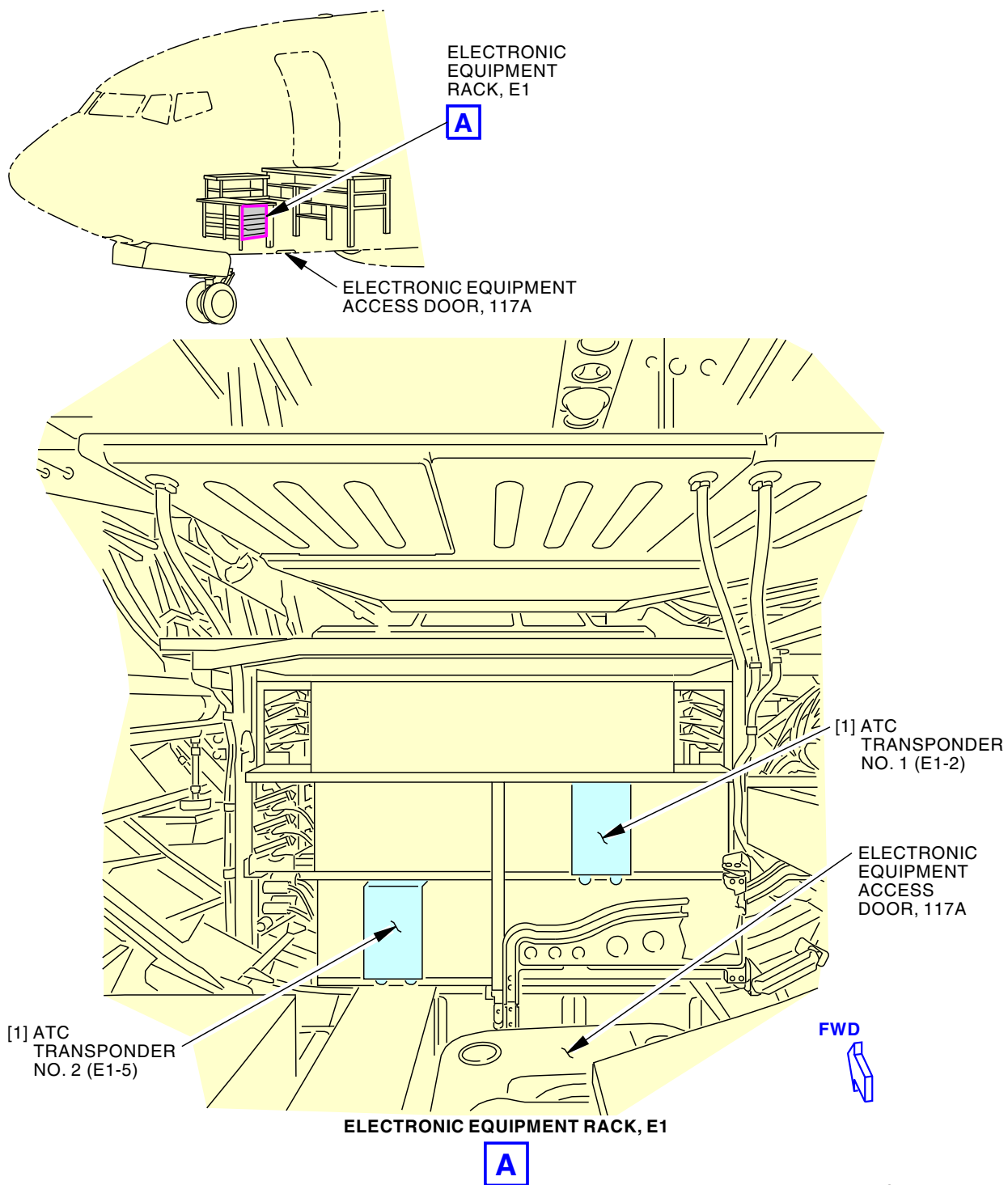
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-02

Page 402
Sep 15/2021



2414895 S00061536453_V2

ATC Transponder Installation
Figure 401/34-53-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-02

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-53-02-400-801

3. ATC Transponder Installation

(Figure 401)

A. General

(1) This task has instructions to install the ATC transponder.

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Transponder	34-53-02-05-020	SIA ALL

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. ATC Transponder Installation

SUBTASK 34-53-02-860-010

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2

SUBTASK 34-53-02-420-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ATC TRANSPONDERS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ATC TRANSPONDERS.

(2) Install the ATC transponder [1] (TASK 20-10-07-400-801).

SUBTASK 34-53-02-860-003

(3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

EFFECTIVITY
SIA ALL

34-53-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2

G. ATC Transponder Installation Test

SUBTASK 34-53-02-860-008

- (1) Set the Air Traffic Control (ATC) control panel switches as follows:
 - (a) Set the mode select switch to the XPNDR position.
 - (b) Make sure that the mode reply switch is set to the AUTO position.

SUBTASK 34-53-02-740-002

- (2) Do the ATC transponder BITE test:
 - (a) Set the transponder select switch, on the ATC control panel, to the applicable position:
 - 1) For the ATC transponder No. 1, set the select switch to the 1 position.
 - 2) For the ATC transponder No. 2, set the select switch to the 2 position.
 - (b) Push and hold the TEST switch on the front panel of the applicable ATC transponder for five seconds.
 - 1) Make sure that the sequence that follows occurs:
 - a) All LED indicators turn red for 2 seconds.
 - b) The LRU STATUS LED turns green.
NOTE: The other LED indicators stay red for 2 seconds.
 - c) All LED indicators go off for 2 seconds.
 - d) The test results show for 30 seconds at the end of the test.
NOTE: If the self-test passes, the green LRU STATUS LED comes on and all other LED indicators go off. If the self-test fails, the red LRU STATUS LED comes on and the applicable LED indicator turns red.
 - e) All the LED indicators go off.

SUBTASK 34-53-02-740-003

- (3) Do the ATC transponder BITE test for the other ATC transponder.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-53-02-410-001

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-53-02-860-009

- (2) Set the ATC control panel switches as follows:
 - (a) Set the mode select switch to the ALT OFF position.
 - (b) Set the mode reply switch to the STBY position.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-02

Page 405
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR TRAFFIC CONTROL (ATC) CONTROL PANEL - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) ATC control panel removal
- (2) ATC control panel installation.

B. The ATC control panel is on the aft aisle stand panel, P8, in the flight compartment.

TASK 34-53-03-000-801

2. **ATC Control Panel Removal**

(Figure 401)

A. General

- (1) This task gives the instructions to remove the ATC control panel.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. ATC Control Panel Removal

SUBTASK 34-53-03-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2

SUBTASK 34-53-03-020-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ATC CONTROL PANEL. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ATC CONTROL PANEL.

- (2) Remove the ATC control panel [1]:
 - (a) Turn the four quarter-turn fasteners [2] to release the ATC control panel [1] from the aisle stand.
 - (b) Lift the ATC control panel [1] to get access to the electrical connectors [3].
 - (c) Disconnect the electrical connectors [3].
 - (d) Install the protective covers on the electrical connectors [3].

————— **END OF TASK** —————

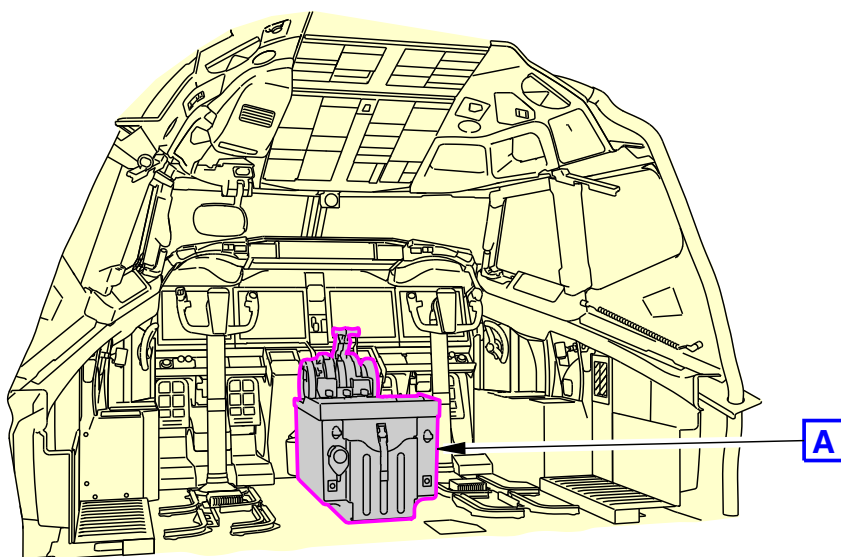
EFFECTIVITY
SIA ALL

D633AM101-SIA

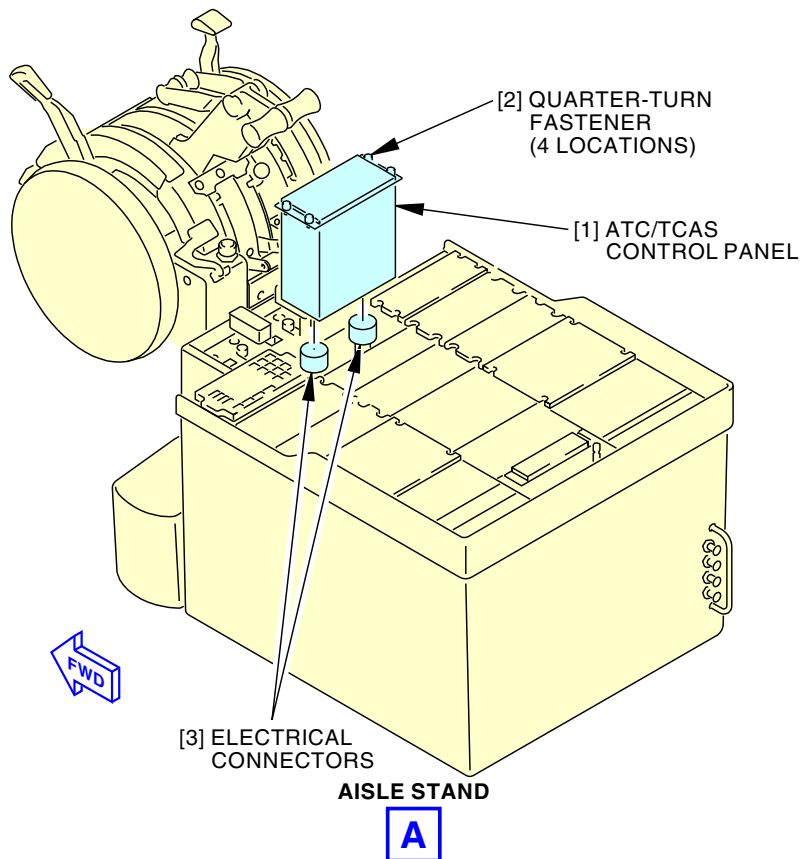
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-03

Page 401
Sep 15/2021



FLIGHT COMPARTMENT



2414896 S00061536458_V1

ATC/TCAS Control Panel Installation
Figure 401/34-53-03-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-03

Page 402
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-53-03-400-801

3. ATC Control Panel Installation

A. General

- (1) This task gives the instructions to install the ATC control panel.

B. References

Reference	Title
34-53-00-710-801	ATC System - Operational Test (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	ATC control panel	34-53-03-04-010	SIA ALL

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. ATC Control Panel Installation

SUBTASK 34-53-03-420-001



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ATC CONTROL PANEL. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ATC CONTROL PANEL.

- (1) Install the ATC control panel [1]:
- Remove the protective covers from the electrical connectors [3].
 - Examine the electrical connectors [3] for bent or broken pins, dirt, and damage.
 - Connect the electrical connectors [3].
 - Put the ATC control panel [1] into its position in the aisle stand.
 - Turn the four quarter-turn fasteners [2] that attach the ATC control panel [1].

SUBTASK 34-53-03-760-002

- (2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2

F. ATC Control Panel Installation Test

SUBTASK 34-53-03-860-003

- (1) Do the installation test:
- Set the transponder select switch on the ATC control panel to the 1 position.
 - Push and release the TEST switch on the left ATC transponder.
 - Make sure that the self-test passes and no faults are detected.

EFFECTIVITY
SIA ALL

34-53-03

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 403
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (c) Set the transponder select switch on the ATC control panel to the 2 position.
- (d) Push and release the TEST switch on the right ATC transponder.
 - 1) Make sure that the self-test passes and no faults are detected.

G. ATC System Operational Test

SUBTASK 34-53-03-710-001

- (1) Do this task: ATC System - Operational Test, TASK 34-53-00-710-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-03

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AIR TRAFFIC CONTROL (ATC) ANTENNA SWITCH - REMOVAL/INSTALLATION

1. **General**

- A. This procedure has two tasks. One is the removal of the ATC antenna switch, the other is the installation of the ATC antenna switch.
- B. The top and bottom ATC antenna switch, S00942 and S00943, installations are the same. The ATC antenna switches are installed left of the E1-5 shelf on the E1 rack.

TASK 34-53-04-000-801

2. **ATC Antenna Switch Removal**

(Figure 401)

A. **General**

- (1) This task has instructions to remove the ATC antenna switch.

B. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right

C. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

D. **Prepare for the Removal**

SUBTASK 34-53-04-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-04-010-001

- (2) To get to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Procedure**

SUBTASK 34-53-04-020-001

- (1) Remove the Air Traffic Control (ATC) antenna switch [1]:
- (a) Disconnect the electrical connectors [4] from the ATC antenna switch [1].
- (b) Put protective covers on the electrical connectors [4].
- (c) Remove the screws [2] and washers [3] that hold the ATC antenna switch [1] to the bracket.
- (d) Remove the ATC antenna switch [1] from the bracket.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

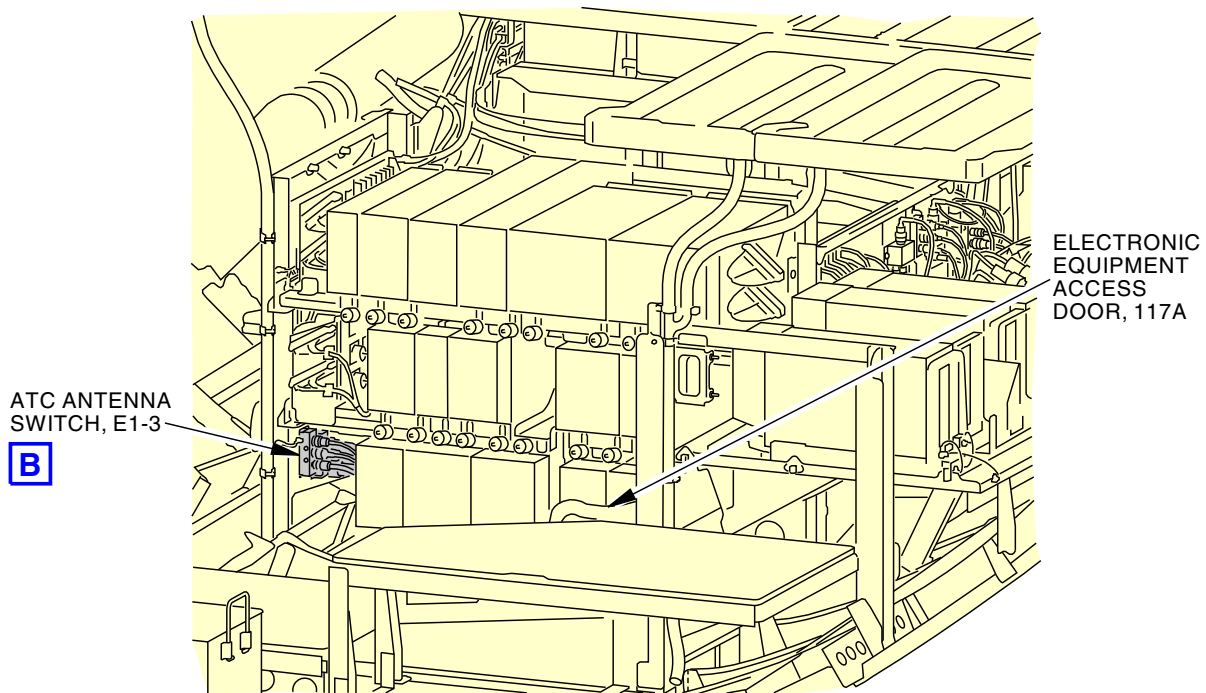
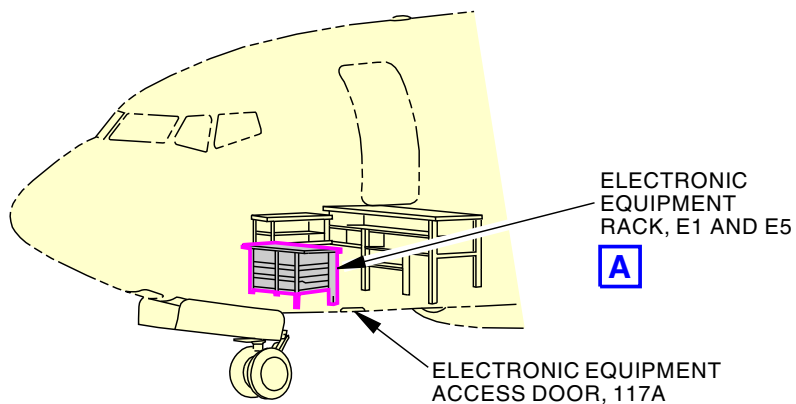
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-04

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



ELECTRONIC EQUIPMENT RACKS, E1 AND E5

A

2414897 S00061536463_V1

ATC Antenna Switch Installation
Figure 401/34-53-04-990-801 (Sheet 1 of 2)

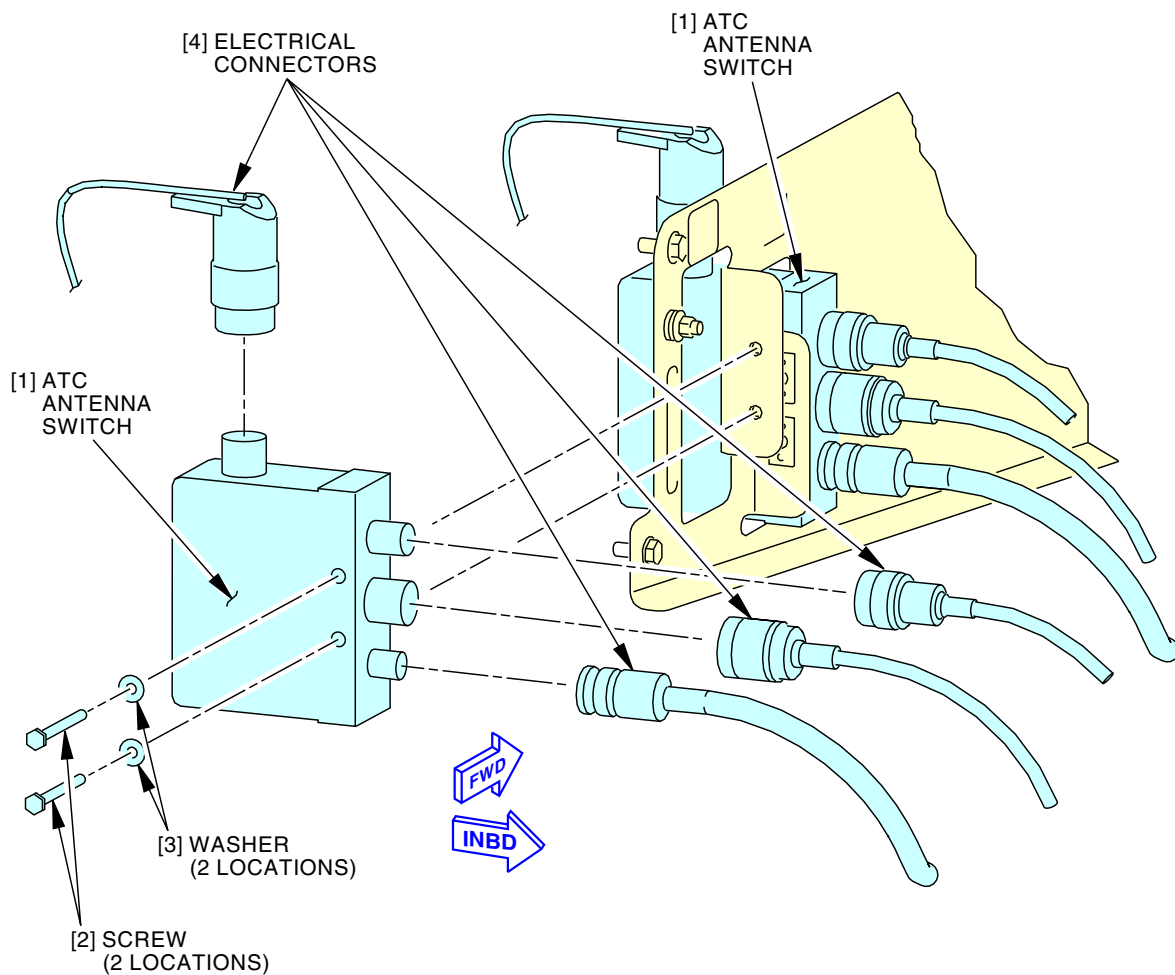
EFFECTIVITY
SIA ALL

34-53-04

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2021



ATC ANTENNA SWITCH

B

2414898 S00061536464_V1

ATC Antenna Switch Installation
Figure 401/34-53-04-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-04

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-53-04-400-801

3. **ATC Antenna Switch Installation**

(Figure 401)

A. General

- (1) This task has instructions to install the ATC antenna switch.

B. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
20-40-11-760-801	Electrical Bonding (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Switch	34-53-04-10A-005	SIA ALL

E. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

F. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

G. Procedure

SUBTASK 34-53-04-420-001

- (1) Install the ATC antenna switch [1]:
- (a) Remove the protective covers from the electrical connectors [4].
 - (b) Examine the electrical connectors [4] for bent or broken pins, dirt and damage.
 - (c) Make sure that the bracket for the ATC antenna switch [1] has no corrosion.
 - 1) If there is corrosion, clean the mating surfaces. To do this, do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801.
 - (d) Use the electrical bond fastener to install the ATC antenna switch [1] on the bracket. To do it, do this task: Electrical Bonding, TASK 20-40-11-760-801.
 - (e) Put the switch [1] into position on the bracket.
 - (f) Install the screws [2] and washers [3] that hold the ATC antenna switch [1] to the bracket.

EFFECTIVITY
SIA ALL

34-53-04

D633AM101-SIA

Page 404
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-53-04-760-001

- (2) Use the intrinsically safe approved bonding meter, COM-1550, and make sure that the resistance from the ATC antenna switch [1] to the E2 rack is less than 0.001 ohm.

SUBTASK 34-53-04-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-53-04-860-003

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

H. Installation Test

SUBTASK 34-53-04-860-005

- (1) Do the installation test:
- (a) Set the transponder select switch on the ATC control panel to the 1 position.
 - (b) Push and release the TEST switch on the left ATC transponder
 - 1) Make sure that the self-test passes and no faults are detected.
 - (c) Set the transponder select switch on the ATC control panel to the 2 position.
 - (d) Push and release the TEST switch on the right ATC transponder
 - 1) Make sure that the self-test passes and no faults are detected.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-53-04

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
DME SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) DME System Deactivation
- (2) DME System Activation.

TASK 34-55-00-040-801

2. DME System Deactivation

A. General

- (1) This procedure removes electrical power to the DME System.

NOTE: There are two DME antennas which are installed on the bottom centerline of the airplane fuselage.

B. Location Zones

<u>Zone</u>	<u>Area</u>
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-55-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

D. DME System - Tryout

NOTE: This tryout is to make sure that the DME system is in zero energy state.

SUBTASK 34-55-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-00

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-55-00-860-003

- (2) Make sure that display screens on DME-1 and DME-2 are not ON.

————— END OF TASK —————

TASK 34-55-00-440-801

3. DME System Activation

A. General

- (1) This procedure adds electrical power to the DME system.

B. Location Zones

<u>Zone</u>	<u>Area</u>
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure



WARNING

KEEP ALL PERSONNEL AT A SAFE DISTANCE FROM THE ANTENNA. RF ENERGY CAN CAUSE INJURIES TO PERSONNEL.

SUBTASK 34-55-00-860-004

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

DME SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) An operational test of the distance measuring equipment (DME) system.
- (2) A system test of the DME system.

TASK 34-55-00-710-801

2. DME System - Operational Test

A. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Operational Test

SUBTASK 34-55-00-860-006

- (1) Set the VHF NAV switch on the instrument switching module, on the P5 forward overhead panel, to the NORMAL position.

SUBTASK 34-55-00-860-007

- (2) Set the SOURCE switch on the instrument switching module, on the P5 forward overhead panel, to the AUTO position.

SUBTASK 34-55-00-860-008

- (3) Set the display select switch, on the P7 captain's and first officer's EFIS control panels, to the VOR position.

D. DME Self Test

SUBTASK 34-55-00-860-009

- (1) Make sure that the DME 1 and DME 2 are not tuned to a local station's frequency.

SUBTASK 34-55-00-740-001

- (2) Push and hold the TEST button, on the P8 captain's navigation control panel, to start the DME 1 self test.
 - (a) Make sure that the DME 2 shows dashes on the displays during the DME 1 self test.
 - (b) Make sure that the DME 1 has a flag on the displays for approximately two seconds.
 - (c) Make sure that the DME 1 shows dashes on the displays until the end of the test.

SUBTASK 34-55-00-860-010

- (3) Release the TEST button on the P8 captain's navigation control panel.

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

Page 501
Jan 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-55-00-860-012



MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR DOOR AREAS. THE CONTROL SURFACES, THE LANDING GEAR, AND THE LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (4) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 34-55-00-730-001

- (5) Push and hold the TEST button, on the P8 captain's navigation control panel, to start the DME 1 self test.
- (a) Make sure that the self test sequence for DME 1 did not start.

SUBTASK 34-55-00-860-013

- (6) Release the TEST button on the P8 captain's navigation control panel.

SUBTASK 34-55-00-860-014

- (7) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

SUBTASK 34-55-00-730-002

- (8) Set the SOURCE switch on the instrument switching module to the ALL ON 2 position.

SUBTASK 34-55-00-730-003

- (9) Push and hold the TEST button on the first officer's navigation control panel to start the DME 2 self test.
- (a) Make sure that the DME 1 shows dashes on the displays during the DME 2 self test.
- (b) Make sure that the DME 2 has a flag on the displays for approximately two seconds.
- (c) Make sure that the DME 2 shows dashes on the displays until the end of the test.

SUBTASK 34-55-00-860-015

- (10) Release the TEST button on the P8 first officer's navigation control panel.

SUBTASK 34-55-00-860-016



MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR DOOR AREAS. THE CONTROL SURFACES, THE LANDING GEAR, AND THE LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (11) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 34-55-00-730-004

- (12) Push and hold the TEST button, on the P8 first officer's navigation control panel, to start the DME 2 self test.
- (a) Make sure that the self test sequence for DME 2 did not start.

SUBTASK 34-55-00-860-017

- (13) Release the TEST button on the P8 first officer's navigation control panel.

SUBTASK 34-55-00-860-018

- (14) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

Page 502
Jan 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-55-00-730-801

3. DME System - System Test

A. General

- (1) This task gives procedures for more than one DME test set. It is necessary to use only one of the DME test sets to do a test of the DME system.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-909	Test Set - DME Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 6000 Supplier: 51190 Part #: TR-210 Supplier: 92606 Part #: TR-220 Supplier: 92606 Opt Part #: 600A-110 Supplier: 51190 Opt Part #: ATC-600A-2 Supplier: 51190 Opt Part #: T-24B Supplier: 92606 Opt Part #: T-48D Supplier: 92606 Opt Part #: TR-211 Supplier: 92606
COM-13614	Test Set - DME, T-24B Opt Part #: T-24B Supplier: 92606

C. Location Zones

Zone	Area
112	Area Forward of Nose Landing Gear Wheel Well
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the System Test

SUBTASK 34-55-00-860-022

- (1) Set the VHF NAV switch on the instrument switching module on the forward overhead panel, P5, to the NORMAL position.

SUBTASK 34-55-00-860-023

- (2) Set the SOURCE switch on the instrument switching module on the forward overhead panel, P5, to the ALL ON 1 position.

E. Operational Test

SUBTASK 34-55-00-710-001

- (1) Do this task: DME System - Operational Test, TASK 34-55-00-710-801.

F. No. 1 DME System Test (with the use of the test set, IFR 6000, TR-210, or TR-220)

SUBTASK 34-55-00-860-024

- (1) Do these steps to prepare for the No. 1 DME system test:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-00

Page 503
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CAUTION

DO NOT PUT THE TEST SET LESS THAN 15 INCHES (38 CM) FROM THE DME ANTENNA WITH THE TEST SET ON. DAMAGE TO THE TEST SET CAN OCCUR.

- (a) Put the DME test set, COM-909, approximately 21 in. (53 cm) from the DME antenna.
NOTE: The test antenna should be approximately the same height as the airplane antenna.
- (b) Set the controls on the DME test set, COM-909, as follows:

Table 501/34-55-00-993-801

SWITCH NAME	SWITCH POSITION
PWR Switch	AC or BAT as appropriate
Mode Switch	DME
Velocity Select Switch	Range
Velocity HI/LO Switch	HI
Squitter Switch	SQTR
X/Y Switch	X

SUBTASK 34-55-00-860-025

- (2) Set the SOURCE switch on the instrument switching module on the forward overhead panel, P5, to the AUTO position.

SUBTASK 34-55-00-860-026

- (3) Set an active VOR frequency of 109.00 MHz on the captain's and the first officer's navigation control panel, P8.
- (a) Make sure that the DME 1 shows dashes on the displays.
- (b) Make sure that the DME 2 shows dashes on the displays.

SUBTASK 34-55-00-730-005

- (4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

A	14	C00192	RADIO NAVIGATION DME 2

- (a) Make sure that the DME 2 has a flag on the displays.

SUBTASK 34-55-00-860-027

- (5) Set a frequency of 108.00 MHz on the captain's navigation control panel, P8.

SUBTASK 34-55-00-860-028

- (6) Set the X/Y switch on the DME test set, COM-909, to Y.

SUBTASK 34-55-00-730-006

- (7) Use the SLEW switch to set a distance of 6 mi (9.66 km) on the DME test set, COM-909.
- (a) Make sure that the DME 1 shows dashes on the displays.

SUBTASK 34-55-00-730-007

- (8) Set the X/Y switch on the DME test set, COM-909, to X.
- (a) Make sure that the DME 1 shows from 5.5 nmi (10.19 km) to 6.5 nmi (12.04 km) on the displays.

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 504
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-55-00-860-029

- (9) Set the voice/range filter switch on one of the audio control panels to the B position.

SUBTASK 34-55-00-860-030

- (10) At the same audio control panel, push the receiver volume control for NAV-1 to set the volume to on.

SUBTASK 34-55-00-860-031

- (11) At the same audio control panel, turn the receiver volume control clockwise for NAV-1 to adjust the volume level.

SUBTASK 34-55-00-860-032

- (12) At all other audio control panels, push the receiver volume control for NAV-1 to set the volume to off.

SUBTASK 34-55-00-860-033

- (13) Push the receiver volume control for NAV-2 on all the audio control panels to set the volume to off.

SUBTASK 34-55-00-730-008

- (14) Use the switches on the DME test set, COM-909, to supply an identification tone.
(a) Make sure that you can hear a tone through the flight interphone system.

SUBTASK 34-55-00-860-034

- (15) Push the receiver volume control for NAV-1 on the audio control panels to set the volume to off.

SUBTASK 34-55-00-860-035

- (16) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

G. No. 2 DME System Test (with the use of the test set, IFR 6000, TR-210, or TR-220)

SUBTASK 34-55-00-860-036

- (1) Set the SOURCE switch on the instrument switching module on the forward overhead panel, P5, to the AUTO position.

SUBTASK 34-55-00-860-037

- (2) Set an active VOR frequency of 109.00 MHz on the captain's and the first officer's navigation control panel, P8.
(a) Make sure that the DME 1 shows dashes on the displays.
(b) Make sure that the DME 2 shows dashes on the displays.

SUBTASK 34-55-00-860-038

- (3) Set a frequency of 109.00 MHz on the captain's navigation control panel, P8.

SUBTASK 34-55-00-730-009

- (4) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

- (a) Make sure that the DME 1 has a flag on the displays.

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 505
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-55-00-860-039

- (5) Set a frequency of 108.00 MHz on the first officer's navigation control panel, P8.

SUBTASK 34-55-00-860-040

- (6) Set the X/Y switch on the DME test set, COM-909, to Y.

SUBTASK 34-55-00-730-010

- (7) Use the SLEW switch to set a distance of 6 mi (9.66 km) on the DME test set, COM-909.
(a) Make sure that the DME 2 shows dashes on the displays.

SUBTASK 34-55-00-730-011

- (8) Set the X/Y switch on the DME test set, COM-909, to X.
(a) Make sure the DME 2 shows from 5.5 nmi (10.19 km) to 6.5 nmi (12.04 km) on the displays.

SUBTASK 34-55-00-860-041

- (9) Set the voice/range filter switch on one of the audio control panels to the B position.

SUBTASK 34-55-00-860-042

- (10) At the same audio control panel, push the receiver volume control for NAV-2 to set the volume to on.

SUBTASK 34-55-00-860-043

- (11) At the same audio control panel, turn the receiver volume control clockwise for NAV-2 to adjust the volume level.

SUBTASK 34-55-00-860-044

- (12) At all other audio control panels, push the receiver volume control for NAV-2 to set the volume to off.

SUBTASK 34-55-00-860-045

- (13) Push the receiver volume control for NAV-1 on all the audio control panels to set the volume to off.

SUBTASK 34-55-00-730-012

- (14) Use the switches on the DME test set, COM-909, to supply an identification tone.
(a) Make sure that you can hear a tone through the flight interphone system.

SUBTASK 34-55-00-860-046

- (15) Push the receiver volume control for NAV-2 on the audio control panels to set the volume to off.

SUBTASK 34-55-00-860-047

- (16) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

H. No. 1 DME System Test (with the use of the test set, T-24B)

SUBTASK 34-55-00-860-049

- (1) Do these steps to prepare for the No. 1 DME system test:

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 506
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CAUTION

DO NOT PUT THE TEST SET LESS THAN 15 INCHES (38 CM) FROM THE DME ANTENNA WITH THE TEST SET ON. DAMAGE TO THE TEST SET CAN OCCUR.

- (a) Put the T-24B DME test set, COM-13614, approximately 21 in. (53 cm) from the DME antenna.

NOTE: The test antenna should be approximately the same height as the airplane antenna.

- (b) Set the controls on the T-24B DME test set, COM-13614, as follows:

Table 502/34-55-00-993-802

SWITCH NAME	SWITCH POSITION
POWER	ON
IDENT	OFF
DIST/VEL	DIST
Squitter Switch	ON

SUBTASK 34-55-00-860-050

- (2) Set the SOURCE switch on the instrument switching module on the forward overhead panel, P5, to the AUTO position.

SUBTASK 34-55-00-860-051

- (3) Set an active VOR frequency of 109.00 MHz on the captain's and the first officer's navigation control panel, P8.
- (a) Make sure that the DME 1 shows dashes on the displays.
- (b) Make sure that the DME 2 shows dashes on the displays.

SUBTASK 34-55-00-730-013

- (4) Open this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

- (a) Make sure that the DME 2 has a flag on the displays.

SUBTASK 34-55-00-860-052

- (5) Set a frequency of 108.00 MHz on the captain's navigation control panel, P8.

SUBTASK 34-55-00-730-014

- (6) Use the DISTANCE switch to set distance of 6 mi (9.66 km) on the T-24B DME test set, COM-13614.
- (a) Make sure that the DME 1 shows from 5.5 nmi (10.19 km) to 6.5 nmi (12.04 km) on the displays.

SUBTASK 34-55-00-860-053

- (7) Set the voice/range filter switch on one of the audio control panels to the B position.

SUBTASK 34-55-00-860-054

- (8) At the same audio control panel, push the receiver volume control for NAV-1 to set the volume to on.

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 507
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-55-00-860-055

- (9) At the same audio control panel, turn the receiver volume control clockwise for NAV-1 to adjust the volume level.

SUBTASK 34-55-00-860-056

- (10) At all other audio control panels, push the receiver volume control for NAV-1 to set the volume to off.

SUBTASK 34-55-00-860-057

- (11) Push the receiver volume control for NAV-2 on all the audio control panels to set the volume to off.

SUBTASK 34-55-00-730-015

- (12) Push the IDENT switch on the T-24B DME test set, COM-13614, to supply an identification tone.
 - (a) Make sure that you can hear a tone through the flight interphone system.

SUBTASK 34-55-00-860-058

- (13) Push the receiver volume control for NAV-1 on the audio control panels to set the volume to off.

SUBTASK 34-55-00-860-059

- (14) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

I. No. 2 DME System Test (with the use of the test set, T-24B)

SUBTASK 34-55-00-860-060

- (1) Set the SOURCE switch on the instrument switching module on the forward overhead panel, P5, to the AUTO position.

SUBTASK 34-55-00-860-061

- (2) Set an active VOR frequency of 109.00 MHz on the captain's and the first officer's navigation control panel, P8.
 - (a) Make sure that the DME 1 shows dashes on the displays.
 - (b) Make sure that the DME 2 shows dashes on the displays.

SUBTASK 34-55-00-730-016

- (3) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

- (a) Make sure that the DME 1 has a flag on the displays.

SUBTASK 34-55-00-860-062

- (4) Set a frequency of 108.00 MHz on the first officer's navigation control panel, P8.

SUBTASK 34-55-00-730-017

- (5) Use the DISTANCE switch to set a distance of 6 mi (9.66 km) on the T-24B DME test set, COM-13614.
 - (a) Make sure that the DME 2 shows from 5.5 nmi (10.19 km) to 6.5 nmi (12.04 km) on the displays.

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 508
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-55-00-860-063

- (6) Set the voice/range filter switch on one of the audio control panels to the B position.

SUBTASK 34-55-00-860-064

- (7) At the same audio control panel, push the receiver volume control for NAV-2 to set the volume to on.

SUBTASK 34-55-00-860-065

- (8) At the same audio control panel, turn the receiver volume control clockwise for NAV-2 to adjust the volume level.

SUBTASK 34-55-00-860-066

- (9) At all other audio control panels, push the receiver volume control for NAV-2 to set the volume to off.

SUBTASK 34-55-00-860-067

- (10) Push the receiver volume control for NAV-1 on all the audio control panels to set the volume to off.

SUBTASK 34-55-00-730-018

- (11) Push the IDENT switch on the T-24B DME test set, COM-13614, to supply an identification tone.
- (a) Make sure that you can hear a tone through the flight interphone system.

SUBTASK 34-55-00-860-068

- (12) Push the receiver volume control for NAV-2 on the audio control panels to set the volume to off.

SUBTASK 34-55-00-860-069

- (13) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-55-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 509
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
DME ANTENNA - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the DME antenna
- (2) An installation of the DME antenna.

B. The two DME antennas are installed on the bottom centerline of the airplane fuselage.

TASK 34-55-11-000-801

2. DME Antenna Removal

(Figure 401)

A. Location Zones

<u>Zone</u>	<u>Area</u>
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

B. DME Antenna Removal

SUBTASK 34-55-11-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

SUBTASK 34-55-11-020-001

- (2) Remove the DME antenna [3]:

- (a) Remove the bolts [4] from the antenna base.



CAUTION

LOWER THE ANTENNA ONLY AS FAR AS REQUIRED TO DISCONNECT THE COAXIAL CONNECTOR. DAMAGE TO THE CABLE CAN OCCUR IF YOU PULL THE CABLE.

- (b) Lower the DME antenna [3] until you can get access to the coaxial connector [1].
- (c) Disconnect the coaxial connector [1] from the DME antenna [3].
- (d) Remove the DME antenna [3].
- (e) Remove and discard the O-ring [2].
- (f) Put a protective cover on the electrical connector.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

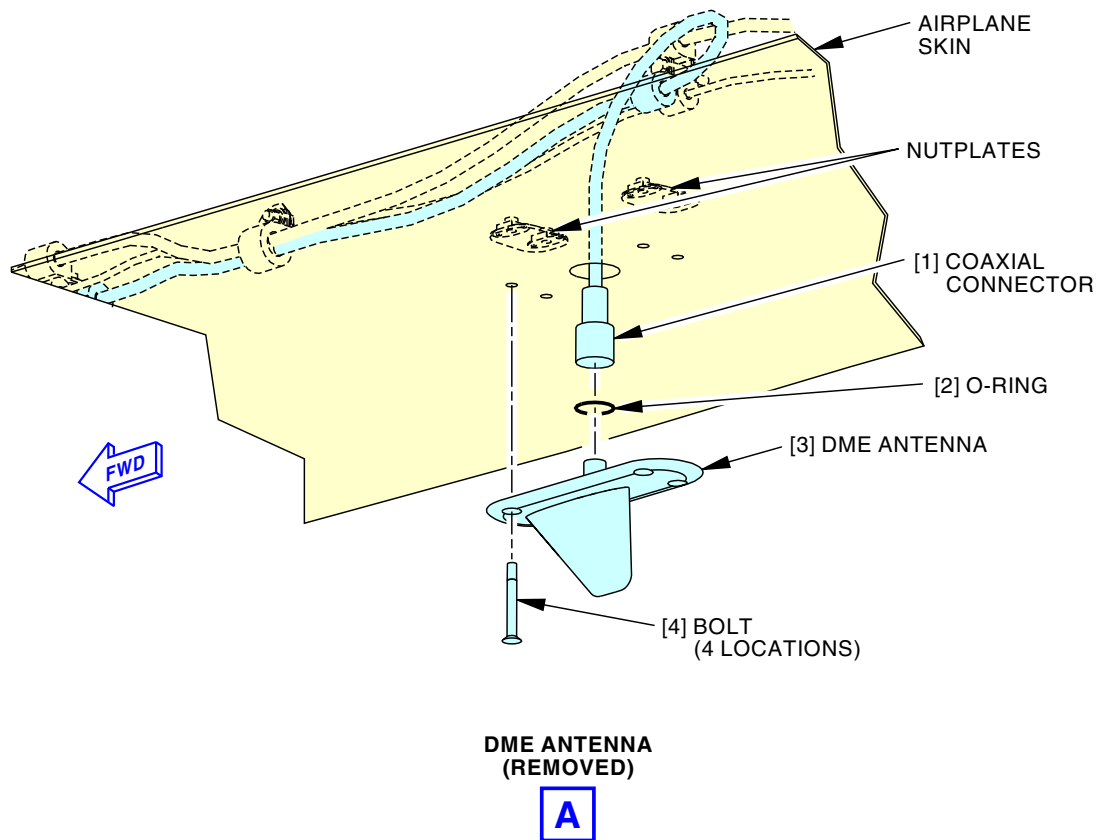
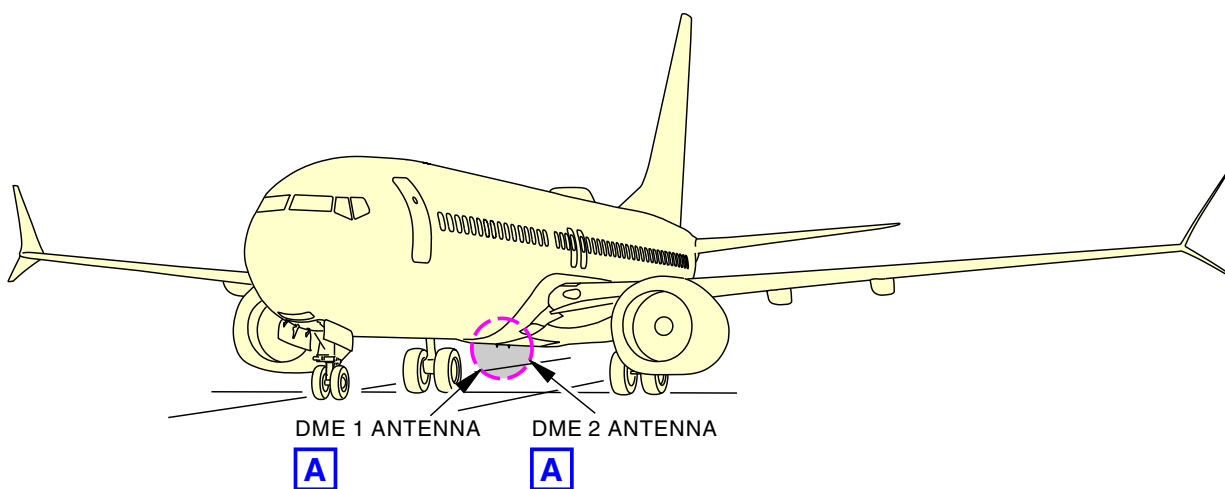
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-11

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414899 S00061536477_V1

DME Antenna Installation
Figure 401/34-55-11-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-55-11

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-55-11-400-801

3. DME Antenna Installation

(Figure 401)

A. References

Reference	Title
51-21-00-160-801	Surface Preparation Of Aluminum Bonding Surfaces For Antenna Installations (P/B 701)
51-21-00-160-802	Surface Preparation Of Flame Sprayed Skin Panel Bonding Surfaces For Antenna Installations (P/B 701)
51-21-00-160-803	Surface Preparation Of Skin Panel With BMS 8-336 Expanded Aluminum Foil Bonding Surfaces For Antenna Installations (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-909	Test Set - DME Part #: ARTS-7000 Supplier: 0RDZ5 Part #: AVX-10K Supplier: 51190 Part #: IFR 6000 Supplier: 51190 Part #: TR-210 Supplier: 92606 Part #: TR-220 Supplier: 92606 Opt Part #: 600A-110 Supplier: 51190 Opt Part #: ATC-600A-2 Supplier: 51190 Opt Part #: T-24B Supplier: 92606 Opt Part #: T-48D Supplier: 92606 Opt Part #: TR-211 Supplier: 92606
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
COM-4114	Test Set - ATC-600A-2 ATC Transponder (Modes A & C) Opt Part #: ATC-600A-2 Supplier: 51190

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-11

Page 403
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Reference	Description	Specification
C00862	Coating - Chemical Conversion - Bonderite M-CR 600 Aero (Formerly Alodine 600)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	O-ring	34-53-01-04-015	SIA ALL
		34-53-01-04-115	SIA ALL
		34-55-11-03-015	SIA ALL
		34-55-11-03-115	SIA ALL
3	DME antenna	34-55-11-03-005	SIA ALL
		34-55-11-03-105	SIA ALL

E. Location Zones

Zone	Area
123	Forward Cargo Compartment - Left
124	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

F. DME Antenna Installation

SUBTASK 34-55-11-110-001

- (1) Prepare the antenna surface per abrasive cleaning (TASK 51-21-00-160-801).

SUBTASK 34-55-11-110-002

- (2) Apply a layer of Bonderite M-CR 600 Aero coating, C00862, on the antenna base (TASK 51-21-41-370-802).

SUBTASK 34-55-11-110-003



DO NOT GET SOLVENTS IN YOUR MOUTH, YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE DANGEROUS MATERIALS. SOLVENTS CAN BE FLAMMABLE OR CAUSE DAMAGE TO THE ENVIRONMENT. REFER TO THE MATERIAL SAFETY DATA SHEETS (MSDS) AND THE LOCAL SAFETY PRECAUTIONS.

- (3) For the airplane skin panel surface with the application of flame spray:
(a) Prepare the flame sprayed skin panel surface per solvent cleaning (TASK 51-21-00-160-802).

SUBTASK 34-55-11-110-004

- (4) For the airplane skin panel surface with the application of Expanded Aluminum Foil (EAF):



DO NOT ABRABE THE EXPANDED ALUMINUM FOIL (EAF) PANEL. IF YOU CAUSE DAMAGE TO THE EAF, THE ANTENNA WILL NOT ELECTRICALLY BOND WITH THE AIRPLANE SKIN.

- (a) Prepare the EAF skin panel surface per abrasive cleaning (TASK 51-21-00-160-803).

SUBTASK 34-55-11-420-001

- (5) Install the DME antenna [3].

EFFECTIVITY
SIA ALL

34-55-11

D633AM101-SIA

Page 404
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (a) Remove the protective cover from the electrical connector.
- (b) Install the new O-ring [2] on the DME antenna [3].
- (c) Apply sealant, A00247, to the threads of the bolts [4].
- (d) Examine the coaxial connector [1] for bent or broken pins, dirt, and damage.
- (e) Connect the coaxial connector [1] to the DME antenna [3].
- (f) Put the DME antenna [3] in the correct position on the airplane surface.
- (g) Install three of the four bolts [4].
- (h) Tighten the bolts [4] to 30 in-lb (3.39 N·m).

SUBTASK 34-55-11-760-001

- (6) Measure resistance between the interior countersunk hole of the DME antenna baseplate and the airplane skin panel surface just outside of the antenna base with a intrinsically safe approved bonding meter, COM-1550.

- (a) Use the empty hole to get access to the antenna baseplate.

NOTE: Use caution to assure that probe is as close as possible to antenna base of panel without touching antenna. Resistance is to be measured immediately following surface preparation and antenna installation.

- (b) Make sure that the resistance is less than 0.001 ohm (1 milliohm).

SUBTASK 34-55-11-420-002

- (7) Install the last bolt [4].

- (a) Tighten the bolt [4] to 30 in-lb (3.39 N·m).

SUBTASK 34-55-11-390-001

- (8) Apply aerodynamic sealant.

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (a) Apply an aerodynamic fillet seal around the base of the DME antenna [3] with sealant, A00247 (TASK 51-22-00-390-809).
- (b) Let the sealant dry for the correct cure time.

SUBTASK 34-55-11-860-004

- (9) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

G. DME Antenna Installation Test

SUBTASK 34-55-11-860-006

- (1) Do these steps to prepare for the installation test:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-11

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CAUTION

DO NOT PUT THE TEST SET LESS THAN 15 INCHES (38 CM) FROM THE DME ANTENNA WITH THE TEST SET ON. DAMAGE TO THE TEST SET CAN OCCUR.

- (a) Put the DME test set approximately 21 in. (53 cm) from the DME antenna.
NOTE: The test antenna should be approximately the same height as the airplane antenna.
- (b) For the DME test DME test set, COM-909, put the switches in these positions:

Table 401/34-55-11-993-801

SWITCH NAME	SWITCH POSITION
POWER	ON
IDENT	OFF
DIST/VEL	DIST
Squitter Switch	ON

- (c) For the DME test ATC transponder test set, COM-4114, put the switches in these positions:

Table 402/34-55-11-993-802

SWITCH NAME	SWITCH POSITION
PWR Switch	AC or BAT as appropriate
Mode Switch	DME
Velocity Select Switch	Range
Velocity HI/LO Switch	HI
Squitter Switch	SQTR
X/Y Switch	X

- (d) Set the VHF NAV switch on the P5-28 Instrument Switching Module to the NORMAL position.
- (e) Set the SOURCE switch on the P5-28 Instrument Switching Module to the AUTO position.
- (f) Set the display select switch on the captain's and the first officer's EFIS control panels to the VOR position.

SUBTASK 34-55-11-710-001

- (2) Do these steps to do a test of the No. 1 (captain's) DME antenna with the use of ATC transponder test set, COM-4114:
- (a) Set a frequency of 108.00 MHz on the captain's navigation control panel.
- (b) Set a frequency of 109.00 MHz on the first officer's navigation control panel.
- (c) Set the X/Y switch on the DME test ATC transponder test set, COM-4114, to Y.
- (d) Use the SLEW switch to set the tester range (or distance) to 6 miles (or 10 miles, depending on your test set configuration) on the DME test ATC transponder test set, COM-4114.
- 1) Make sure that the DME 1 shows dashes on the displays.

EFFECTIVITY
SIA ALL

34-55-11

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 406
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (e) Set the X/Y switch on the DME test ATC transponder test set, COM-4114, to X.
 - 1) Make sure that the DME 1 shows 6 ± 0.5 nmi (or 10 ± 0.5 nmi, depending on your tester settings) on the displays.

SUBTASK 34-55-11-710-002

- (3) Do these steps to do a test of the No. 1 (captain's) DME antenna with the use of DME test set, COM-909:
 - (a) Set a frequency of 108.00 MHz on the captain's navigation control panel.
 - (b) Set a frequency of 109.00 MHz on the first officer's navigation control panel.
 - (c) Use the DISTANCE switch to set the tester range (or distance) to 6 miles (or 10 miles, depending on your test set configuration) on the DME test set, COM-909.
 - 1) Make sure that the DME 1 shows 6 ± 0.5 nmi (or 10 ± 0.5 nmi, depending on your tester settings) on the displays.

SUBTASK 34-55-11-710-003

- (4) Do these steps to do a test of the No. 2 (first officer's) DME antenna with the use of DME test ATC transponder test set, COM-4114:
 - (a) Set a frequency of 109.00 MHz on the captain's navigation control panel.
 - (b) Set a frequency of 108.00 MHz on the first officer's navigation control panel.
 - (c) Set the X/Y switch on the DME test ATC transponder test set, COM-4114, to Y.
 - (d) Use the SLEW switch to set the tester range (or distance) to 6 miles (or 10 miles, depending on your test set configuration) on the DME test ATC transponder test set, COM-4114.
 - 1) Make sure that the DME 2 shows dashes on the displays.
 - (e) Set the X/Y switch on the DME test ATC transponder test set, COM-4114, to X.
 - 1) Make sure that the DME 2 shows 6 ± 0.5 nmi (or 10 ± 0.5 nmi, depending on your tester settings) on the displays.

SUBTASK 34-55-11-710-004

- (5) Do these steps to do a test of the No. 2 (first officer's) DME antenna with the use of DME test set, COM-909:
 - (a) Set a frequency of 109.00 MHz on the captain's navigation control panel.
 - (b) Set a frequency of 108.00 MHz on the first officer's navigation control panel.
 - (c) Use the DISTANCE switch to set the tester range (or distance) to 6 miles (or 10 miles, depending on your test set configuration) on the DME test set, COM-909.
 - 1) Make sure that the DME 2 shows 6 ± 0.5 nmi (or 10 ± 0.5 nmi, depending on your tester settings) on the displays.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-11

Page 407
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

DME INTERROGATOR - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the distance measuring equipment (DME) interrogator.
 - (2) An installation of the DME interrogator.
- B. The two DME interrogators are in the main equipment center. The No. 1 DME interrogator is on the E1 electronic equipment rack, shelf No. 2. The No. 2 DME interrogator is on the E1 electronic equipment rack, shelf No. 5.

TASK 34-55-21-000-801

2. DME Interrogator Removal

(Figure 401)

A. **References**

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)

B. **Location Zones**

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

D. **DME Interrogator Removal**

SUBTASK 34-55-21-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	14	C00192	RADIO NAVIGATION DME 2

SUBTASK 34-55-21-010-001

- (2) To get access to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-21

Page 401
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-55-21-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE DME INTERROGATOR. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE DME INTERROGATOR.

- (3) To remove the DME INTERROGATOR [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

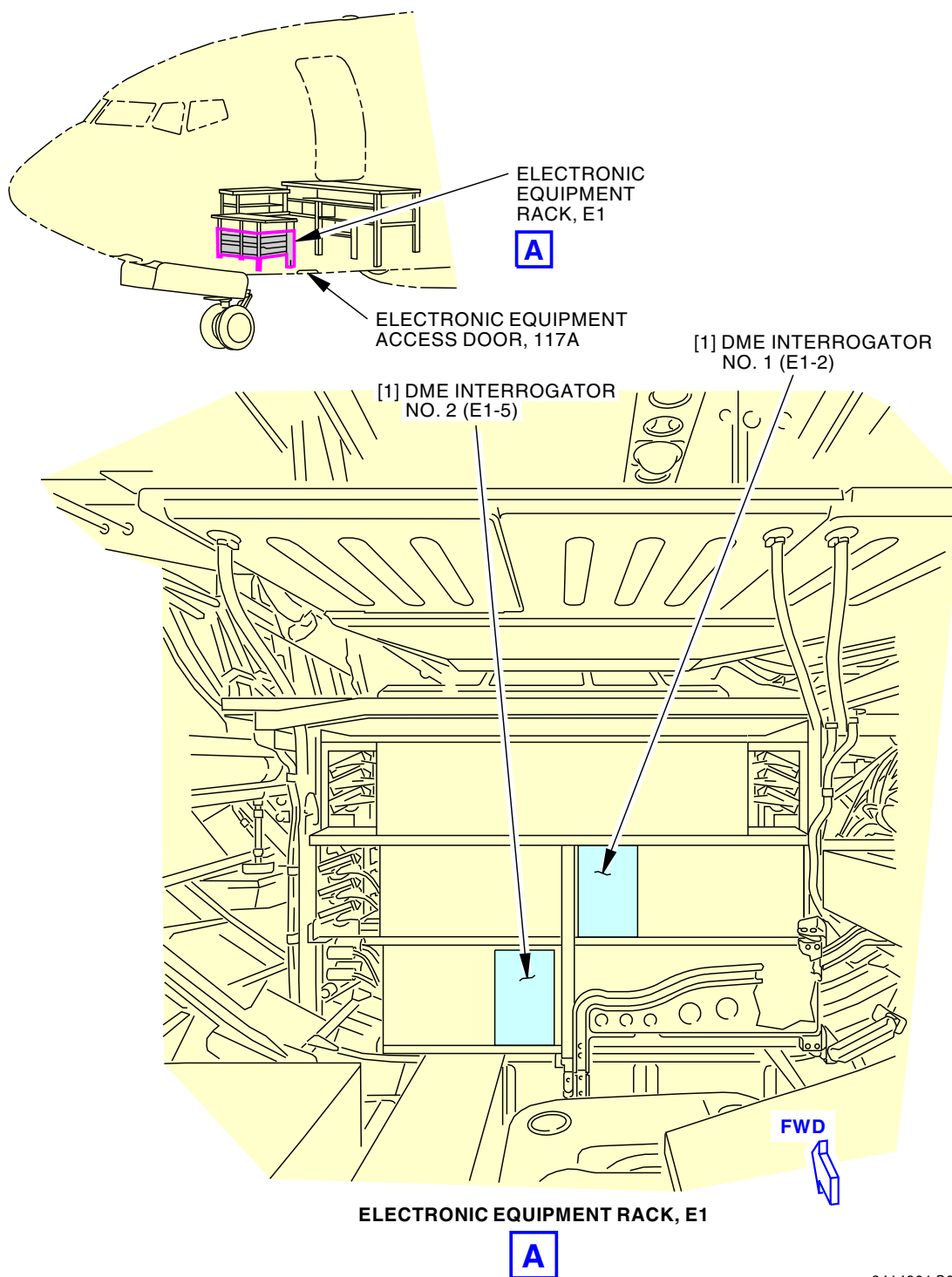
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-21

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414901 S00061536485_V1

DME Interrogator Installation
Figure 401/34-55-21-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-21

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-55-21-400-801

3. DME Interrogator Installation

(Figure 401)

A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	DME INTERROGATOR	34-55-21-02-005	SIA ALL
		34-55-21-02-050	SIA ALL

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. DME Interrogator Installation

SUBTASK 34-55-21-420-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE DME INTERROGATOR. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE DME INTERROGATOR.

- (1) To install the DME INTERROGATOR [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-55-21-410-001

- (2) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-55-21-860-003

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	3	C00190	RADIO NAVIGATION DME 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	14	C00192	RADIO NAVIGATION DME 2

EFFECTIVITY
SIA ALL

34-55-21

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

F. Installation Test

SUBTASK 34-55-21-860-005

- (1) Do this step on the P5-28 Instrument Switching Module (located on the P5 Forward Overhead Panel):
 - (a) Set the VHF NAV switch to the NORMAL position.

SUBTASK 34-55-21-860-006

- (2) Make sure that DME 1 and DME 2 are not tuned to a local station's frequency.

SUBTASK 34-55-21-710-001

- (3) Do these steps to do a test of the No. 1 DME INTERROGATOR [1]:
 - (a) Set the SOURCE switch on the P5-28 Instrument Switching Module to the AUTO position.
 - (b) Push the TEST button on the captain's navigation control panel to start the DME 1 self test.
 - (c) Make sure that this sequence occurs on the captain's and the first officer's displays:
NOTE: The DME 2 shows dashes on the displays during the DME 1 self test.
 - 1) The DME 1 has a flag on the displays for approximately two seconds.
 - 2) The DME 1 is dashes on the displays until the end of the test.

SUBTASK 34-55-21-710-002

- (4) Do these steps to do a test of the No. 2 DME INTERROGATOR [1]:
 - (a) Set the SOURCE switch on the P5-28 Instrument Switching Module to the AUTO position.
 - (b) Push the TEST button on the first officer's navigation control panel to start the DME 2 self test.
 - (c) Make sure that this sequence occurs on the captain's and the first officer's displays:
NOTE: The DME 1 shows dashes on the displays during the DME 2 self test.
 - 1) The DME 2 has a flag on the displays for approximately two seconds.
 - 2) The DME 2 is dashes on the displays until the end of the test.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-55-21

Page 405
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AUTOMATIC DIRECTION FINDER SYSTEM - MAINTENANCE PRACTICES

1. **General**

A. This procedure has these tasks:

- (1) Automatic Direction Finder (ADF) System Deactivation
- (2) Automatic Direction Finder (ADF) System Activation

TASK 34-57-00-040-801

2. **Automatic Direction Finder System - Deactivation**

(Figure 34-57-03-990-801)

A. **General**

- (1) This procedure removes electrical power to the ADF System.

B. **References**

Reference	Title
34-57-03-990-801	Figure: ADF Receiver Installation (P/B 401)

C. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
240	Subzone - Passenger Compartment - Body Station 663.75 to Body Station 1016.00

D. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Procedure**

SUBTASK 34-57-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	17	C01383	RADIO NAVIGATION ADF 2

F. **Automatic Direction Finder System - Tryout**

NOTE: This tryout is to make sure the ADF System is in a zero energy state.

SUBTASK 34-57-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	4	C01382	RADIO NAVIGATION ADF 1

EFFECTIVITY
SIA ALL

34-57-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-00-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-57-00-860-003

- (3) Make sure the lights on the front panel of the ADF Receiver(s) are not illuminated.

SUBTASK 34-57-00-750-001

- (4) Push and release the applicable TEST switch on the ADF Receiver(s) and make sure none of the lights on the front panel come on.

————— END OF TASK —————

TASK 34-57-00-440-801

3. Automatic Direction Finder System - Activation

(Figure 34-57-03-990-801)

A. General

- (1) This procedure adds electrical power to the ADF System.

B. References

<u>Reference</u>	<u>Title</u>
34-57-03-990-801	Figure: ADF Receiver Installation (P/B 401)

C. Location Zones

<u>Zone</u>	<u>Area</u>
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
240	Subzone - Passenger Compartment - Body Station 663.75 to Body Station 1016.00

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

E. Procedure

SUBTASK 34-57-00-860-004

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

EFFECTIVITY
SIA ALL

34-57-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-57-00-410-001

(2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-00

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

AUTOMATIC DIRECTION FINDER SYSTEM - ADJUSTMENT/TEST

1. **General**

- A. The system test is a full functional check of the ADF System and its interfaces.

TASK 34-57-00-730-801

2. **Automatic Direction Finder System - System Test**

A. **General**

- (1) Some of the tests need radio reception from local AM commercial broadcast stations or Automatic Direction Finder (ADF) beacon transmitting stations.

NOTE: ADF bearing checks on the ground, in hangars, or near other airplanes, metal buildings and equipment, etc. may show inaccurate bearings or weak signals.

B. **References**

Reference	Title
23-51-00-710-801	Flight Interphone System Operational Test (P/B 501)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Prepare for the Test**

SUBTASK 34-57-00-840-002

- (1) Do these steps to prepare for the test:
- (a) Make sure that the Flight Interphone System (FIS) is on (TASK 23-51-00-710-801).
 - (b) Make sure that the Air Data Inertial Reference System (ADIRS) is on (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
 - (c) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	17	C01383	RADIO NAVIGATION ADF 2

- (d) Set the CDS switch, on the P5 panel, to the AUTO position.
- (e) Set the VOR1/OFF/ADF1 switches, on the captain's and first officer's EFIS control panels, to the ADF 1 position.
- (f) set the VOR2/OFF/ADF2 switches, on the captain's and first officer's EFIS control panels, to the ADF 2 position.

SUBTASK 34-57-00-860-005

- (2) For the audio select panels, do these steps:
- (a) Set the ADF 1 audio selector to the ON position.

EFFECTIVITY
SIA ALL

34-57-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 501
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the volume for the ADF 1 system is set to a comfortable level.
- (b) Set the volume controls for all other audio selects to the OFF position.
- (c) Set the VOICE/RANGE switch to the BOTH position.

SUBTASK 34-57-00-860-007

- (3) On the ADF control panel, set the switches as follows:
 - (a) The ADF 1 mode switch to the ADF position.
 - (b) The ADF 2 mode switch to the ADF position.
 - (c) The TONE switch to the OFF position.

E. ADF BITE Test

SUBTASK 34-57-00-740-004

- (1) Do these steps to do a test of the ADF BITE:
 - (a) On the ADF control panel, push and release the TEST switch on the ADF 1 mode switch.
 - (b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

- (c) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

- (d) On the ADF control panel, push and release the TEST switch on the ADF 2 mode switch.
- (e) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

- (f) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

F. ADF System Self-Test

SUBTASK 34-57-00-730-001

- (1) To see the ADF test sequence, select VOR or APP on the EFIS control panel mode selector.
 - (a) To start the test, push the test switch on the ADF control panel mode selector knob.
 - (b) During the first two seconds of the test, the receiver output goes to a fail condition. The pointer goes out of view and the amber ADF flag shows momentarily.
 - (c) For the next two seconds, the receiver output goes to an NCD condition. During this time, the amber ADF flag goes out of view and the pointer stays out of view.
 - (d) Next, the test display shows and the pointer goes to a test position of 135 degrees from the heading lubber line until the end of test.

NOTE: For a dual system, the test is the same for each ADF receiver.

EFFECTIVITY
SIA ALL

34-57-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 502
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

G. ADF-1 and ADF-2 System Test

SUBTASK 34-57-00-860-013

- (1) Set the ADF 1 frequency control, on the ADF control panel, to a local AM broadcast or NDB station.

SUBTASK 34-57-00-730-003

- (2) Do these steps to do a check of the ADF-1 system test:
 - (a) Make sure that you hear a loud and clear ADF audio signal at all audio select locations.
 - (b) Make sure that the ADF-1 pointers on the captain's and first officer's ND's show the same bearing.
 - (c) Make sure that the ADF bearing accuracy is as follows:
 - 1) ± 3 degrees at the quadrantal areas (45 degree, 135 degree, 225 degree and 315 degree)
 - 2) ± 2 degrees at the areas different than quadrantal areas.
 - (d) Make sure that the ADF L frequencies that show on the bottom left corner of the captain's and first officer's ND's are the same as the frequency from the ADF control panel.

SUBTASK 34-57-00-860-014

- (3) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

- (a) Make sure that the yellow ADF flags show on the captain's and first officer's ND's.

SUBTASK 34-57-00-860-015

- (4) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-00-860-016

- (5) For the audio select panels, do these steps:
 - (a) Set the ADF 2 audio selector to the ON position.
 - 1) Make sure that the volume for the ADF 2 system is set to a comfortable level.
 - (b) Set the volume controls for all other audio selects to the OFF position.
 - (c) Set the VOICE/RANGE switch to the BOTH position.

SUBTASK 34-57-00-860-017

- (6) Set the ADF 2 frequency control, on the ADF control panel, to a local AM broadcast or NDB station.

SUBTASK 34-57-00-730-004

- (7) Do these steps to do a check of the ADF-2 system:
 - (a) Make sure that you hear a loud and clear ADF audio signal at all audio select locations.
 - (b) Make sure that the ADF-2 pointers on the captain's and first officer's ND's show the same bearing.
 - (c) Make sure that the ADF bearing accuracy is as follows:

EFFECTIVITY
SIA ALL

34-57-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 503
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) ± 3 degrees at the quadrantal areas (45 degree, 135 degree, 225 degree and 315 degree)
 - 2) ± 2 degrees at the areas different than quadrantal areas.
- (d) Make sure that the ADF R frequencies that show on the bottom right corner of the captain's and first officer's ND's are the same as the frequency from the ADF control panel.

SUBTASK 34-57-00-860-018

- (8) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

- (a) Make sure that the yellow ADF flags show on the captain's and first officer's ND's.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-57-00-860-029

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-00-860-026

- (2) If the Air Data Inertial Reference Unit (ADIRU) is not necessary, set the ADIRU switch to the OFF position.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-00

Page 504
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
ADF ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the automatic direction finder (ADF) antenna
 - (2) An installation of the ADF antenna.
- B. The left and right ADF antennas are installed on the top of the fuselage. The left ADF antenna is installed at station 694.00. The right ADF antenna is installed at station 727A+9.00.

TASK 34-57-01-000-801

2. ADF Antenna Removal

(Figure 401)

A. General

- (1) This task has instructions to remove the ADF antenna.

B. References

Reference	Title
51-22-00-390-809	Aerodynamic Smoother Application (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-01

Page 401
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
240	Subzone - Passenger Compartment - Body Station 663.75 to Body Station 1016.00

E. Removal Procedure

SUBTASK 34-57-01-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-01-140-001

- (2) Remove the aerodynamic smoother from around the edge of the ADF Antenna [1] (TASK 51-22-00-390-809).

SUBTASK 34-57-01-020-001

- (3) Remove the ADF Antenna [1]:
- (a) Loosen the mounting bolts [4] until they disengage from the airplane nutplates.



CAUTION

BE CAREFUL WHEN YOU USE THE SEALANT REMOVAL TOOL TO BREAK THE SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRPLANE SKIN, THE ANTENNA CABLE OR THE ADF ANTENNA.

- (b) Use force around the ADF Antenna [1] with the sealant removal tool, COM-2481 until the seal is fully broken.



CAUTION

LIFT THE ADF ANTENNA ONLY AS FAR AS NECESSARY TO DISCONNECT THE CABLE. DAMAGE TO THE ANTENNA CABLE CAN OCCUR IF YOU PULL THE CABLE.

- (c) Lift the ADF Antenna [1] until you can get access to the connector [3].
- (d) Disconnect the connector [3] from the ADF Antenna [1].
- NOTE: Do not let the connector [3] fall into the fuselage.
- (e) Remove the ADF Antenna [1] and the O-ring [2].
- (f) Put a protective cover on the connector [3].

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

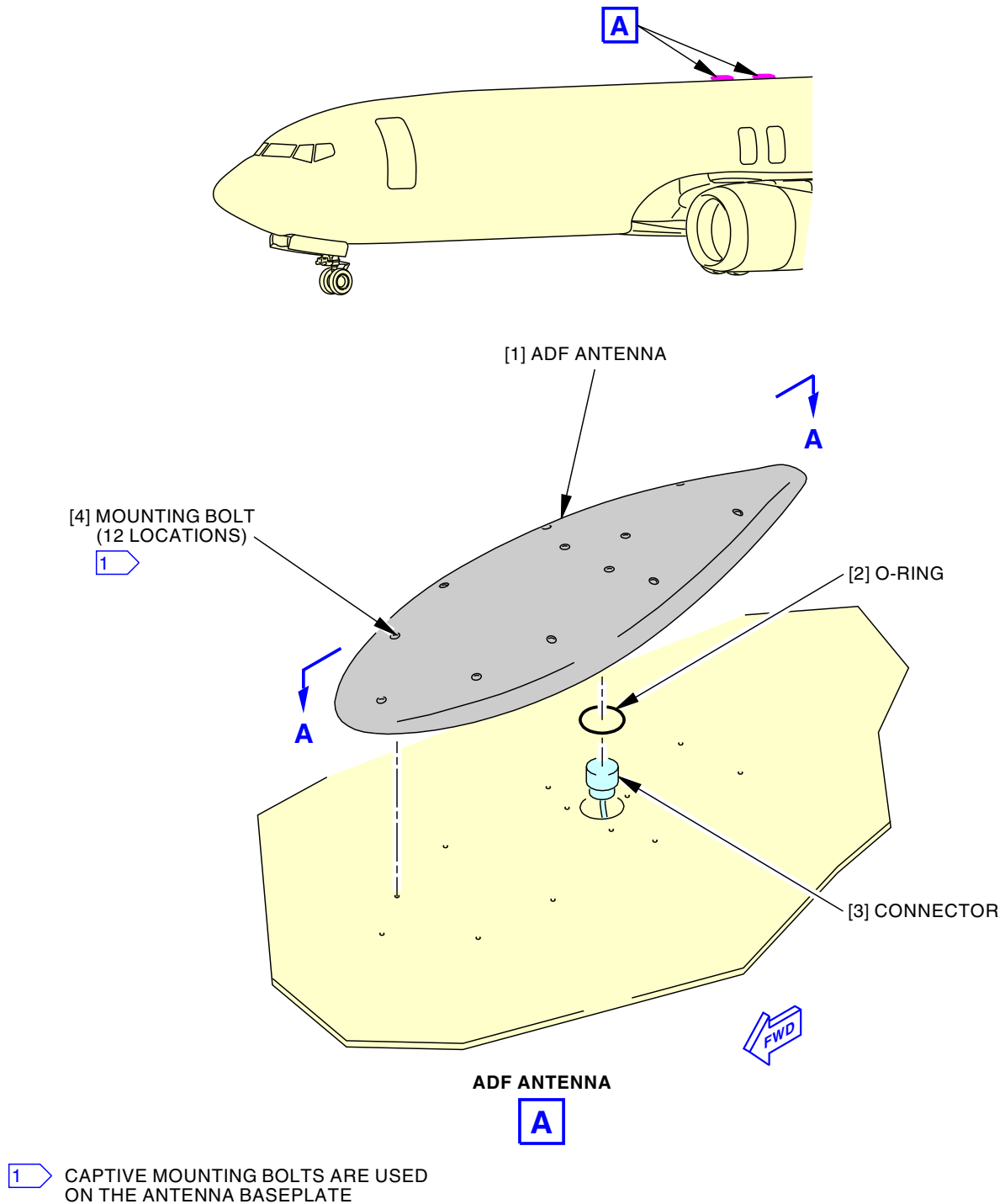
34-57-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Sep 15/2021

BOEING
737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2533820 S0000600373_V1

ADF Antenna Installation
Figure 401/34-57-01-990-801 (Sheet 1 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

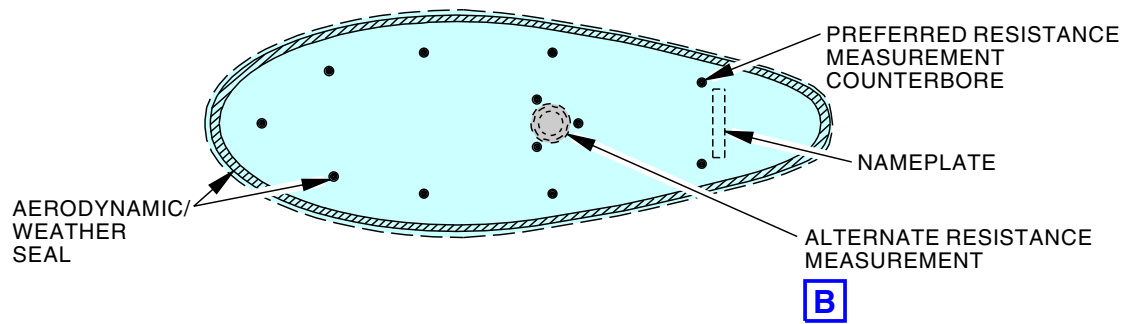
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-01

Page 403
Sep 15/2021

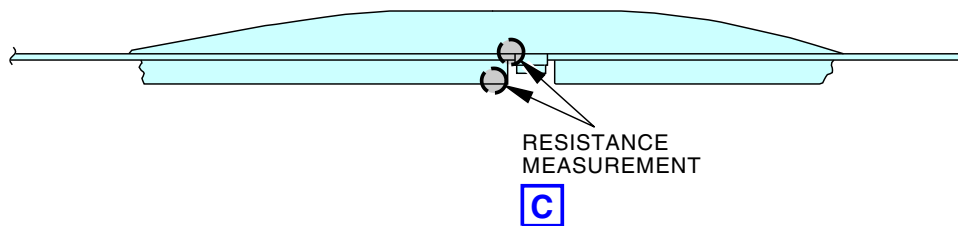


737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



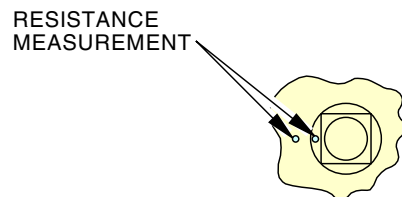
AERODYNAMIC/WEATHERPROOFING SEALANT
(TOP VIEW)

A-A



ALTERNATE RESISTANCE MEASUREMENT
(SIDE VIEW)

B



RESISTANCE MEASUREMENT
(BOTTOM VIEW)

C

2533821 S0000600374_V1

ADF Antenna Installation
Figure 401/34-57-01-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-01

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-57-01-400-801

3. ADF Antenna Installation

(Figure 401)

A. General

(1) This task has instructions to install the ADF antenna.

B. References

Reference	Title
51-21-00-100-801	Airplane Surface Preparation for Application of Finish (P/B 701)
51-21-31-350-801	Removal and Control of Corrosion for Aluminum and Aluminum Alloys (P/B 701)
51-22-00-390-806	Fillet Seal Application (P/B 201)
51-22-00-390-808	Fastener Seal Application (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
STD-810	Spatula - Fillet Smoothing, Hardwood or Plastic

D. Consumable Materials

Reference	Description	Specification
A00230	Compound - Electrical Insulating Coating	BMS5-37
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
D00633	Grease - Aircraft General Purpose	BMS3-33
G02497	Agent - Non-Peelable Parting (Henkel Loctite - Frekote 700-NC Mold Release)	BAC5000
G50313	Agent - Non-Peelable Parting (Henkel Loctite - Frekote 710-NC Mold Release)	BAC5000

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-01

Page 405
May 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	ADF Antenna	34-57-01-01-035	SIA ALL
		34-57-01-04-020	SIA ALL
2	O-ring	34-57-01-01-040	SIA ALL
		34-57-01-04-025	SIA ALL

F. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
240	Subzone - Passenger Compartment - Body Station 663.75 to Body Station 1016.00

G. ADF Antenna Installation

SUBTASK 34-57-01-110-001

- (1) Clean the airplane skin (TASK 51-21-00-100-801).
 - (a) Remove the old sealant from the airplane skin in the area of the ADF Antenna [1].
 - (b) Clean the mating surface with solvent, B00083.

SUBTASK 34-57-01-620-001

- (2) If the airplane skin has corrosion or other damage, do these steps:
 - (a) To remove the corrosion, do this task: Removal and Control of Corrosion for Aluminum and Aluminum Alloys, TASK 51-21-31-350-801.
 - (b) Apply a layer of coating, C00064, on the airplane skin in the area where the ADF Antenna [1] touches the skin.

SUBTASK 34-57-01-420-001

- (3) Install the ADF Antenna [1].
 - (a) Apply a thin layer of compound, A00230, to the antenna base.
 - (b) Apply Frekote 700-NC non-peelable parting agent, G02497, or Frekote 710-NC non-peelable parting agent, G50313, to the antenna base.
 - (c) Apply a layer of grease, D00633, on the new O-ring [2] and groove of the O-ring [2].
 - (d) Install the O-ring [2] on the ADF Antenna [1].
 - (e) Remove the protective cover from the electrical connector [3].
 - (f) Connect the electrical connector [3] to the ADF Antenna [1].
 - (g) Put the ADF Antenna [1] into position on the airplane surface.
 - (h) Lightly tighten the mounting bolts [4] in a diagonal pattern to hold the ADF Antenna [1] in the correct position.

NOTE: Refer to the IPC for the bolt part number.



CAUTION

TIGHTEN THE BOLTS MANUALLY TO THE CORRECT TORQUE VALUE. OPERATION OF POWER OR AIR TOOLS TO TIGHTEN THE BOLTS CAN CAUSE DAMAGE TO THE ADF ANTENNA SURFACE.

- (i) Manually tighten the mounting bolts [4] to 20 +5 / -0 in-lb (2.3 +0.6 / -0.0 N·m).
 - (j) Remove the unwanted compound, A00230, from around the edge of the ADF Antenna [1].

EFFECTIVITY
SIA ALL

34-57-01

D633AM101-SIA

Page 406
Jan 15/2022



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

H. Resistance Measurement (Preferred)

SUBTASK 34-57-01-760-001

- (1) Do a check of the electrical continuity between the ADF Antenna [1] baseplate and the airplane skin.
 - (a) Loosen one mounting bolt [4] from the ADF Antenna [1].
 - (b) Connect the intrinsically safe approved bonding meter, COM-1550, between the mounting bolt [4] counterbore and the airplane skin.
 - 1) Make sure that the measurement of continuity is 0.001 ohm (1 milliohm) or less.
 - (c) If the resistance measurement caused damage, apply sealant, A02315, or sealant, A00247, to the damaged area of the airplane skin.
 - (d) Manually, tighten the mounting bolt [4] to 20 +5 / -0 in-lb (2.3 +0.6 / -0.0 N·m).

I. Resistance Measurement (Alternate)

SUBTASK 34-57-01-760-002

- (1) Do a check of the electrical continuity from the inside of the airplane between the ADF Antenna [1] baseplate and the airplane skin.
 - (a) Connect the intrinsically safe approved bonding meter, COM-1550, between the ADF Antenna [1] baseplate and the airplane skin.
 - 1) Make sure that the measurement of continuity is 0.001 ohm (1 milliohm) or less.
 - (b) If the resistance measurement caused damage, apply sealant, A02315, or sealant, A00247, to the damaged area of the airplane skin.

J. ADF Antenna Sealing

SUBTASK 34-57-01-390-001

- (1) Fill the mounting bolt [4] counterbores with approximately 0.3 in. (7.6 mm) of cotton plug.

SUBTASK 34-57-01-390-002

- (2) Seal all the mounting bolts [4] with sealant, A02315, or sealant, A00247, until flush with the ADF Antenna [1] surface (TASK 51-22-00-390-808).

SUBTASK 34-57-01-390-003

- (3) Apply sealant, A02315, or sealant, A00247, to seal around the ADF Antenna [1] (TASK 51-22-00-390-806).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (a) Let the sealant dry for the correct cure time.

SUBTASK 34-57-01-390-004

- (4) Use the hardwood or plastic fillet smoothing spatula, STD-810, to make a smooth 45-degree bead.

SUBTASK 34-57-01-390-005

- (5) Remove unwanted sealant from the area around the ADF Antenna [1] base.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-01

Page 407
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

K. ADF Antenna Installation Test

SUBTASK 34-57-01-860-003

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-01-860-004

- (2) On the ADF control panel, set the controls to these positions:
- (a) The mode switch(es) to the ADF position
 - (b) The frequency controls to a broadcast station between 190 and 1750 kHz.

SUBTASK 34-57-01-750-002

- (3) Make sure that the NDs show the correct bearing.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-01

Page 408
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

ADF CONTROL PANEL - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the automatic direction finder (ADF) control panel
 - (2) An installation of the ADF control panel.
- B. The ADF control panel is installed on the aisle control stand, P8.

TASK 34-57-02-000-801

2. ADF Control Panel Removal

(Figure 401)

A. **General**

- (1) This task has instructions to remove the ADF control panel.

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Removal Procedure**

SUBTASK 34-57-02-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-02-020-001

- (2) Loosen the quarter-turn fasteners [2] on the ADF Control Panel [1].

SUBTASK 34-57-02-020-002

- (3) Move the ADF Control Panel [1] out to get access to the electrical connector [3].

SUBTASK 34-57-02-020-003

- (4) Disconnect the electrical connector [3].

SUBTASK 34-57-02-020-004

- (5) Remove the ADF Control Panel [1].

———— **END OF TASK** ————

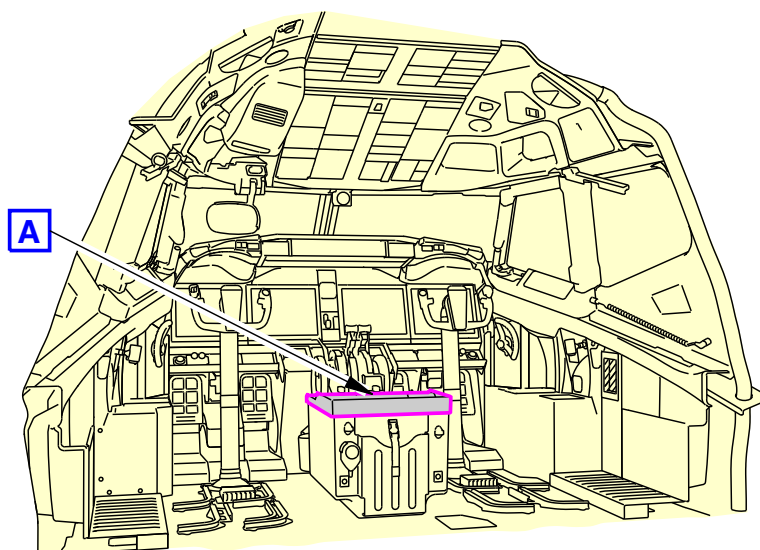
EFFECTIVITY
SIA ALL

D633AM101-SIA

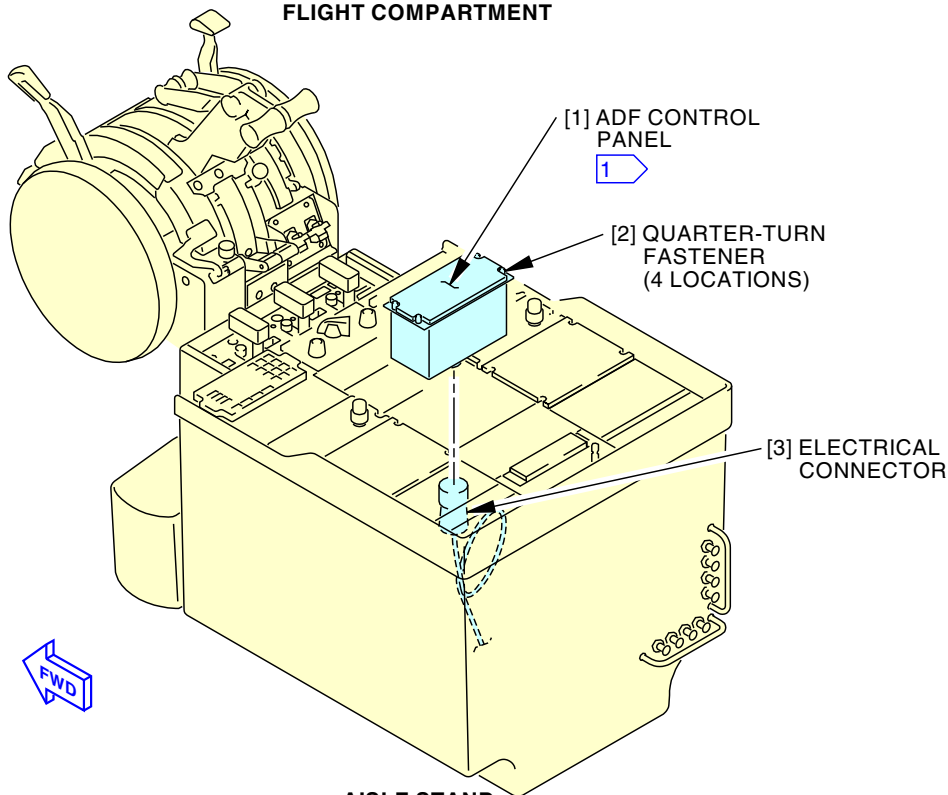
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-02

Page 401
Sep 15/2021



FLIGHT COMPARTMENT



AISLE STAND
(EXAMPLE)

1 THE LOCATION ON THE AISLE STAND CAN
BE DIFFERENT FOR SOME AIRPLANES

2534142 S0000600386_V1

ADF Control Panel Installation
Figure 401/34-57-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-02

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-57-02-400-801

3. **ADF Control Panel Installation**

(Figure 401)

A. General

- (1) This task has instructions to install the ADF control panel.

B. References

Reference	Title
31-11-91	AFT ELECTRONIC PANEL
34-57-00-730-801	Automatic Direction Finder System - System Test (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	ADF Control Panel	31-11-91-01E-455	SIA ALL
		34-57-02-31-010	SIA ALL

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Installation Procedure

SUBTASK 34-57-02-420-001

- (1) Connect the electrical connector [3] to the ADF Control Panel [1].

SUBTASK 34-57-02-420-002

- (2) Install the ADF Control Panel [1].

NOTE: Refer to AFT ELECTRONIC PANEL, SUBJECT 31-11-91 for exact panel location.

SUBTASK 34-57-02-420-003

- (3) Tighten the quarter-turn fasteners [2] on the ADF Control Panel [1].

SUBTASK 34-57-02-860-003

- (4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	17	C01383	RADIO NAVIGATION ADF 2

F. Installation Test

SUBTASK 34-57-02-750-001

- (1) Make sure the panel lights are on.

SUBTASK 34-57-02-730-001

- (2) Do this task: Automatic Direction Finder System - System Test, TASK 34-57-00-730-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-57-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 403
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Automatic Direction Finder (ADF) RECEIVER - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the Automatic Direction Finder (ADF) receiver
- (2) An Installation of the ADF receiver.

B. The ADF receivers are installed on the E3-1 rack in the main equipment center.

TASK 34-57-03-000-801

2. **ADF Receiver Removal**

(Figure 401)

A. General

- (1) This task has instructions to remove the ADF receiver.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
20-10-07-000-801	E/E Box Removal (P/B 401)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Removal Procedure

SUBTASK 34-57-03-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	17	C01383	RADIO NAVIGATION ADF 2

SUBTASK 34-57-03-010-001

- (2) To get access to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(Finding an Access Door or Panel on the Lower Half of the Fuselage, TASK 06-41-00-800-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-03

Page 401
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-57-03-020-001



CAUTION

DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ADF RECEIVER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ADF RECEIVER.

- (3) Remove the applicable ADF receiver [1]. To remove it, do this task: E/E Box Removal, TASK 20-10-07-000-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

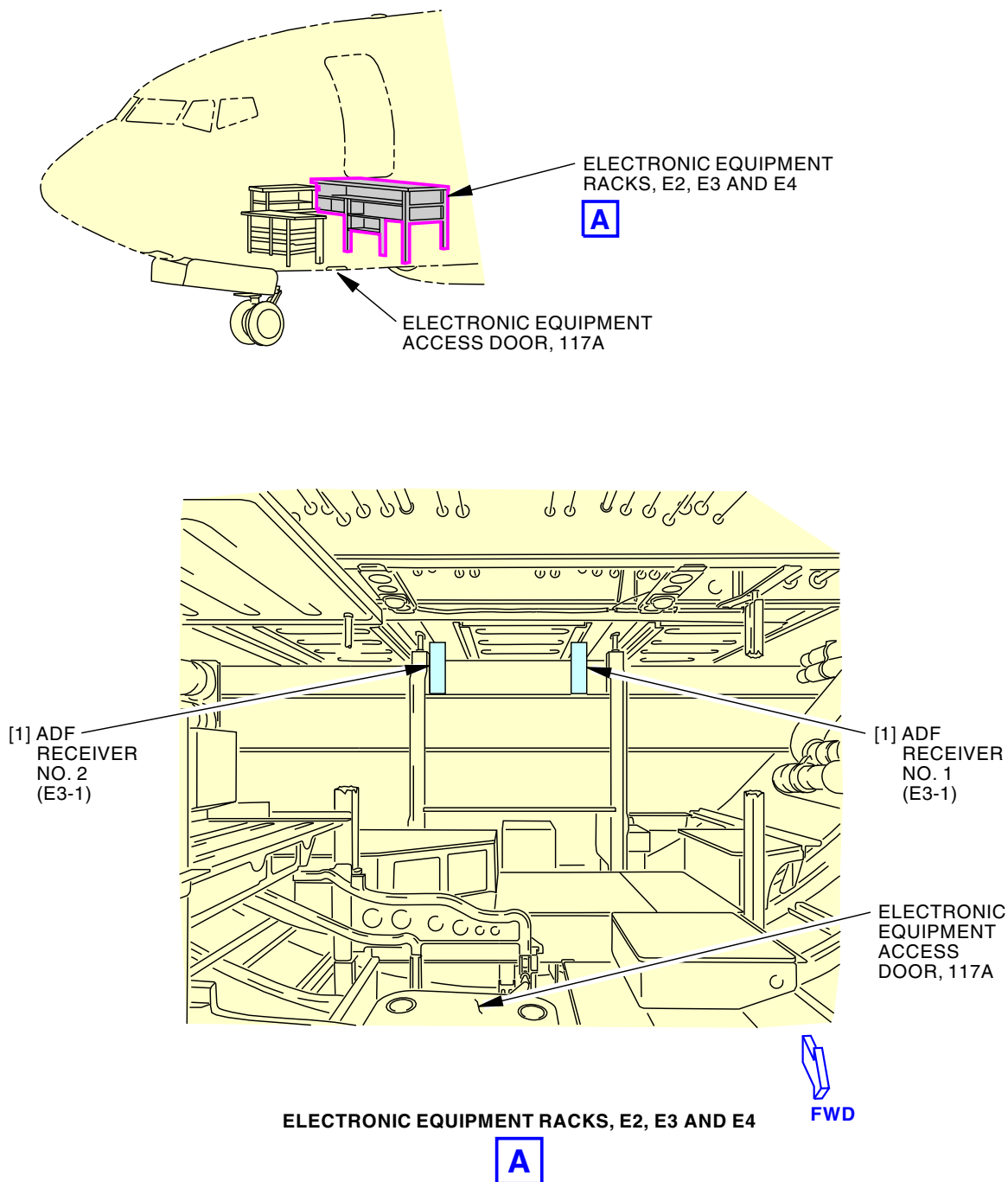
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-03

Page 402
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2533964 S0000600392_V1

ADF Receiver Installation
Figure 401/34-57-03-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-03

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-57-03-400-801

3. **ADF Receiver Installation**

(Figure 401)

A. General

- (1) This task has instructions to install the Automatic Direction Finder (ADF) receiver.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
20-10-07-400-801	E/E Box Installation (P/B 401)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Installation Procedure

SUBTASK 34-57-03-420-001

 CAUTION	DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ADF RECEIVER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ADF RECEIVER.

- (1) Install the ADF receiver [1] (TASK 20-10-07-400-801).

SUBTASK 34-57-03-410-001

- (2) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(Finding an Access Door or Panel on the Lower Half of the Fuselage, TASK 06-41-00-800-801).

SUBTASK 34-57-03-860-003

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	4	C01382	RADIO NAVIGATION ADF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	17	C01383	RADIO NAVIGATION ADF 2

F. ADF Receiver Installation Test

SUBTASK 34-57-03-860-005

- (1) On the captain's and first officer's Electronic Flight Instrument System (EFIS) control panels, set the applicable VOR/OFF/ADF switches to the ADF position.

EFFECTIVITY
SIA ALL

34-57-03

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 404
May 15/2022



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-57-03-860-006

- (2) Set the ADF switch(es) on the ADF control panel to ADF.

SUBTASK 34-57-03-740-001

- (3) Push and release the TEST switch on the applicable ADF receiver [1].

SUBTASK 34-57-03-740-003

- (4) Make sure this sequence occurs on the ADF receiver [1]:
- (a) For seconds 0-2: The Line Replaceable Unit (LRU) status and Control Fail Light Emitting Diode (LED) come on RED.
 - (b) For seconds 2-4: The LRU status LED changes to GREEN and the Control Fail LED remains RED.
 - (c) For seconds 4-12: The LRU status and Control Fail LEDs go off.
 - (d) For seconds 12-42: The test results show on the LED status indicators. The LRU status LED comes on GREEN if there are no LRU faults or RED if any faults occur. The Control Fail LED stays off if the ADF control panel input signal is valid or comes on RED if there is no input from the ADF control panel or if the input signal is invalid.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-57-03

Page 405
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

GLOBAL POSITIONING SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) Global Positioning System Deactivation
- (2) Global Positioning System Activation

TASK 34-58-00-040-801

2. Global Positioning System - Deactivation

(Figure 201)

A. General

- (1) This procedure removes electrical power to the Global Positioning System.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

C. Procedure

SUBTASK 34-58-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	13	C01480	RADIO NAVIGATION MMR 2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

D. Global Positioning System - Tryout

NOTE: This tryout is to make sure that the GPS is in a zero energy state.

SUBTASK 34-58-00-710-001

- (1) Do these steps at the CDU:
 - (a) Push the INIT REF key on the CDU.
 - (b) Push the line select key (LSK) that is adjacent to <INDEX.
 - (c) Push the LSK that is adjacent to <POS.
 - (d) Push the NEXT PAGE key on the CDU.
 - (e) Make sure that the GPS position does not show on the screen.

NOTE: Wait at least 5 minutes to make sure that the position does not show on the CDU.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

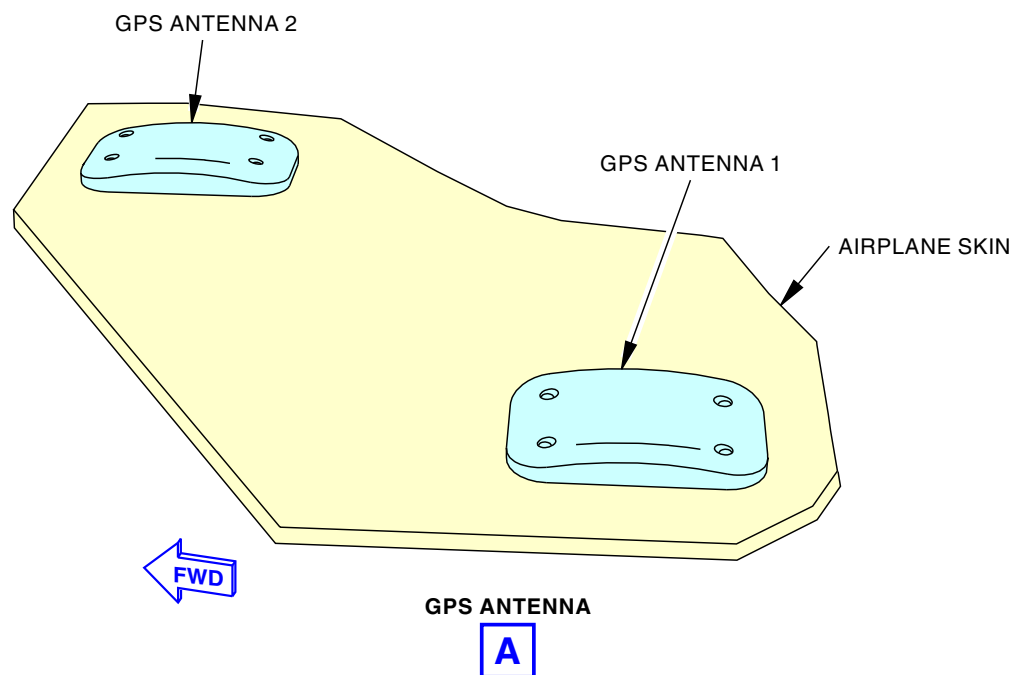
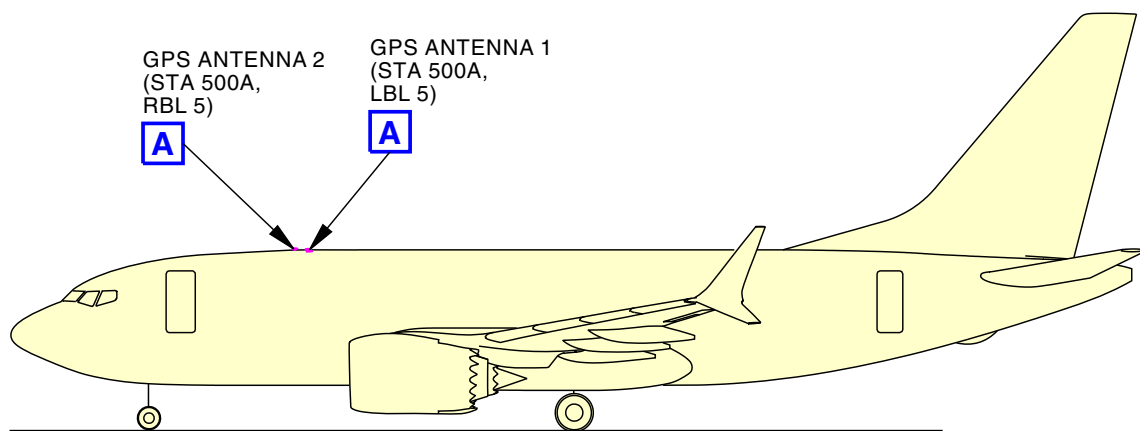
34-58-00

D633AM101-SIA

Page 201
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414902 S00061536491_V1

GPS Antenna
Figure 201/34-58-00-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-58-00

Page 202
May 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-58-00-440-801

3. Global Positioning System - Activation

(Figure 201)

A. General

- (1) This procedure adds electrical power to the Global Positioning System.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

C. Procedure

SUBTASK 34-58-00-860-003



KEEP ALL PERSONNEL AT A SAFE DISTANCE FROM THE ANTENNA. RF ENERGY CAN CAUSE INJURIES TO PERSONNEL.

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1
B	1	C01376	RADIO NAVIGATION NAV SNSR DC-1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	10	C01377	RADIO NAVIGATION NAV SNSR DC-2
A	13	C01480	RADIO NAVIGATION MMR 2
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

————— END OF TASK —————

EFFECTIVITY
SIA ALL

34-58-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 203
Jan 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

GLOBAL POSITIONING SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) An operational test of the global positioning system (GPS).
- (2) A system test of the global positioning system.

NOTE: The airplane must be moved to a position where the GPS antennas have a clear view of the GPS satellites.

TASK 34-58-00-710-801

2. Global Positioning System - Operational Test

A. **General**

- (1) This task does a GPS position check.

B. **References**

Reference	Title
09-10-00-580-801	Nose Gear Maintenance Towing (P/B 201)

C. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Procedure**

SUBTASK 34-58-00-860-005

- (1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-58-00-580-001

- (2) Move the airplane to a position where the GPS antennas have a clear view of the GPS satellites. To move the airplane, do this task: Nose Gear Maintenance Towing, TASK 09-10-00-580-801.

SUBTASK 34-58-00-710-002

- (3) Do these steps to see the GPS position on the CDU:
 - (a) Push the INIT REF key on the CDU.
 - (b) Push the line select key (LSK) that is adjacent to <INDEX.
 - (c) Push the LSK that is adjacent to <POS.
 - (d) Push the NEXT PAGE key on the CDU.
 - (e) Make sure the steps that follow occur:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-58-00

Page 501
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) The GPS L position on the CDU agrees with the known airplane position.
NOTE: As much as 5 minutes of time can be necessary for the positions to show on the CDU.
- 2) The GPS R position on the CDU agrees with the known airplane position.
NOTE: As much as 5 minutes of time can be necessary for the positions to show on the CDU.

————— **END OF TASK** —————

TASK 34-58-00-730-801

3. Global Positioning System - System Test

A. General

- (1) This procedure does a GPS interface check.
- (2) The airplane must be moved to a position where the GPS antennas have a clear view of the GPS satellites.

B. References

Reference	Title
09-10-00-580-801	Nose Gear Maintenance Towing (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-58-00-580-002

- (1) Move the airplane to a position where the GPS antennas have a clear view of the GPS satellites. To move the airplane, do this task: Nose Gear Maintenance Towing, TASK 09-10-00-580-801.

SUBTASK 34-58-00-860-007

- (2) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-58-00-710-003

- (3) Do these steps to see the GPS position on the CDU:
 - (a) Push the INIT REF key on the CDU.
 - (b) Push the line select key (LSK) that is adjacent to <INDEX.
 - (c) Push the LSK that is adjacent to <POS.
 - (d) Push the NEXT PAGE key on the CDU.
 - (e) Make sure the steps that follow occur:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-58-00

Page 502
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) The GPS L position on the CDU agrees with the known airplane position.
NOTE: As much as 5 minutes of time can be necessary for the positions to show on the CDU.
- 2) The GPS R position on the CDU agrees with the known airplane position.
NOTE: As much as 5 minutes of time can be necessary for the positions to show on the CDU.

SUBTASK 34-58-00-710-004

- (4) Do these steps to do a check of the GPS annunciator on the IRS MSU (P5 panel):

- (a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

- 1) Make sure the GPS L position goes out of view on the CDU.
- 2) Make sure the GPS R position stays in view on the CDU.
- 3) Make sure the GPS annunciator on the IRS MSU (P5) stays off.

- (b) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

- 1) Make sure the GPS R position goes out of view on the CDU.
- 2) Make sure the GPS L position stays out of view on the CDU.
- 3) Make sure the GPS annunciator on the IRS MSU (P5) comes on after approximately 10 seconds.

- (c) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

- (d) Make sure the GPS annunciator on the IRS MSU goes off.
 - (e) Stop for approximately 5 minutes until the GPS L and GPS R positions are shown again.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-58-00

Page 503
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
GPS ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) Removal of the GPS antenna
 - (2) Installation of the GPS antenna.
- B. There are two GPS antennas on the airplane: GPS Antenna 1, M2103, and GPS Antenna 2, M2102. The two antennas are installed near station 500A. GPS Antenna 2 is forward and to the right of GPS Antenna 1.
- C. The tasks are the same for the two antennas.

TASK 34-58-02-000-801

2. GPS Antenna Removal

(Figure 401)

A. References

Reference	Title
51-22-00-160-801	Prepare For Sealing (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-2481	Sealant Removal Tool (meets BSS7384 requirements) Part #: 1-6390-A Supplier: 63318 Part #: 10810 Supplier: \$0855 Part #: 10811 Supplier: \$0855 Part #: 10812 Supplier: \$0855 Part #: 234350 Supplier: 5HCF1 Part #: 235072 Supplier: 5HCF1 Part #: 235073 Supplier: 5HCF1 Part #: 235074 Supplier: 5HCF1 Part #: 235075 Supplier: 5HCF1 Part #: 235076 Supplier: 5HCF1 Part #: 311/03 Supplier: F6892 Part #: 311/14 Supplier: F6892 Part #: 311/25 Supplier: F6892 Part #: 311/37 Supplier: F6892 Part #: AS1 Supplier: \$1351 Part #: AS2 Supplier: \$1351 Part #: AS3 Supplier: \$1351 Part #: DAD5013 Supplier: 7RKH2 Part #: DFD5019 Supplier: 7RKH2 Part #: JNT411B60 Supplier: 3DN12 Part #: JNT411B90 Supplier: 3DN12 Part #: SCD5019 Supplier: 7RKH2 Part #: ST982LF-9 Supplier: 81205 Part #: TS1275-4 Supplier: 22975

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-58-02

Page 401
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

D. GPS Antenna Removal

SUBTASK 34-58-02-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-58-02-020-001

- (2) Remove the sealant from around the edge of the GPS antenna [1] (TASK 51-22-00-160-801).

SUBTASK 34-58-02-020-003

- (3) Do these steps to remove the GPS antenna [1]:
- (a) Remove the seals that are above the screw holes on the antenna.
 - (b) Remove the screws [2] from the GPS antenna [1].



CAUTION

BE CAREFUL WHEN YOU USE THE SEALANT REMOVAL TOOL TO BREAK THE SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRPLANE SKIN, AND OTHER COMPONENTS

- (c) Use the sealant removal tool, COM-2481, to break the seal all around the GPS antenna [1].



CAUTION

MOVE THE ANTENNA THE MINIMUM DISTANCE NECESSARY TO LET YOU TO DISCONNECT THE COAXIAL CONNECTOR. DAMAGE TO THE COAXIAL CABLE CAN OCCUR IF YOU PULL THE CABLE WITH TOO MUCH FORCE.

- (d) Carefully pull the GPS antenna [1] until you can get access to the coaxial connector [3].
- (e) Disconnect the coaxial connector [3].
- NOTE: Make sure that the coaxial cable and connector [3] do not fall into the airplane fuselage.
- (f) Remove the GPS antenna [1] and the O-Ring [4].
- (g) Put protective covers on the coaxial connector [3].

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

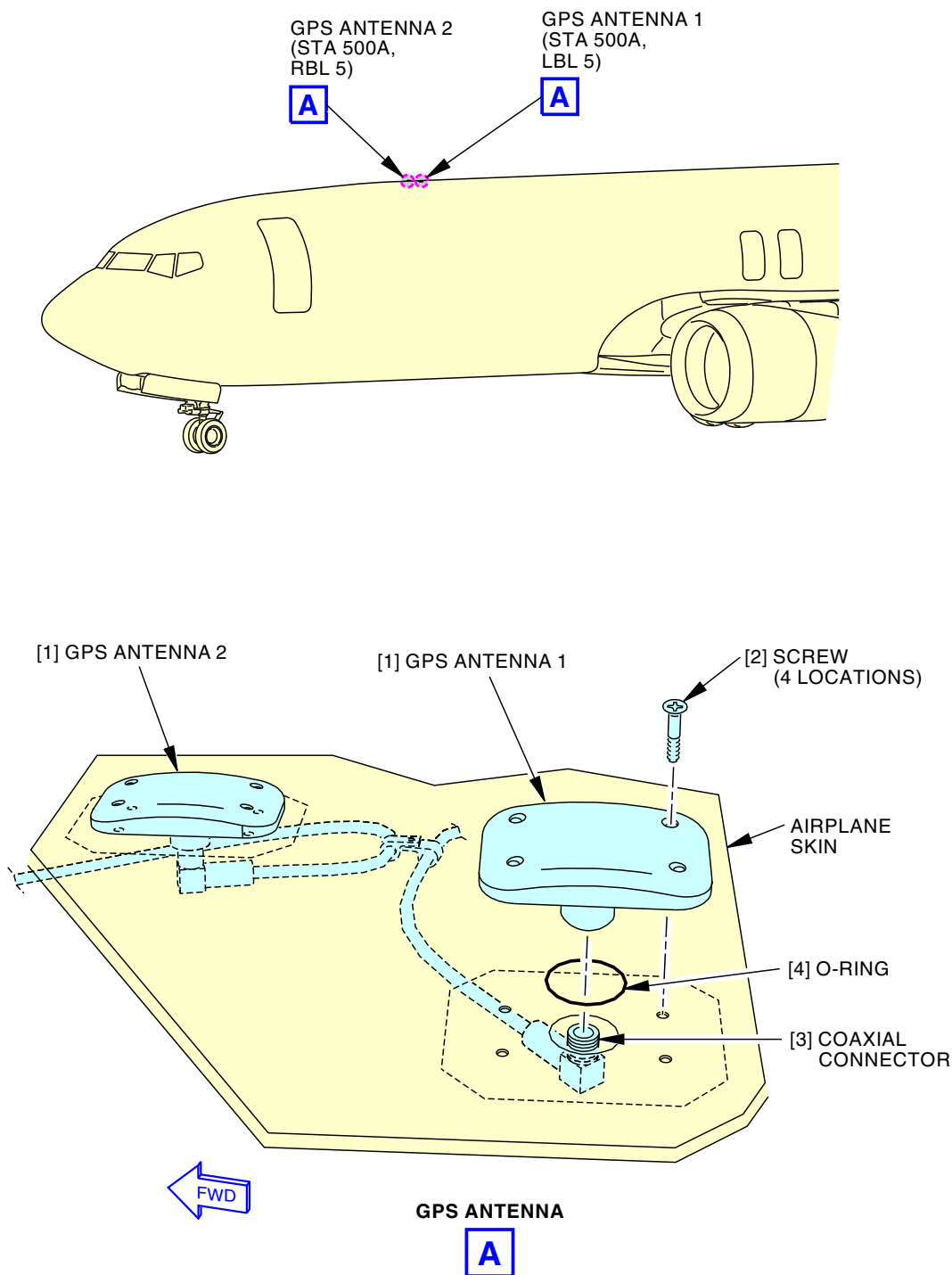
34-58-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 402
Jan 15/2023

737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2414903 S00061536499_V2

GPS Antenna Installation
Figure 401/34-58-02-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-58-02

Page 403
 Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-58-02-400-801

3. GPS Antenna Installation

(Figure 401)

A. References

Reference	Title
51-21-21-100-801	Clean the Surface to be Painted (P/B 701)
51-21-31-350-801	Removal and Control of Corrosion for Aluminum and Aluminum Alloys (P/B 701)
51-21-41-370-802	Apply Bonderite M-CR 600, Bonderite M-CR 1200, Bonderite M-CR 600RTU, or Bonderite M-CR 1200S Solution (P/B 701)
51-22-00-390-806	Fillet Seal Application (P/B 201)
SL 20-043	Deferred Application of Aero-Sealant in Antenna Installations

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt.", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
STD-810	Spatula - Fillet Smoothing, Hardwood or Plastic

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
B00062	Solvent - Acetone (99.5% Grade)	ASTM D 329 (Supersedes O-A-51)
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
C50033	Coating - Chemical Conversion - Bonderite M-CR 1200S Aero (Formerly Alodine 1200)	BAC5719 Class A, C or D, MIL-DTL-81706 Type I Class 1A or 3
D00254	Compound - Silicone	SAE AS8660 (NATO S-736) (Supersedes MIL-S-8660)
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	GPS antenna	34-58-02-04-030	SIA ALL

EFFECTIVITY
SIA ALL

34-58-02

D633AM101-SIA

Page 404
May 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
231	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Left
232	Forward Passenger Compartment - Forward Entry Door to STA 663.75 - Right

F. GPS Antenna Installation

SUBTASK 34-58-02-110-001

- (1) Clean the airplane skin.
 - (a) Remove the remaining sealant from the airplane skin in the antenna area (TASK 51-21-21-100-801).



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (b) Clean the airplane skin in the antenna area with solvent, B00062, or solvent, B00184.

SUBTASK 34-58-02-840-001

- (2) If there is corrosion on the airplane skin below the antenna, do the steps that follow to prepare the airplane skin:
 - (a) To remove the corrosion, do this task: Removal and Control of Corrosion for Aluminum and Aluminum Alloys, TASK 51-21-31-350-801.



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (b) Clean the airplane skin in the area of the corrosion with solvent, B00062, or solvent, B00184.
 - (c) Apply a layer of Bonderite M-CR 1200S Aero coating, C50033, to the airplane skin in the area where the GPS antenna [1] touches the skin (TASK 51-21-41-370-802).

SUBTASK 34-58-02-390-001

- (3) Prepare the GPS antenna [1].
 - (a) Apply a layer of grease, D00633, on the O-Ring [4] and the O-ring groove.
 - (b) Install the O-Ring [4] on the GPS antenna [1].
 - 1) Make sure that the O-Ring [4] is not damaged and is installed correctly in the O-ring groove.
 - (c) Apply a layer of sealant, A00247, in the holes in the airplane skin for the screws [2] and the coaxial cable.
 - (d) Apply a layer of sealant, A00247, on the threads and shank of the screws [2].

SUBTASK 34-58-02-420-001

- (4) Install the GPS antenna [1].
 - (a) Remove the protective covers from the coaxial connector [3].

EFFECTIVITY
SIA ALL

34-58-02

D633AM101-SIA

Page 405
Jan 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- (b) Examine the coaxial connector [3] for dirt and damage.
- (c) Connect the coaxial connector [3].
- (d) Tighten the connector [3] to 10 ± 2 in-lb (1 ± 0 ft-lb).
- (e) Apply a large quantity of silicone compound, D00254, to the outside coaxial connector, and at the exterior connector/antenna interface.
- (f) Put the GPS antenna [1] into its position on the airplane.
- (g) Install three of the screws [2] that hold the GPS antenna [1].



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (h) Remove the unwanted sealant, A00247, from around the antenna with solvent, B00062, or solvent, B00184.

SUBTASK 34-58-02-760-001

- (5) Do a check of the resistance between the GPS antenna [1] and the airplane skin.
 - (a) Use the intrinsically safe approved bonding meter, COM-1550, to measure the resistance between the base of the antenna and the airplane skin.

NOTE: You can get access to the base of the antenna through the hole for the last screw.

- 1) Make sure that the measured resistance is 0.001 ohm (1 milliohm) or less.

SUBTASK 34-58-02-420-002

- (6) Install the last screw [2] that holds the GPS antenna [1].

SUBTASK 34-58-02-420-003



WARNING

DO NOT GET SOLVENTS IN YOUR MOUTH, EYES, OR SKIN. DO NOT BREATHE FUMES FROM SOLVENTS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING. SOLVENTS ARE HAZARDOUS MATERIALS AND MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT.

- (7) Remove the unwanted sealant, A00247, from around the head of each screw [2] with solvent, B00062, or solvent, B00184.

G. Aerodynamic Fillet Seal Installation

SUBTASK 34-58-02-390-002

- (1) Apply a bead of sealant, A02315, around the antenna where it touches the airplane skin (TASK 51-22-00-390-806).

NOTE: Operators can defer the application of the aero-sealant in the antenna installation to avoid a flight delay (SL 20-043).

- (a) Apply the sealant all around the edge of the antenna.
 - 1) Make sure that no air bubbles are in the sealant.
- (b) Use a sufficient quantity of the sealant to permit you to make the surface smooth.
- (c) Let the sealant dry for the correct cure time.

EFFECTIVITY
SIA ALL

34-58-02

D633AM101-SIA

Page 406
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-58-02-390-003

- (2) Make the bead into an aerodynamic fillet seal approximately 0.70 in. (17.78 mm) wide with the hardwood or plastic fillet smoothing spatula, STD-810 (TASK 51-22-00-390-806).

SUBTASK 34-58-02-140-001

- (3) Remove all the unwanted sealant from the area around the antenna.

SUBTASK 34-58-02-390-004

- (4) Fill the screw holes with sealant, A02315.
 - (a) Make the sealant smooth in relation to the antenna surface.

H. GPS Antenna Installation Test

SUBTASK 34-58-02-860-006

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C01479	RADIO NAVIGATION MMR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

SUBTASK 34-58-02-710-001

- (2) Do these steps to see the GPS position on the CDU:
 - (a) Push the INIT REF key on the CDU.
 - (b) Push the line select key (LSK) that is adjacent to <INDEX.
 - (c) Push the LSK that is adjacent to <POS.
 - (d) Push the NEXT PAGE key on the CDU.
 - (e) Make sure that the steps that follow occur:
 - 1) The GPS L position on the CDU agrees with the known airplane position.
NOTE: As much as 5 minutes of time can be necessary for the GPS positions to show on the CDU.
 - 2) The GPS R position on the CDU agrees with the known airplane position.
NOTE: As much as 5 minutes of time can be necessary for the GPS positions to show on the CDU.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-58-02

Page 407
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

FLIGHT MANAGEMENT COMPUTER SYSTEM - MAINTENANCE PRACTICES

1. General

- A. This procedure contains these tasks:
- (1) FMC Deactivation
 - (2) FMC Activation
 - (3) An installation of the FMC software with the onboard network system (ONS).
 - (4) A crossload of the FMC software.
 - (5) An FMC software configuration check.
 - (6) An installation of the CDU software with the onboard network system (ONS).
 - (7) A CDU software configuration check.
 - (8) An FMC diagnostic data transfer.
 - (9) The Procedure to enter Zero Fuel Weight.
- B. For general information for software installation times, do this task: On-Airplane Software Installation, TASK 20-15-11-470-801.
- C. The airplane must be on the ground before you can do these tasks.

TASK 34-61-00-040-801

2. FMC Deactivation

A. General

- (1) This task includes the steps to remove electrical power from the Flight Management Computer System (FMCS).

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right

C. FMC Deactivation

SUBTASK 34-61-00-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2

D. FMC Tryout

NOTE: This tryout is to make sure that the FMCS is in a zero energy state.

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 201
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-61-00-860-002

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2

SUBTASK 34-61-00-860-003

- (2) Make sure that the screen on both Control Display Units (CDUs) is blank.

————— **END OF TASK** —————

TASK 34-61-00-440-801

3. FMC Activation

A. General

- (1) This task includes the steps to supply electrical power to the Flight Management Computer System (FMCS).

B. Location Zones

<u>Zone</u>	<u>Area</u>
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50
211	Flight Compartment - Left
212	Flight Compartment - Right

C. FMC Activation

SUBTASK 34-61-00-860-004

- (1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-00-470-801

4. FMC Software Installation with Onboard Network System

A. General

- (1) This task gives the instructions to install software onto the Flight Management Computer (FMC) with the Onboard Network System (ONS).
 - (a) The FMC usually contains these pieces of software:
 - 1) Operational Software (OPS)
 - 2) Navigation Database (NDB)
 - 3) Software Options Database (OPC)
 - 4) Model/Engine Database (MEDB).
 - (b) The FMC can contain these pieces of the optional software:
 - 1) Performance Defaults Database (Perf Defaults)
 - 2) ACARS Datalink Configuration Database (Adaptable Datalink Database (ADDB))
 - 3) Flight Plan Database
 - 4) Loadable Default Data Base (LDDB).
- (2) If you install a full set of the FMC software, you must install the OPS first. The OPS installation erases all other software installed in the FMC. Also, manually selected performance factors go back to their default values.
 - (a) You must install the NDB and MEDB again after the installation of the OPS. If you do not install the customized OPC, the OPS will use default values.
 - (b) You must install the optional databases again if your airline uses them. If you do not install the customized Perf Defaults or ADDB, the OPS will use default values.
- (3) The MEDB installation erases the initially installed LDDB. Also, the manually selected performance factors go back to their default values.
 - (a) You must install the customized LDDB, given directly from the FMC supplier, again if your airline uses them.
- (4) The installation of the OPC, ADDB, LDDB, or NDB does not erase other initially installed software.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. FMC Software Installation

SUBTASK 34-61-00-840-001

- (1) Do these steps to prepare for software installation:
 - (a) Make sure that the system select switch, on the P61 data loader control panel, is set to the NORMAL position.
 - (b) Set the FMC Source Select switch, on the P5 overhead panel, to the NORMAL position.
 - (c) If loading the Left FMC, do these steps:

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 203
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Set the upper switch, on the P61 data loader control panel, to the L CAPT UPR position.
 - 2) Set the system select switch, on the P61 data loader control panel, to the FMC position.
 - 3) Set the FMC Source Select switch, on the P5 overhead panel, to the BOTH ON L position.
- (d) If loading the Right FMC, do these steps:
- 1) Set the upper switch, on the P61 data loader control panel, to the R F/O LWR position.
 - 2) Set the system select switch, on the P61 data loader control panel, to the FMC position.
 - 3) Set the FMC Source Select switch, on the P5 overhead panel, to the BOTH ON R position.
- (e) If either CDU (L, R) displays the main CDU menu, select the FMC key on that CDU.

SUBTASK 34-61-00-470-001

- (2) Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.
- (a) If you install the OPS, do this procedure again for the customized NDB, OPC, and MEDB after the OPS installation.
 - (b) If your airline use the optional software, do this procedure again for the optional software after the OPS installation.
 - (c) If necessary, enter the manually selected performance factors on the CDU again.

SUBTASK 34-61-00-470-019

- (3) Wait until the FMC prompt is displayed on the CDU main menu.

NOTE: If a large database is loaded, the wait can be 15 minutes or longer.

SUBTASK 34-61-00-470-002

- (4) Do this task: FMC Software Crossload, TASK 34-61-00-470-802.

SUBTASK 34-61-00-840-002

- (5) Set the system select switch, on the P61 data loader control panel, to the NORMAL position.

SUBTASK 34-61-00-840-014

- (6) Set the FMC Source Select switch, on the P5 overhead panel, to the NORMAL position.

SUBTASK 34-61-00-840-015

- (7) Set the upper switch, on the P61 data loader control panel, to the C SINGLE SYS position.

SUBTASK 34-61-00-750-018

- (8) Do this task to check the software was loaded: FMC Software Configuration Check, TASK 34-61-00-750-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 204
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-00-470-802

5. FMC Software Crossload

A. General

- (1) This task gives the instructions to crossload software from one Flight Management Computer (FMC) to the other FMC. A crossload will install the software into the second FMC significantly faster than the data loader.

NOTE: After an OP PROGRAM or DATABASE crossload is carried out, all previously entered performance factors, such as F-F Factor, must be manually entered into the FMC.

- (a) The FMC usually contains these pieces of software:
- 1) Operational Software (OPS)
 - 2) Navigation Database (NDB)
 - 3) Software Options Database (OPC)
 - 4) Model/Engine Database (MEDB).
- (b) The FMC can contain these pieces of the optional software:
- 1) Performance Defaults Database (Perf Defaults)
 - 2) ACARS Datalink Configuration Database (Adaptable Datalink Database (ADDB))
 - 3) Flight Plan Database
 - 4) Loadable Default Data Base (LDDB).
- (2) If you install a full set of the FMC software, you must install the OPS first. The OPS installation erases all other software installed in the FMC. Also, manually selected performance factors go back to their default values.
- (a) You must install the NDB and MEDB again after the installation of the OPS. If you do not install the customized OPC, the OPS will use default values.
- (b) You must install the optional databases again if your airline uses them. If you do not install the customized Perf Defaults or ADDB, the OPS will use default values.
- (3) The MEDB installation erases the initially installed LDDB. Also, the manually selected performance factors go back to their default values.
- (a) You must install the customized LDDB, given directly from the FMC supplier, again if your airline uses them.
- (4) The installation of the OPC, ADDB, LDDB, or NDB does not erase other initially installed software.
- (5) After a dual FMC activation, the OP PROGRAM CROSSLOAD page or the DATABASE CROSSLOAD page is shown automatically on the CDU if the two FMCs have different software installed.
- (6) When the CROSSLOAD> prompt is shown on the Flight Management Computer System (FMCS) BITE page, you can push the LSK to manually select the OP PROGRAM CROSSLOAD page or the DATABASE CROSSLOAD page.

B. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 34-61-00-470-005

- (1) Do these steps to crossload the software:

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-61-00

Page 205
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the CDU shows the OP PROGRAM CROSSLOAD page or the DATABASE CROSSLOAD page.

NOTE: The CROSSLOAD> prompt is not shown if an FMC is failed, or only one FMC is powered, or only one FMC is installed in a dual FMC configuration.

NOTE: The OP PROGRAM CROSSLOAD page lets you install the operational program and databases into the other FMC. The DATABASE CROSSLOAD page lets you install only the databases into the other FMC.

- 1) If the OP PROGRAM INVALID page shows, you must set the FMC source select switch to the position shown on the CDU.
- (b) Push the CDU LSK next to COPY FROM LEFT(RIGHT) to select the FMC you want to copy from.
- 1) If you see the message SET FMC SOURCE SELECT TO BOTH-ON-L(R), make sure that the switch is in the correct position.
- (c) Push the EXEC key on the CDU.
- 1) If you install the OPS, do this procedure again for the customized NDB, OPC, and MEDB after the OPS installation.
 - 2) If your airline uses the optional databases, do this procedure again for the optional software after the OPS installation.
 - 3) If necessary, enter the manually selected performance factors on the CDU again.
- (d) The CROSSLOAD IN PROGRESS message shows during the FMC crossload.
- (e) The CROSSLOAD COMPLETE message shows for a successful crossload, do one of the following steps:

- 1) If the CROSSLOAD FAIL message is shown, do these steps:

NOTE: The CROSSLOAD FAIL message is shown if the FMC crossload fails. Possible causes for a failure are loss of communication between the FMC's, loss of power to one FMC, or failure of the FMC receiving the data. A second attempt may be made to do the crossload.

- a) Select the INDEX prompt to return to the FMC BITE page.
 - b) Select the CROSSLOAD> prompt to repeat the crossload operation.
- 2) If the NEXT MISMATCH prompt is shown with the CROSSLOAD COMPLETE message, select the NEXT MISMATCH prompt to continue.

NOTE: A database crossload failure causes the NEXT MISMATCH prompt to show with the CROSSLOAD COMPLETE message. The prompt can also show for mismatches in the analog input discretes or the performance factors.

SUBTASK 34-61-00-750-001

- (2) Do this task: FMC Software Configuration Check, TASK 34-61-00-750-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 206
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-00-750-801

6. FMC Software Configuration Check

A. General

- (1) This procedure tells you how to check the Flight Management Computer (FMC) software installation.
- (2) You must know the correct part number for the FMC software. For the FMC to be an approved installation, software with the correct part number must be installed.

B. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 34-61-00-750-002

- (1) Do these steps to do a software configuration check of the FMC:

SIA ALL; AIRPLANES WITH DUAL FMC

- (a) Set the Flight Management Computer System (FMCS) transfer switch to the applicable position:
 - 1) To check the software for the left FMC, set the FMCS transfer switch to the NORMAL position.
 - 2) To check the software for the right FMC, set the FMCS transfer switch to the BOTH ON R position.

SIA ALL

- (b) Make sure that the Control Display Unit (CDU) display shows the IDENT 1/2 page.
- (c) Do these steps if the IDENT 1/2 page is not shown:
 - 1) Push the INIT/REF key on both CDUs.
 - 2) Push the LSK next to IDENT on both CDUs.
- (d) Do a check of the FMC operational program and navigational database software:
 - 1) Make sure that the correct part number for the operational program shows below OP PROGRAM on the CDU.
 - 2) Make sure that the correct part number for the navigation database shows below NAV DATA on the CDU.
 - 3) Make sure that the correct date range shows below ACTIVE on the CDU.
- (e) Push the NEXT PAGE button on the CDU.
- (f) Make sure that the CDU display shows the IDENT 2/2 page.
- (g) Do a check of this FMC software:
 - 1) Make sure that the correct part number for the software options database shows below SW OPTIONS on the CDU.

NOTE: You must install the software options database for the FMC to operate. If you did not install a software options database the CDU will show DEFAULT050 below SW OPTIONS.

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-61-00

Page 207
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

- 2) Make sure that the correct part number for the model/engine database shows below MODEL/ENGINE DATA on the CDU.

NOTE: You must install the model/engine database for the FMC to operate. If INVALID shows on the CDU, the model/engine database was not installed. If PROGRAM PIN NOT IN MODEL/ENGINE DATABASE shows, the model/engine database installed does not match the airframe/engine program pin configuration.

- 3) Make sure that the correct part number is shown for any installed optional databases (Perf Defaults, Datalink, Flight plan or Loadable Default).

SUBTASK 34-61-00-470-006

- (2) If a part number is not correct, do this task: FMC Software Installation with Onboard Network System, TASK 34-61-00-470-801

————— END OF TASK —————

TASK 34-61-00-470-805

7. CDU Software Installation with Onboard Network System

A. General

- (1) This procedure tells you how to install software onto the CDU with the onboard network system (ONS).
 - (a) The CDU contains these pieces of software:
 - 1) operational software (OPS)
 - 2) software options database (OPC)
- (2) The CDU OPS must be loaded first.

B. References

Reference	Title
46-13-00-470-801	LRU Software Parts Installation (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Procedure

SUBTASK 34-61-00-840-009

- (1) Do these steps to prepare for software installation:
 - (a) Make sure the system select switch on the data loader control panel (P61) is set to NORMAL.
 - (b) Set the FMC Source Select switch on the P5 panel to NORMAL.
 - (c) If loading the Left CDU, do these steps at the data loader control panel (P61):
 - 1) Set the upper switch to L CAPT UPR.
 - 2) Set the system select switch to CDU.
 - (d) If loading the Right CDU, do these steps at the data loader control panel (P61):
 - 1) Set the upper switch to R F/O LWR.
 - 2) Set the system select switch to CDU.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 208
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-61-00-470-015

- (2) Do this task: LRU Software Parts Installation, TASK 46-13-00-470-801.

NOTE: Load OPS SW first, then load OPC SW.

SUBTASK 34-61-00-470-016

- (3) Repeat procedure if loading the remaining CDU.

SUBTASK 34-61-00-840-010

- (4) Set the system select switch on the data loader control panel (P61) to NORMAL.

SUBTASK 34-61-00-750-020

- (5) Do this task to verify the software was loaded: CDU Software Configuration Check (AIRPLANES WITH LIQUID CRYSTAL DISPLAY CDU), TASK 34-61-00-750-802.

————— **END OF TASK** —————

TASK 34-61-00-750-802

8. CDU Software Configuration Check (AIRPLANES WITH LIQUID CRYSTAL DISPLAY CDU)

A. General

- (1) This procedure tells you how to check the CDU software installation.

B. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 34-61-00-750-003

- (1) Do these steps to do a software configuration check of the CDU:
- (a) Set the FMC source select switch to the NORMAL position.
 - (b) Select INIT REF on the CDU.
 - (c) Push the Line Select Key (LSK) on the applicable CDU as follows:
 - 1) INDEX
 - 2) MAINT
 - 3) FMCS
 - 4) FMC LEFT(RIGHT)
 - 5) LCD CDU
 - 6) CONFIG.
 - (d) Make sure that the CDU shows the CDU CONFIGURATION page.
 - (e) Make sure that the correct part number is shown below SOFTWARE P/N.

SUBTASK 34-61-00-470-012

- (2) If a part number is not correct, do this task: CDU Software Installation with Onboard Network System, TASK 34-61-00-470-805

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 209
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-00-810-802

9. FMC Diagnostic Data Transfer via Network Filer Server

A. General

- (1) This procedure tells you how to transfer diagnostic data to a Portable Maintenance Device (PMD) after a Flight Management Computer (FMC) failure occurs.
- (2) A PMD and an installed Network File Server (NFS) are necessary for this procedure.

B. References

Reference	Title
46-13-00-480-801	Maintenance Laptop Connection (P/B 201)
46-13-02-970-803	LRU Reports (P/B 201)

C. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

D. Procedure

SUBTASK 34-61-00-480-001

- (1) Do this task: Maintenance Laptop Connection, TASK 46-13-00-480-801.

SUBTASK 34-61-00-700-002

- (2) Do these steps to check the FMC INFLIGHT FAULTS:
 - (a) On the Control Display Unit (CDU), push the INIT/REF key.
 - (b) On the INIT/REF INDEX 1/1 page, push the Line Select Key (LSK) next to MAINT.
 - (c) On the MAINT BITE INDEX 1/1 page, push the LSK next to FMCS.
 - (d) On the FMCS BITE 1/1 page, push the LSK next to FMC LEFT (RIGHT).
 - (e) On the LEFT (RIGHT) FMC BITE 1/2 page, push the LSK next to INFLT FAULT.

SUBTASK 34-61-00-750-030

- (3) Make sure the CDU shows INFLT FAULT page.

SUBTASK 34-61-00-750-031

- (4) Make sure a FMC failure occurred.

SUBTASK 34-61-00-750-024

- (5) Do these steps at the data loader control panel (P61):
 - (a) Select Capt Left System or F/O Right System on Data Load Select switch.
 - (b) Select FMC on the Data Load System Select switch.

SUBTASK 34-61-00-750-026

- (6) Do this task: LRU Reports, TASK 46-13-02-970-803

SUBTASK 34-61-00-750-027

- (7) On the CDU, push the LSK next to PRESS HERE TO EXIT.

NOTE: If you push the LSK next to PRESS HERE TO EXIT, the FMC will do a cold start power-up.

SUBTASK 34-61-00-750-028

- (8) To download data from the second FMC, set the Data Load Select switch and the Source Select switch to the other FMC, and do the Diagnostic Data Transfer via Network File Server task again.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 210
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Data Transfer Failure Indications

SUBTASK 34-61-00-750-029

- (1) If the diagnostic data transfer is not successful, the FMC DATALOADER page shows this message:

DEVICE NOT PRESENT

DISK WAS REMOVED OR

INTERFACE HAS FAILED

- (a) Push the LSK next to PRESS HERE TO RETRY.

————— END OF TASK —————

TASK 34-61-00-860-801

10. Setting Zero Fuel Weight

A. General

- (1) This procedure tells you how to enter a zero fuel weight (ZFW) using the Control Display Unit (CDU).

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 34-61-00-869-001

- (1) Do these steps to set a zero fuel weight:
- (a) Make sure the IDENT page shows on the CDU.
 - (b) Push the INDEX page next to LSK 6L.
 - (c) Push the PERF from the INIT/REF page.
 - (d) Enter a zero fuel weight on the scratch pad.
 - (e) Push the LSK 3L.

SUBTASK 34-61-00-869-002

- (2) Make sure that the CDU displays the zero fuel weight.

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 211
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

FLIGHT MANAGEMENT COMPUTER SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

- (1) An operational test of the flight management computer system (FMCS).
- (2) A system test of the FMCS.
- (3) An adjustment of the FMCS performance factors.

TASK 34-61-00-710-801

2. Flight Management Computer System - Operational Test

A. General

- (1) The operational test does a quick check of the Flight Management Computer System (FMCS). The test makes sure that the system is serviceable.
- (2) You can do the tests in sequence or one at a time. The Prepare For Test steps must be done before each test or sequence of tests.
- (3) The two Control Display Unit (CDU)s (Left or Captain's CDU and Right or First Officer's CDU) are necessary for this procedure. This procedure uses two CDUs to make sure that the operational test is conducted from the two corresponding Flight Management Computer (FMC)s (Left and Right FMC).
- (4) An FMC software option causes the CDU to normally show information in color. Default operation is white text on a black background.
- (5) The FMC transfer switch allows the operation of the Left FMC to be displayed on the two CDUs (or CDUs if installed) when the transfer switch is in the NORMAL position. If the transfer switch is in the BOTH ON L or BOTH ON R position, the two CDUs (or CDUs if installed) will display simultaneously the Left or Right Flight Management Computer output and software database configuration, respectively.

B. References

Reference	Title
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)
34-61-00-470-801	FMC Software Installation with Onboard Network System (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare For Test

SUBTASK 34-61-00-860-005

- (1) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, TASK 34-21-00-820-801 or Air Data Inertial Reference System - Automatic Alignment from the IRS MSU, TASK 34-21-00-820-803.

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 501
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

E. Flight Management Computer System Operational Test

SUBTASK 34-61-00-710-001

(1) Do this test of the operational program and databases:

SIA ALL; AIRPLANES WITH DUAL FMC

- (a) Set the FMCS transfer switch to the applicable position:
 - 1) To check the operational program and databases for the left FMC, set the FMCS transfer switch to the NORMAL position.
 - 2) To check the operational program and databases for the right FMC, set the FMCS transfer switch to the BOTH ON R position.

SIA ALL

- (b) Push the INIT REF key on the two CDUs.
- (c) Push the Line Select Key (LSK) next to INDEX on the two CDUs.
- (d) Push the LSK next to IDENT on the two CDUs.
- (e) Make sure that the two CDUs show the IDENT page.
- (f) Make sure that the part number of the OP PROGRAM is correct on the two CDUs.

NOTE: The applicable airline department has the correct part number for the OP PROGRAM.

- 1) If the OP PROGRAM is incorrect, then, do this task: FMC Software Installation with Onboard Network System, TASK 34-61-00-470-801.

- (g) Make sure that the part number of the NAV DATA is correct on the CDU.

NOTE: The applicable airline department has the correct part number for the NAV DATA.

- 1) If the NAV DATA is incorrect, then, do this task: FMC Software Installation with Onboard Network System, TASK 34-61-00-470-801.

- (h) Make sure that the date of the NAV DATA is correct on the two CDUs.

NOTE: You can find the dates for the active navigation database below ACTIVE.

- (i) Push the NEXT PAGE button on the two CDUs.
- (j) Make sure that the part number of the PERF DEFAULTS is correct on the two CDUs.

NOTE: AIRPLANES WITH OP PROGRAM U13;

DEFAULT08P will be shown if a customized PERF DEFAULTS diskette is not installed.

- 1) If the PERF DEFAULTS is incorrect, then, do this task: FMC Software Installation with Onboard Network System, TASK 34-61-00-470-801.

- (k) Make sure that the part number of the SW OPTIONS is correct on the two CDUs.

NOTE: DEFAULTXXX will be shown if a customized software options database diskette is not installed.

- 1) If the SW OPTIONS part number is incorrect, then, do this task: FMC Software Installation with Onboard Network System, TASK 34-61-00-470-801.

- (l) Make sure that the part number of the MODEL/ENGINE DATA is correct on the two CDUs.

NOTE: The applicable airline department has the correct part number for the MODEL/ENGINE DATA.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 502
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) If the MODEL/ENGINE DATA part number is incorrect, then, do this task: FMC Software Installation with Onboard Network System, TASK 34-61-00-470-801.

SUBTASK 34-61-00-710-002

- (2) Do this test of the FMC SENSOR STATUS:
- (a) Set the FMC transfer switch to the NORMAL position.
 - (b) Push the INIT REF key on the two CDUs.
 - (c) Push the LSK next to INDEX on the two CDUs.
 - (d) Push the LSK next to MAINT on the two CDUs.
 - (e) Push the LSK next to FMCS on the two CDUs.
 - (f) Push the LSK next to FMC LEFT on the Captain's CDU.
 - (g) Push the LSK next to FMC RIGHT on the First Officer's CDU.
 - (h) Push the LSK next to SENSORS on the two CDUs.
 - (i) Wait 5 seconds, then make sure that the FMC SENSOR STATUS 1/2, page of the two CDUs agree with the data shown below (Table 501):

Table 501/34-61-00-993-801

LRU	LEFT	RIGHT
VOR	OK	OK
DME	OK	OK
ADIRS	OK	OK
MMR	OK	OK
DFCS	OK	----
FQIS	OK	----

- (j) Make sure that none of the status fields under the LEFT or RIGHT column headings on the FMC SENSOR STATUS 1/2 page of the two CDUs are highlighted.

NOTE: If a SENSOR STATUS is highlighted, a mismatch exists between the FMCs, and must be corrected before further testing can be accomplished. If CDU is in Color mode then the text will be yellow for a mismatch.

- 1) If both CDUs show FAIL for the same system, the reverse video or yellow color will not show.
- (k) Open this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1

- 1) After 5 seconds, make sure that the DME LEFT STATUS field has not changed.

- (l) Close this circuit breaker:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C01378	RADIO NAVIGATION NAV CONT PNL 1

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 503
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (m) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

- 1) After 5 seconds, make sure that the DME RIGHT STATUS field has not changed.

- (n) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	15	C01379	RADIO NAVIGATION NAV CONT PNL 2

SIA 001-005

- (o) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	12	C01375	RADIO NAVIGATION VOR 2

- 1) Make sure that the VOR LEFT STATUS field on the two CDUs show OK.
2) Make sure that the VOR RIGHT STATUS field on the two CDUs show FAIL.

- (p) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	12	C01375	RADIO NAVIGATION VOR 2

SIA ALL

- (q) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

- 1) Make sure that the DME LEFT STATUS field on the two CDUs show OK.
2) Make sure that the DME RIGHT STATUS field on the two CDUs show FAIL.

- (r) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00192	RADIO NAVIGATION DME 2

- (s) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	13	C01480	RADIO NAVIGATION MMR 2

- 1) Make sure that the MMR LEFT STATUS field on the two CDUs show OK.
2) Make sure that the MMR RIGHT STATUS field on the two CDUs show FAIL.

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 504
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

SIA 006-999

- 3) Make sure that the VOR RIGHT STATUS field on the two CDUs show FAIL.

SIA ALL

- (t) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	13	C01480	RADIO NAVIGATION MMR 2

- (u) Push the NEXT PAGE button on the two CDUs.
(v) Wait 5 seconds, then make sure that the FMCS SENSOR STATUS 2/2, page of the two CDUs agree with the data shown below for the MDS DPC and FMC (Table 502):

NOTE: The other LRUs listed on this page are tested in the system test (TASK 34-61-00-730-801).

Table 502/34-61-00-993-811

LRU	LEFT	RIGHT
MDS DPC	OK	OK
FMC	OK	OK
A/T	OK	----
ACARS	OK	----
NFS	OK	----

- (w) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	11	C04025	DISPLAY DPC 2 PRI

- 1) Make sure that the MDS DPC LEFT STATUS field on the two CDUs show OK.
2) Make sure that the MDS DPC RIGHT STATUS field on the two CDUs show FAIL.
(x) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C04024	DISPLAY DPC 2 HOLDUP
D	11	C04025	DISPLAY DPC 2 PRI

- (y) Push the LSK next to INDEX on the two CDUs.
(z) Push the NEXT PAGE button on the two CDUs.
(aa) Push the LSK next to H/W CONFIG on the two CDUs.
1) Make sure that 30 MHZ shows under the PROC SPEED field on the two CDUs.
2) Make sure that VALID shows under the RS422 field on the two CDUs.
3) Make sure that ACTIVE shows under the ETHERNET field on the two CDUs.
(ab) Push the LSK next to INDEX on the two CDUs.

SUBTASK 34-61-00-710-003

- (3) Do this test of the FMC FIXED OUTPUTS:

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 505
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Set the PFD/MFD switches, on the P1 Captain's and P3 First Officer's panels, to the NORM position.
- (b) Set the CTR rotary knobs , on the P7 Captain's and First Officer's EFIS control panel, to the MAP position.
- (c) Push the MFD/INFO button on the P9 Multi Function Panel (MFP).
- (d) Set the SELECTOR (SEL) rotary knobs, on the P9 MFP, to the C position.
- (e) Turn the Captain's SELECTOR (SEL) rotary dial, on the P9 MFP, until N1 AUTO is highlighted by a magenta box.
- (f) Push SEL button on the end of the Captain's SELECTOR (SEL) rotary dial on the P9 MFP.
- (g) Set the FMC transfer switch, on the P5 forward overhead panel, to the NORMAL position.
- (h) Push the INIT REF key on the two CDUs.
 - (i) Push the LSK next to INDEX on the two CDUs.
 - (j) Push the LSK next to MAINT on the two CDUs.
 - (k) Push the LSK next to FMCS on the two CDUs.
 - (l) Push the LSK next to FMC LEFT on the Captain's CDU.
- (m) Push the LSK next to FMC RIGHT on the First Officer's CDU.
- (n) Push the LSK next to FIXED OUTPUTS on the Captain's CDU.
- (o) Make sure that the Captain's and First Officer's Inboard Display Units show "FMC INTERFACE OK".
- (p) Push NEXT PAGE on the Captain's CDU.
- (q) Make sure that the MSG, FAIL and OFST annunciators on the two CDUs come on.
- (r) Make sure that the Captain's and First Officer's FMC P/RST annunciators, are on.
- (s) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	16	C01262	FMCS CMPTR 2

- (t) Make sure that the Thrust Mode Annunciator on the Display Unit on the Engine Format above the N1 Display cycles through these thrust modes: CRZ, CLB, ---, CON, TO, G/A.
- (u) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	16	C01262	FMCS CMPTR 2

- 1) Wait 90 seconds before continuing.

- (v) Set the FMC transfer switch, on the P5 forward overhead panel, to the BOTH ON R position.

NOTE: If the MENU page is displayed on either CDU, push the LSK next to FMC on that CDU.



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (w) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1

- (x) Return to the INDEX on the First Officer's CDU.
- (y) Push the LSK next to FMC RIGHT on the First Officer's CDU.
- (z) Push the LSK next to FIXED OUTPUTS on the First Officer's CDU.
- (aa) Make sure that the Thrust Mode Annunciator on the Display Unit on the Engine Format above the N1 Display cycles through these thrust modes: CRZ, CLB, ---, CON, TO, G/A.
- (ab) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1

- 1) Wait 60 seconds before continuing.
- (ac) Push the LSK next to INDEX on the First Officer's CDU.
- (ad) Set the FMC transfer switch, on the P5 forward overhead panel, to the NORMAL position.
- NOTE: If the MENU page is displayed on either CDU, push the LSK next to FMC on that CDU.

SUBTASK 34-61-00-860-006

- (4) Shut down the Air Data Inertial Reference System if no longer necessary.

———— **END OF TASK** ————

TASK 34-61-00-730-801

3. Flight Management Computer System - System Test

A. General

- (1) The system test does a complete check of the Flight Management Computer System (FMCS). The test makes sure that the system operates correctly.
- (2) You can do the tests in sequence or one at a time. All tests must be done to make sure that the system operates correctly. The Prepare For Test steps must be done before each test or sequence of tests.

B. References

<u>Reference</u>	<u>Title</u>
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
34-21-00-820-803	Air Data Inertial Reference System - Automatic Alignment from the IRS MSU (P/B 201)

C. Location Zones

<u>Zone</u>	<u>Area</u>
211	Flight Compartment - Left

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 507
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

(Continued)

Zone	Area
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
192CL	ECS Access Door
192CR	ECS Access Door

E. Prepare For Test

SUBTASK 34-61-00-800-001

- (1) Do this task: Flight Management Computer System - Operational Test, TASK 34-61-00-710-801.

F. Procedure

SUBTASK 34-61-00-710-004

- (1) Do this test of the annunciators:

- (a) Set the FMC transfer switch to NORMAL position.
- (b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1

- (c) Make sure that the FMC P/RST annunciator on the Captain's and First Officer's Autoflight Status Annunciator (ASA) comes ON.
- (d) Set the Master Dim and Test (LIGHTS) switch to the TEST position.
 - 1) Make sure that the MSG, CALL, FAIL, OFST, and EXEC annunciators on the two CDUs come ON.
- (e) Set the Master Dim and Test (LIGHTS) switch to the BRT position.
 - 1) Make sure that the FMC P/RST annunciator on the two ASAs is bright.
- (f) If necessary, push the FMC P/RST annunciator on the Captain's or First Officer's ASA.
 - 1) Make sure that the FMC P/RST annunciator on the two ASAs goes OFF.
- (g) Set the Master Dim and Test (LIGHTS) switch back to the DIM position.
- (h) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1

NOTE: This circuit breaker must be closed for at least 60 seconds before you continue.

- (i) If the MENU page is shown on either CDU, push LSK 1L (FMC) on that CDU.
- (j) If necessary, push the CLR button on the CDU to remove all messages from the CDU scratchpad.
- (k) Do these steps to do a test of the annunciators for the R FMC:
 - 1) Set the FMC transfer switch to the NORMAL position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 508
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	16	C01262	FMCS CMPTR 2

- 3) Make sure that the FMC P/RST annunciator on the Captain's and First Officer's autoflight status annunciator (ASA) comes ON.
- 4) Set the Master Dim and Test (LIGHTS) switch to the TEST position.
- a) Make sure that the MSG, CALL, FAIL, OFST, and EXEC annunciators on the two CDUs come ON.
- 5) Set the Master Dim and Test (LIGHTS) switch to the BRT position.
- a) Make sure that the FMC P/RST annunciator on the two ASAs is bright.
- 6) Push the FMC P/RST annunciator on the Captain's or First Officer's ASA.
- a) Make sure that the FMC P/RST annunciator on the two ASAs goes OFF.
- 7) Set the Master Dim and Test (LIGHTS) switch back to the DIM position.
- 8) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	16	C01262	FMCS CMPTR 2

NOTE: This circuit breaker must be closed for at least 15 seconds before you continue.

- 9) If the MENU page is shown on either CDU, push LSK 1L (FMC) on that CDU.
- 10) If necessary, push the CLR button on the CDU to remove all messages from the CDU scratchpad.

SUBTASK 34-61-00-730-001

- (2) Do this test of the PACK VALVES:

- (a) Set the FMC transfer switch to the NORMAL position.
- (b) Push this sequence of keys on the two CDUs to show the FMCS ANALOG DISCRETE 1/4 page:
- 1) Push the INIT REF mode key on the two CDUs.
 - 2) Push line select key (LSK) next to INDEX on the two CDUs.
 - 3) Push LSK 6R, next to MAINT on the two CDUs.
 - 4) Push the LSK next to FMCS on the two CDUs.
 - 5) Push the LSK next to L FMC on the Captain's CDU.
 - 6) Push the LSK next to R FMC on the First Officer's CDU.
 - 7) Push LSK 4L, next to DISCRETES on the two CDUs.
- (c) Make sure that the L PACK and R PACK switches, located on the P5 Overhead Panel, are in the OFF position.
- (d) Make sure that the BLEED 1 and BLEED 2 switches are in the ON position.
- (e) Make sure that the L PACK and R PACK valve Discrete Status shows OFF.

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 509
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (f) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C00555	AIR CONDITIONING MISC LOADS LEFT

- (g) To get access to the left pack valve, open this access panel:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door

- (h) Remove connector D41500 from the LEFT PACK FLOW CONTROL AND SHUT-OFF VALVE, V184 at the FRONT SPAR, STA536L.
- (i) Make sure that the two CDUs agree with the data shown below (Table 503):

Table 503/34-61-00-993-802

Test Step	Switch Name	Switch Position	CDU Discrete Name	Discrete Status Left	Discrete Status Right
1	L PACK	AUTO	ECS PACK	ON	OFF
2	L PACK	HIGH	ECS PACK	ON	OFF

- (j) To get access to the right pack valve, open this access panel:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door

- (k) Remove connector D41600 from the RIGHT PACK FLOW CONTROL AND SHUT-OFF VALVE, V185 at the FRONT SPAR, STA536R.
- (l) Make sure that the two CDUs agree with the data shown below (Table 504):

Table 504/34-61-00-993-803

Test Step	Switch Name	Switch Position	CDU Discrete Name	Discrete Status Left	Discrete Status Right
1	R PACK	AUTO	ECS PACK	ON	ON
2	R PACK	HIGH	ECS PACK	ON	ON
3	R PACK	OFF	ECS PACK	ON	ON
4	L PACK	OFF	ECS PACK	ON	ON

- (m) Connect connector D41500 to the LEFT PACK FLOW CONTROL AND SHUT-OFF VALVE, V184 at the FRONT SPAR, STA536L.
- (n) Connect connector D41600 to the RIGHT PACK FLOW CONTROL AND SHUT-OFF VALVE, V185 at the FRONT SPAR, STA536R.
- (o) Make sure that the L PACK and R PACK valve Discrete Status show OFF.
- (p) Close this access panel:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 192CL | ECS Access Door |
- (q) Close this access panel:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 192CR | ECS Access Door |
- (r) Make sure that the two CDUs agree with the data shown below (Table 505):

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 510
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 505/34-61-00-993-804

Test Step	Switch Name	Switch Position	CDU Discrete Name	Discrete Status Left	Discrete Status Right
1	L PACK	OFF	ECS PACK H/L	HI	HI
2	L PACK	AUTO	ECS PACK H/L	LO	HI
3	L PACK	HIGH	ECS PACK H/L	HI	HI
4	R PACK	OFF	ECS PACK H/L	HI	HI
5	R PACK	AUTO	ECS PACK H/L	HI	LO
6	R PACK	HIGH	ECS PACK H/L	HI	HI

- (s) Put the L PACK and R PACK switches to the OFF position.

SUBTASK 34-61-00-730-002

- (3) Do this test of the ISOLATION VALVE:

- (a) Set the FMC transfer switch to the NORMAL position.
- (b) Make sure that the FMCS ANALOG DISCRETES 1/4 page is shown on the two CDUs.
 - 1) If the FMCS ANALOG DISCRETES 1/4 page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key on the two CDUs.
 - b) Push line select key (LSK) 6L, next to INDEX on the two CDUs.
 - c) Push LSK 6R, next to MAINT on the two CDUs.
 - d) Push the LSK next to FMCS on the two CDUs.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
 - g) Push LSK 4L, next to DISCRETES on the two CDUs.
- (c) Put the L PACK and R PACK switches on the FWD Overhead Panel (P5) to the HIGH position.
- (d) Put the ISOLATION VALVE switch on the FWD Overhead Panel (P5) to the CLOSE position.
 - 1) Make sure that the ISOL VALVE discrete on the two CDUs show CL.
- (e) Put the ISOLATION VALVE switch to the OPEN position.
 - 1) Make sure that the ISOL VALVE discrete on the two CDUs show OP.
- (f) Put the L PACK and R PACK switches on the FWD Overhead Panel (P5) to the OFF position.

SUBTASK 34-61-00-730-003

- (4) Do this test of the ANTI-ICE AND AIR/GROUND DISCRETES:

- (a) Set the FMC transfer switch to the NORMAL position.
- (b) Make sure that that the FMCS ANALOG DISCRETES 1/4 page is shown on the two CDUs.
 - 1) If the FMCS ANALOG DISCRETES 1/4 page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key on the two CDUs.
 - b) Push line select key (LSK) 6L, next to INDEX on the two CDUs.

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 511
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- c) Push LSK 6R, next to MAINT on the two CDUs.
 - d) Push the LSK next to FMCS on the two CDUs.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
 - g) Push LSK 4L, next to DISCRETES on the two CDUs.
- (c) Put the L PACK and R PACK switches on the FWD Overhead Panel (P5) to the HIGH position.
- (d) Make sure that the ENG-1 ANTI-ICE and ENG-2 ANTI-ICE switches are set to the OFF position.
- (e) Make sure that the WING ANTI-ICE switch is set to the OFF position.
- (f) Put the ENG-1 ANTI-ICE switch to the ON position.
- 1) Make sure that the LEFT COWL A/ICE discrete on the two CDUs changes to ON.
 - 2) Make sure that the RIGHT COWL A/ICE discrete on the two CDUs shows OFF.
- (g) Put the ENG-1 ANTI-ICE switch to the OFF position.
- 1) Make sure that the LEFT and RIGHT COWL A/ICE discrete on the two CDUs changes to OFF.
- (h) Put the ENG-2 ANTI-ICE switch to the ON position.
- 1) Make sure that the RIGHT COWL A/ICE discrete on the two CDUs changes to ON.
 - 2) Make sure that the LEFT COWL A/ICE discrete on the two CDUs shows OFF.
- (i) Put the ENG-2 ANTI-ICE switch to the OFF position.
- 1) Make sure that the LEFT and RIGHT COWL A/ICE discrete on the two CDUs changes to OFF.



MAKE SURE THAT THE GROUND LOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE GROUND LOCKS, THE LANDING GEAR CAN RETRACT. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (j) Make sure that the ground locks are installed in the nose and main landing gear (TASK 32-00-01-480-801).



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF CONTROL SURFACES AND LANDING GEAR DOOR AREAS BEFORE YOU SIMULATE THE AIRPLANE TO THE AIR MODE. THE SIMULATED AIR MODE CAN CAUSE MOVEMENT TO CONTROL SURFACES, LANDING GEAR, AND LANDING GEAR DOORS. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (k) Make sure that the Air Data Inertial Reference Unit (ADIRU)s are aligned (TASK 34-21-00-820-802 or TASK 34-21-00-820-801 or TASK 34-21-00-820-803).
- (l) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

Page 512
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Make sure that the OLEO SWITCH discrete on the two CDUs changes from GND to AIR.
- (m) Put the WING ANTI-ICE switch to the ON position.
 - 1) Make sure that the WING A/ICE discrete on the two CDUs changes to ON.
- (n) Put the WING ANTI-ICE switch to the OFF position.
 - 1) Make sure that the WING A/ICE discrete on the two CDUs changes to OFF.
- (o) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN

- 1) Make sure that the OLEO SWITCH discrete on the two CDUs changes from AIR to GND.
- (p) Put the L PACK and R PACK switches to the OFF position.
- (q) Remove the ground locks in the nose and main landing gear, if no longer required:
Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801
- (r) Push the NEXT PAGE button on the two CDUs.

SUBTASK 34-61-00-730-005

- (5) Do this test of the ENGINE BLEED DISCRETES:
 - (a) Set the FMC transfer switch to the NORMAL position.
 - (b) Make sure that that the FMCS ANALOG DISCRETES 3/4 page is shown on the two CDUs.
 - 1) If the FMCS ANALOG DISCRETES 3/4 page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key on the two CDUs.
 - b) Push line select key (LSK) 6L, next to INDEX on the two CDUs.
 - c) Push LSK 6R, next to MAINT on the two CDUs.
 - d) Push the LSK next to FMCS on the two CDUs.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
 - g) Push LSK 4L, next to DISCRETES on the two CDUs.
 - 2) Push the NEXT PAGE button two times on the two CDUs.
 - (c) Make sure that the BLEED 1 and BLEED 2 switches, located on the P5 FWD Overhead Panel, are in the OFF position.
 - (d) Make sure that the two CDUs agree with the data below (Table 506):

Table 506/34-61-00-993-805

Test Step	Switch Name	Switch Position	CDU Discrete Name	Discrete Status NO. 1	Discrete Status NO. 2
1	BLEED 1	ON	ENGINE BLEED	ON	OFF
2	BLEED 1	OFF	ENGINE BLEED	OFF	OFF

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 513
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 506/34-61-00-993-805 (Continued)

Test Step	Switch Name	Switch Position	CDU Discrete Name	Discrete Status NO. 1	Discrete Status NO. 2
3	BLEED 2	ON	ENGINE BLEED	OFF	ON
4	BLEED 2	OFF	ENGINE BLEED	OFF	OFF

SUBTASK 34-61-00-730-006

(6) Do this test of the PROGRAM PINS:

- (a) Push the PREV PAGE button on the two CDUs.
- (b) Set the FMC transfer switch to the NORMAL position.
- (c) Make sure that the FMCS ANALOG DISCRETES 2/4 page is shown on the two CDUs.
 - 1) If the FMCS ANALOG DISCRETES 2/4 page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key on the two CDUs.
 - b) Push line select key (LSK) 6L, next to INDEX on the two CDUs.
 - c) Push LSK 6R, next to MAINT on the two CDUs.
 - d) Push the LSK next to FMCS on the two CDUs.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
 - g) Push LSK 4L, next to DISCRETES on the two CDUs.
 - h) Push the NEXT PAGE button on the two CDUs.
- (d) Make sure that the two CDUs agree with the data below (Table 507):

Table 507/34-61-00-993-806

Discrete	State
JAA FLT RULES	DISABLE
KILOGRAM OPTION	ENABLE
MAG/TRUE	MAG
SRCE/DEST IDENT	*[1] *[2]
ASPIRATED TAT	DISABLE
°C/°F DEFAULT	°C
PERF CODE	1

*[1] The SOURCE/DEST IDENT shows LEFT on the left CDU.

*[2] The SOURCE/DEST IDENT shows RIGHT on the right CDU.

- (e) Push the NEXT PAGE button on the two CDUs.
- (f) Set the FMC transfer switch to the NORMAL position.
- (g) Make sure that the MODEL/ENG discrete on the two CDUs shows VALID.
- (h) Push the NEXT PAGE button on the two CDUs.
 - 1) Make sure that the FMCS ANALOG DISCRETES 4/4 page is shown on the two CDUs.
- (i) Make sure that the two CDUs agree with the data below (Table 508):

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 514
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 508/34-61-00-993-807

Discrete	State
VOR INHIBIT	DISABLE
FLIGHT NUMBER	ENABLE
TOGA RW POS UPD	ENABLE
TAKEOFF PROFILE	ENABLE
TAKEOFF SPEEDS	DISABLE
NAVAID SUPPRESS	ENABLE
SEL CRS INHIBIT	DISABLE
ACARS INSTALLED	OFF

- (j) Press LSK 6L, next to INDEX.

SUBTASK 34-61-00-730-007

- (7) Do this test of the MODEL/ENGINE CONFIGURATION:
- (a) Set the FMC transfer switch to the NORMAL position.
 - (b) Make sure that the FMCS BITE page is shown on the two CDUs.
 - 1) If the FMCS BITE page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key.
 - b) Push line select key (LSK) 6L, next to INDEX.
 - c) Push LSK 6R, next to MAINT.
 - d) Push the LSK next to FMCS.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
 - (c) Push LSK 1R, next to MODEL/ENG.
 - 1) Make sure that the FMCS MODEL/ENG CFG 1/1 page is shown on the two CDUs.
 - (d) Make sure that the two CDUs agree with the data below (Table 509):

Table 509/34-61-00-993-808

Parameter	Value
MODEL	737-8
BRAKE OPT	CAT_B
ENGINE	LEAP-1B
ENGINE OPT	---
ENG RATINGS FULL BUMP	27K NONE

- (e) Push LSK 6L, next to INDEX.

SUBTASK 34-61-00-730-008

- (8) Do this test of the SOFTWARE OPTIONS:
- (a) Set the FMC transfer switch to the NORMAL position.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 515
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (b) Make sure that the FMCS BITE page is shown on the two CDUs.
 - 1) If the FMCS BITE page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key.
 - b) Push line select key (LSK) 6L, next to INDEX.
 - c) Push LSK 6R, next to MAINT.
 - d) Push the LSK next to FMCS.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
- (c) Push LSK 2R, next to SW OPTIONS.
 - 1) Make sure that the FMCS SW OPTIONS page is shown on the two CDUs.

SIA 001-005

- (d) Make sure that the two CDUs agree with the data below (Table 510):

Table 510/34-61-00-993-809

Parameter	Value
DEFAULT RNP	
OCEANIC	12.0
ENROUTE	2.00
TERMINAL	1.00
APPROACH	0.30

SIA ALL

- (e) Push LSK 6L, next to INDEX.

SUBTASK 34-61-00-730-009

- (9) Do this test of the PERFORMANCE FACTORS:
 - (a) Set the FMC transfer switch to the NORMAL position.
 - (b) Make sure that the FMCS BITE page is shown on the two CDUs.
 - 1) If the FMCS BITE page is not shown, push this sequence of keys on the CDU:
 - a) Push the INIT REF mode key.
 - b) Push line select key (LSK) 6L, next to INDEX.
 - c) Push LSK 6R, next to MAINT.
 - d) Push the LSK next to FMCS.
 - e) Push the LSK next to L FMC on the Captain's CDU.
 - f) Push the LSK next to R FMC on the First Officer's CDU.
 - (c) Push LSK 3R, next to PERF FACTR.
 - 1) Make sure that the FMCS PERF FACTORS 1/1 page is shown on the two CDUs.
 - (d) Make sure that the two CDUs agree with the data below (Table 511):

NOTE: The values shown in the table below are factory defaults. If a different value is desired, do this task: FMCS Performance Factors - Adjustment (TASK 34-61-00-750-803).

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-61-00

Page 516
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

Table 511/34-61-00-993-810

Parameter	Value
DRAG FACTOR	+0.0
F-F FACTOR	+0.0
MNVR MARGIN	1.30
MIN CRZ TIME	1
MIN R/C	
CLB	300
CRZ	100
ENG OUT	100

————— END OF TASK —————

TASK 34-61-00-750-803

4. FMCS Performance Factors - Adjustment

A. General

- (1) This task gives steps to adjust these Performance Factors:
 - (a) DRAG FACTOR
 - (b) F-F FACTOR
 - (c) Maneuver Margin (MNVR MARGIN)
 - (d) Minimum Cruise Time (MIN CRZ TIME)
 - (e) Minimum Rate of Climb (climb) Margin (MIN R/C CLB)
 - (f) Minimum Rate of Climb (cruise) Margin (MIN R/C CRZ)
 - (g) Minimum Rate of Climb (engine out) Margin (MIN R/C ENG OUT)
- (2) You can do these adjustments in sequence or one at a time. The Prepare For Adjustment steps must be done before each adjustment or sequence of adjustments.

NOTE: If a factor has had its entry capability disabled by a loadable performance defaults database, you cannot change its value using this procedure. You must load a new performance defaults database with the new factor value.
- (3) The Control Display Unit (CDU) is necessary for this procedure. You can use CDU No. 1 or CDU No. 2 to do this procedure.

NOTE: The term 'CDU' is generic, and is used interchangeably with 'CDU' except for specific references.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare For Adjustment

SUBTASK 34-61-00-860-007

- (1) Set the FMC transfer switch to the NORMAL position.

SUBTASK 34-61-00-940-001

- (2) Push this sequence of keys on the CDU:

EFFECTIVITY
SIA ALL

D633AM101-SIA

34-61-00

Page 517
Sep 15/2023



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Push the INIT REF key.
- (b) Push line select key (LSK) 6L, adjacent to INDEX.
- (c) Push LSK 6R, adjacent to MAINT.
- (d) Push the LSK adjacent to FMCS.
- (e) Push the LSK adjacent to L FMC on the Captain's CDU.
- (f) Push the LSK adjacent to R FMC on the First Officer's CDU.
- (g) Push LSK 3R, adjacent to PERF FACTR.
- (h) Push this sequence of keys on the CDU: "A", "R", "M".
- (i) Push LSK 6R, adjacent to ---.

D. Procedure

SUBTASK 34-61-00-820-001

- (1) Do this adjustment of the DRAG FACTOR:
 - (a) Push the sequence of keys for the new DRAG FACTOR value.
NOTE: Values between -9.9 and +9.9 (%) are permitted. The default value is +0.0 (%).
 - (b) Push LSK 2L.
 - 1) Make sure the new value of DRAG FACTOR is shown adjacent to LSK 2L.

SUBTASK 34-61-00-820-002

- (2) Do this adjustment of the F-F FACTOR:
 - (a) Push the sequence of keys for the new F-F FACTOR value.
NOTE: Values between -9.9 and +9.9 (%) are permitted. The default value is +0.0 (%).
 - (b) Push LSK 3L.
 - 1) Make sure the new value of F-F FACTOR is shown adjacent to LSK 3L.

SUBTASK 34-61-00-820-003

- (3) Do this adjustment of the MNVR MARGIN:
 - (a) Push the sequence of keys for the new MNVR MARGIN value.
NOTE: Values between 1.20 and 1.60 are permitted. The default value is 1.30.
 - (b) Push LSK 4L.
 - 1) Make sure the new value of MNVR MARGIN is shown adjacent to LSK 4L.

SUBTASK 34-61-00-820-004

- (4) Do this adjustment of the MIN CRZ TIME:
 - (a) Push the sequence of keys for the new MIN CRZ TIME value.
NOTE: Values between 1 and 20 (minutes) are permitted. The default value is 1.
 - (b) Push LSK 5L.
 - 1) Make sure the new value of MIN CRZ TIME is shown adjacent to LSK 5L.

SUBTASK 34-61-00-820-005

- (5) Do this adjustment of the MIN R/C CLB:
 - (a) Push the sequence of keys for the new MIN R/C CLB value.
NOTE: Values between 0 and 999 are permitted. The default value is 300.
 - (b) Push LSK 3R.
 - 1) Make sure the new value of MIN R/C CLB is shown adjacent to LSK 3R.

EFFECTIVITY
SIA ALL

34-61-00

D633AM101-SIA

Page 518
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-61-00-820-006

- (6) Do this adjustment of the MIN R/C CRZ:
- (a) Push the sequence of keys for the new MIN R/C CRZ value.
NOTE: Values between 0 and 999 are permitted. The default value is 100.
 - (b) Push LSK 4R.
 - 1) Make sure the new value of MIN R/C CRZ is shown adjacent to LSK 4R.

SUBTASK 34-61-00-820-007

- (7) Do this adjustment of the MIN R/C ENG OUT:
- (a) Push the sequence of keys for the new MIN R/C ENG OUT value.
NOTE: Values between 0 and 500 are permitted. The default value is 100.
 - (b) Push LSK 5R.
 - 1) Make sure the new value of MIN R/C ENG OUT is shown adjacent to LSK 5R.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-00

Page 519
Sep 15/2023



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

FMCS CONTROL DISPLAY UNIT - MAINTENANCE PRACTICES

1. **General**

- A. This procedure contains four tasks. The first task is the cleaning of the FMCS Control Display Units (CDU) cooling vent and surfaces. The second task is the cleaning of the CDU display. The third task is the removal of the CDU keyboard. The fourth task is the installation of the CDU keyboard.
- B. You can find the CDU(s) in the flight compartment on the forward electronic panel, P9. You can replace the keyboard when one of the keys does not operate.
- C. An FMC software option causes the CDU to normally show information in color. Default operation is white text on a black background.

TASK 34-61-01-100-801

2. **FMCS CDU Cooling Vent and Surfaces Cleaning**

(Figure 201)

A. **References**

Reference	Title
34-61-01-000-802	FMCS Control Display Unit (CDU) Removal (P/B 401)
34-61-01-400-802	FMCS Control Display Unit (CDU) Installation (P/B 401)

B. **Tools/Equipment**

Reference	Description
STD-1134	Vacuum Source, 24 Inches Hg Minimum
STD-1136	Facepiece (Mask) - Particulate Filtering, Disposable (NIOSH N95 approved)
STD-1137	Glasses - Safety

C. **Consumable Materials**

Reference	Description	Specification
B00673	Detergent - Liquid - Liqui-Nox	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

D. **Location Zones**

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

E. **FMCS Control Display Unit (CDU) Cooling Vent and Surfaces Cleaning**

SUBTASK 34-61-01-020-001

- (1) Do this task: FMCS Control Display Unit (CDU) Removal, TASK 34-61-01-000-802.

SUBTASK 34-61-01-100-001

- (2) Clean the cooling vents:
- (a) Use a vacuum source (24 inches Hg minimum), STD-1134, to remove blockage from the LCD backlight cooling vents, top and bottom central chamber cooling vent, and the rear chamber vent.
 - (b) Inspect for any loose debris and dust buildup that remains in the vent openings.
 - (c) Do these steps if any debris and dust remain in the control display unit vent openings.

NOTE: The control display unit cover panels do not need to be removed for these steps.

EFFECTIVITY
SIA ALL

34-61-01

D633AM101-SIA

Page 201
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- 1) Use safety glasses, STD-1137, and a filtering facepiece, STD-1136, if it is necessary.
- 2) Blow pressurized air controlled at 65 ± 25 psi (448 ± 173 kPa) through and around these display unit locations:
 - a) Rear chamber vent opening.
 - b) Top and bottom central chamber cooling vent.
 - <1> For the top central chamber cooling vent, the air should be blown toward the display unit keyboard.
 - c) LCD backlight cooling vents.
- 3) Use the vacuum source (24 inches Hg minimum), STD-1134, to remove dirt and dust debris.
- 4) Repeat these cleaning steps if it necessary since debris may dislodge and move into other areas of the control display unit.
- (d) Examine the LCD backlight cooling vents to make sure that they are clear of debris.

NOTE: If significant quantities of debris still remain, this could result in a cooling airflow blockage and reduced control display unit reliability.

It is recommended that the control display unit be returned to the supplier for cleaning if significant debris remains after this procedure is completed.

SUBTASK 34-61-01-160-001

- (3) Do these steps to clean the control display unit (CDU) surfaces:
 - (a) Remove dust and dirt with a vacuum source (24 inches Hg minimum), STD-1134.
 - (b) Clean the surfaces with a paper towel or soft cloth moist with Liqui-Nox detergent, B00673, and water.
 - (c) Remove the remaining detergent with a cotton wiper, G00034, moist with water.

SUBTASK 34-61-01-420-001

- (4) Do this task: FMCS Control Display Unit (CDU) Installation, TASK 34-61-01-400-802.

———— **END OF TASK** ————

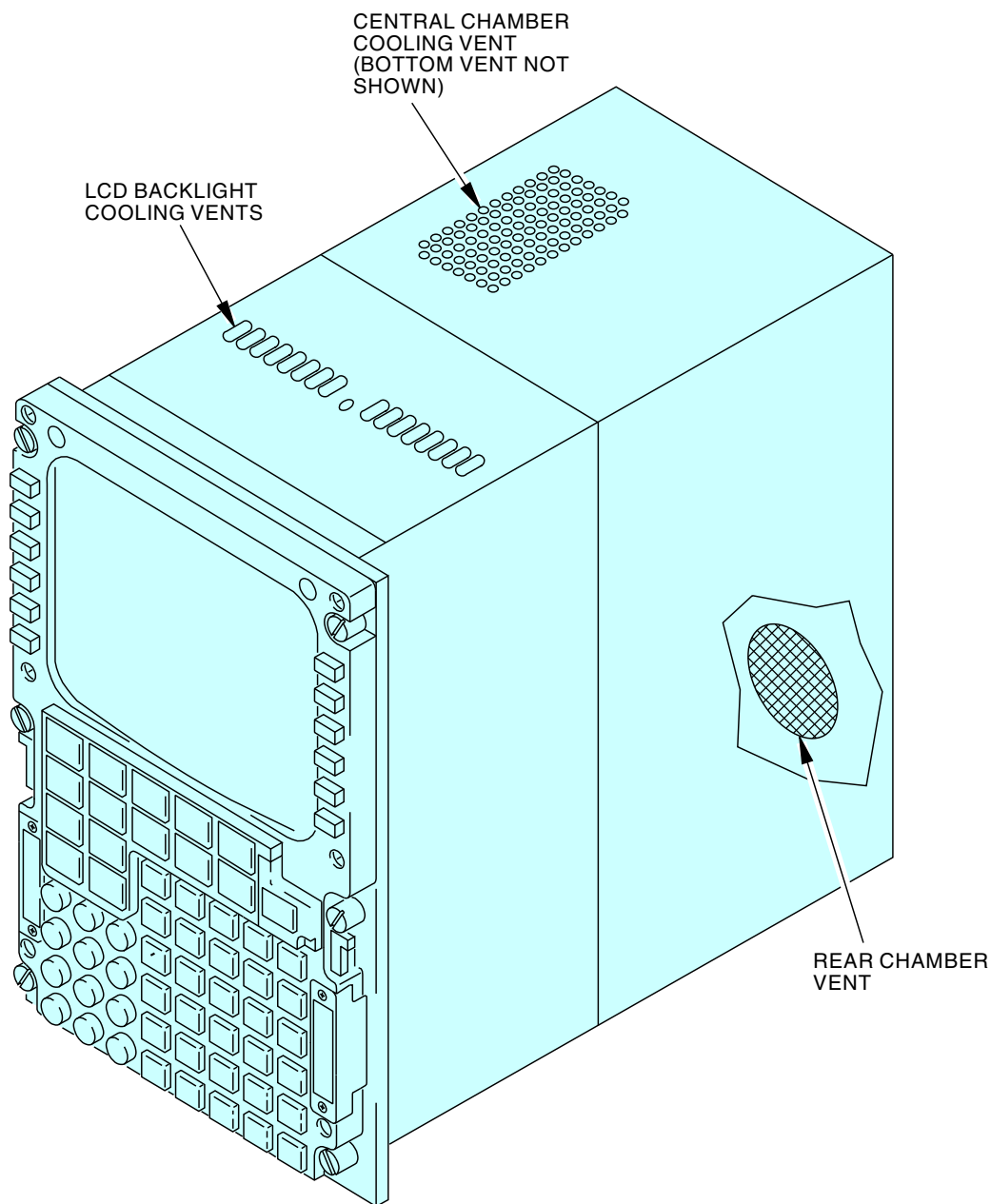
EFFECTIVITY
SIA ALL

34-61-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 202
Sep 15/2021



CONTROL DISPLAY UNIT

2414906 S00061536522_V1

Control Display Unit - Cooling Vent Locations
Figure 201/34-61-01-990-801

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 203
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-01-100-802

3. FMCS CDU Display Cleaning

A. Consumable Materials

Reference	Description	Specification
B50012	Cleaner - Optical Cleaning, Calotherm Solution - Supaspray	
B50013	Cloth - Calocoat Hi-Tech Lenscloth - Supacloth	
G02457	Cleaner - Wet/Dry Anti-Static Sachet - ALGLAS Visial ALG/CR 215	

B. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 34-61-01-100-002

- (1) Clean the display surface of the FMCS control display unit (CDU) with the Supaspray cleaner, B50012, and the Supacloth cloth, B50013, or the ALGLAS Visial cleaner, G02457:
 - (a) Apply 2 or 3 sprays of the Supaspray to the Supacloth, or open the wet sachet.
 - (b) Use the moist cloth or the wet sachet to clean the display surface in a straight line from top to bottom.
 - (c) Gradually move from one side of the display surface to the other side while you clean from top to bottom.
 - (d) When the display surface is clean, use a clean, dry area of the cloth or the dry sachet in a straight line from top to bottom to dry the display surface.

————— END OF TASK —————

TASK 34-61-01-000-801

4. FMCS CDU Keyboard Removal

(Figure 202)

A. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

B. Procedure

SUBTASK 34-61-01-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	16	C01262	FMCS CMPTR 2

SUBTASK 34-61-01-000-001

- (2) Do these steps to remove the Control Display Unit (CDU) keyboard:

EFFECTIVITY
SIA ALL

34-61-01

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 204
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Loosen the six captive screws that hold the keyboard to the front chassis.
- (b) Carefully move the keyboard away from the front chassis to get access to the cable assembly.
- (c) Remove and retain the display gasket.
- (d) Unlock and disconnect cable assembly connector W1P1 from connector DS1J1.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

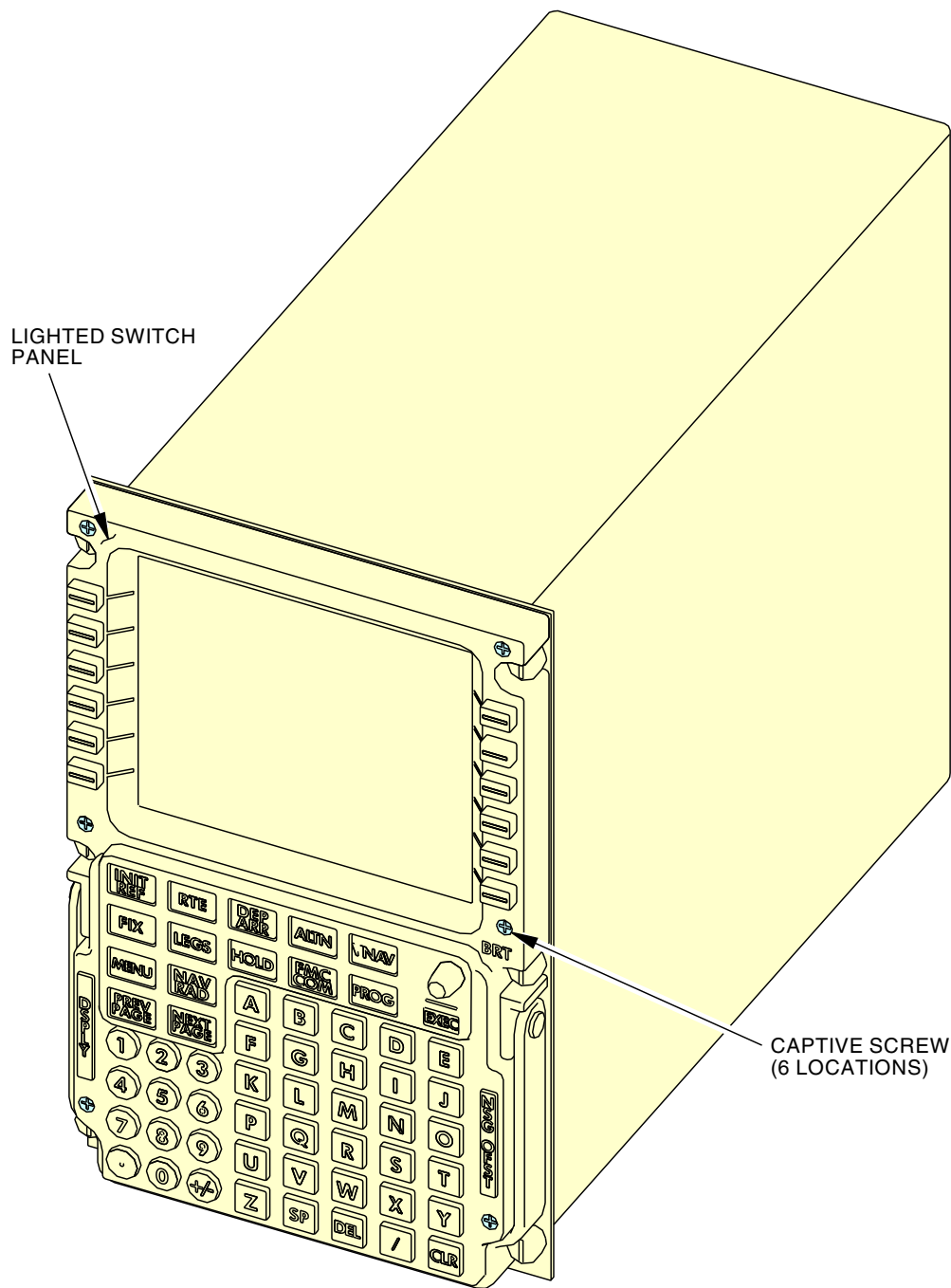
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 205
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



CONTROL DISPLAY UNIT

2414907 S00061536525_V1

Control Display Unit - Lighted Switch Panel Replacement
Figure 202/34-61-01-990-802

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 206
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-01-400-801

5. **FMCS CDU Keyboard Installation**

(Figure 202)

A. References

Reference	Title
34-61-01-710-801	CDU Lamp Test (P/B 301)

B. Location Zones

Zone	Area
210	Subzone - Control Compartment - Body Station 178.00 to Body Station 259.50

C. Procedure

SUBTASK 34-61-01-400-001

- (1) Do these steps to install the Control Display Unit (CDU) keyboard:

NOTE: Make sure that you install a keyboard with the same part number as the one you removed.

- (a) Make sure that the display gasket is correctly aligned.
- (b) Connect and lock cable assembly connector W1P1 to connector DS1J1.
- (c) Position keyboard on the front chassis.
- (d) Tighten the six captive screws that hold the keyboard to the front chassis.

SUBTASK 34-61-01-860-002

- (2) Close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	16	C01262	FMCS CMPTR 2

D. CDU Keyboard Test

SUBTASK 34-61-01-860-003

- (1) Prepare for the CDU keyboard test:

- (a) Make sure that the BAT switch on the Pilot's Forward Overhead Panel is in the ON position.
- (b) Set the STANDBY POWER switch on the Pilot's Forward Overhead Panel to the AUTO position.

SUBTASK 34-61-01-740-001

- (2) Do these steps to do the CDU keyboard test:

- (a) Push the INIT REF key on the CDU.
- (b) Push the line select key (LSK) adjacent to INDEX.
- (c) Push the LSK adjacent to MAINT.
- (d) Push the LSK adjacent to FMCS.
- (e) Push the LSK adjacent to FMC LEFT (RIGHT).
- (f) Push the LSK adjacent to CDU TEST or LCD CDU.

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 207
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (g) Push the LSK adjacent to KEY TEST.
- (h) Make sure that the CDU display shows the legends of all the keys the same as on the CDU keyboard.
 - 1) Push each key on the CDU.
 - 2) Make sure that the same key legend on the CDU display comes on.
- (i) Push the LSK adjacent to INDEX to go back to the CDU MAINT BITE INDEX page.
- (j) Push the LSK adjacent to EXIT to go back to the FMCS BITE page.
- (k) Do this task: CDU Lamp Test, TASK 34-61-01-710-801.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 208
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
FMCS CONTROL DISPLAY UNIT - SERVICING

1. General

- A. This procedure contains the task for the CDU lamp test.
- B. You can find the FMCS control display units (CDUs) in the flight compartment on the forward electronic panel, P9. The CDU has four annunciators (DSPY or CALL, FAIL, MSG, and OFST) and a lighted EXEC key. Two of the annunciators are on the left of the CDU (DSPY or CALL/FAIL), and two are on the right of the CDU(MSG/OFST).
- C. The CDU has lamps for the annunciators and the EXEC key that are not line replaceable. This requires replacement of the keyboard or the CDU.

TASK 34-61-01-710-801

2. CDU Lamp Test

A. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

B. Procedure

SUBTASK 34-61-01-710-001

- (1) Do the CDU Lamp Test:
 - (a) Hold the LIGHTS switch in the TEST position. You can find the LIGHTS switch on the pilots' center instrument panel (P2).
 - (b) Make sure that the CALL, FAIL, MSG, OFST, and EXEC lights on the two CDUs come on.
 - (c) Set the LIGHTS switch to the BRT or DIM position if it is necessary.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 301
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

FMCS CONTROL DISPLAY UNIT - REMOVAL/INSTALLATION

1. General

- A. This procedure contains two tasks:
- (1) The first task is for the removal of the flight management computer system (FMCS) control display unit (CDU)
 - (2) The second task is for the installation of the FMCS CDU.
- B. You can find the FMCS CDU No. 1 on the left corner of the Pilots' Forward Electronics Panel, P9. You can find the CDU No. 2 on the right corner of the Pilots' Forward Electronics Panel, P9.
- C. Six quick-release fasteners hold the CDU in position. An electrical connector attaches the electrical cable to a connector (J1) on the rear panel of the CDU.
- D. An FMC software option causes the CDU to normally show information in color. Default operation is white text on a black background.

TASK 34-61-01-000-802

2. FMCS Control Display Unit (CDU) Removal

(Figure 401)

A. **References**

Reference	Title
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Prepare for the Removal**

SUBTASK 34-61-01-860-007

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01050	FMCS CDU 2

SUBTASK 34-61-01-480-001



MAKE SURE THAT THE GROUND LOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE GROUND LOCKS, THE LANDING GEAR CAN RETRACT. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) Make sure that the ground locks are installed in the nose and main landing gear (TASK 32-00-01-480-801).

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 401
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

D. Procedure

SUBTASK 34-61-01-860-008



DO NOT TOUCH THE CONDUCTOR PINS OR OTHER CONDUCTORS ON THE CDU. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CDU.



DO NOT LET THE CDU PUSH AGAINST OR FALL ON OTHER COMPONENTS ON THE AISLE STAND. THIS CAN OCCUR WHEN YOU DISCONNECT THE CONNECTOR FROM THE REAR OF THE CDU. DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do these steps to remove the CDU [1]:
 - (a) Loosen the six quick-release quarter-turn fasteners [2] on the front of the CDU [1].
 - (b) Pull the CDU [1] out of the panel until you can get access to the electrical connector [3].
 - (c) Disconnect the electrical connector [3].
 - (d) Remove the CDU [1] from the panel.
 - (e) Put a protective cover on the electrical connector [3].

———— **END OF TASK** ————

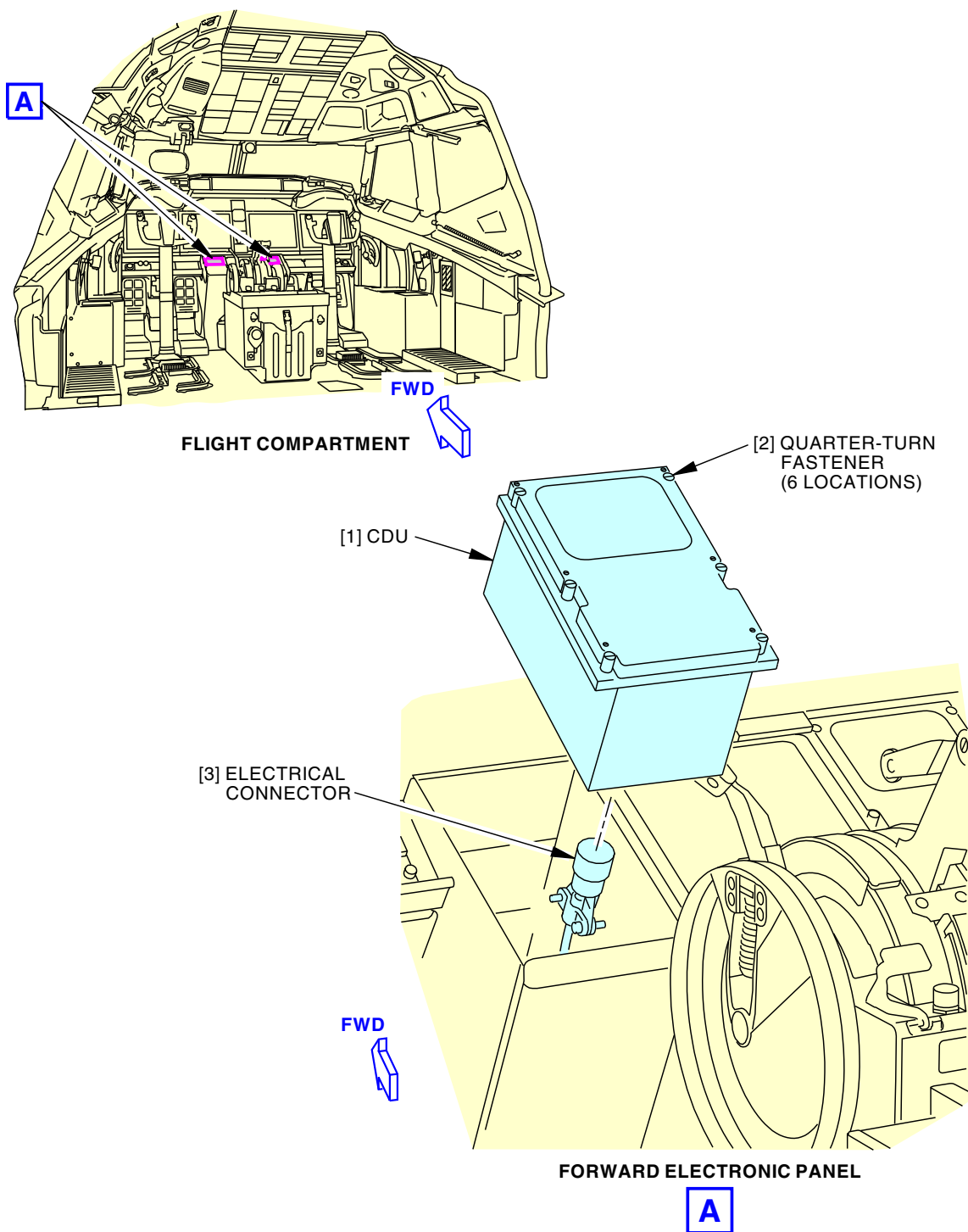
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 402
Sep 15/2021



2414908 S00061536531_V1

CDU Installation
Figure 401/34-61-01-990-803

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 403
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-01-400-802

3. **FMCS Control Display Unit (CDU) Installation**

(Figure 401)

A. **References**

Reference	Title
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
34-61-00-750-802	CDU Software Configuration Check (AIRPLANES WITH LIQUID CRYSTAL DISPLAY CDU) (P/B 201)

B. **Location Zones**

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Procedure**

SUBTASK 34-61-01-420-002



CAUTION

DO NOT TOUCH THE CONDUCTOR PINS OR OTHER CONDUCTORS ON THE CDU. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CDU.

- (1) Do these steps to install the CDU [1]:
 - (a) Remove the protective cover from the electrical connector [3].
 - (b) Examine the electrical connector [3] for bent or broken pins, dirt, and damage.
 - (c) Connect the electrical connector [3] to the CDU [1].
 - (d) Carefully lower the CDU [1] into the panel.
 - (e) Tighten the six quick-release quarter-turn fastener [2].

SUBTASK 34-61-01-860-009

- (2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01050	FMCS CDU 2

SUBTASK 34-61-01-710-003

- (3) If the INVALID CDU MODE page is shown on the CDU:
 - (a) Push the LSK for the FANS MCDU.

SUBTASK 34-61-01-470-001

- (4) Make sure that the software part number is correct. Do this task: CDU Software Configuration Check (AIRPLANES WITH LIQUID CRYSTAL DISPLAY CDU), TASK 34-61-00-750-802.

D. **Installation Test**

SUBTASK 34-61-01-710-002

- (1) Do an installation test of the multi-purpose control display unit:

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 404
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

- (a) Make sure that the MCDU shows <FMC on the MENU page.
- (b) Set the MASTER DIM and TEST switch to the TEST position.
- (c) Make sure that the CALL, FAIL, MSG, OFST, and EXEC lights on the MCDU are on.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-61-01-440-001

- (1) Remove the ground locks in the nose and main landing gear if no longer required (TASK 32-00-01-080-801).

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-01

Page 405
Sep 15/2022



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL
FMCS COMPUTER - REMOVAL/INSTALLATION

1. General

- A. This procedure contains these tasks:
- (1) A removal of the FMCS computer
 - (2) An installation of the FMCS computer.
- B. You can find the FMCS computer in the main equipment center on the E5-2 shelf.

TASK 34-61-02-000-801

2. FMCS Computer Removal

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
20-10-07-000-801	E/E Box Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
118	Electrical and Electronics Compartment - Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

D. FMCS Computer Removal

SUBTASK 34-61-02-860-001

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2

SUBTASK 34-61-02-010-001

- (2) To get access to the main equipment center, open this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

SUBTASK 34-61-02-860-002



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE FMCS COMPUTER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE FMCS COMPUTER.

- (3) To remove the FMCS Computer [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

————— **END OF TASK** —————

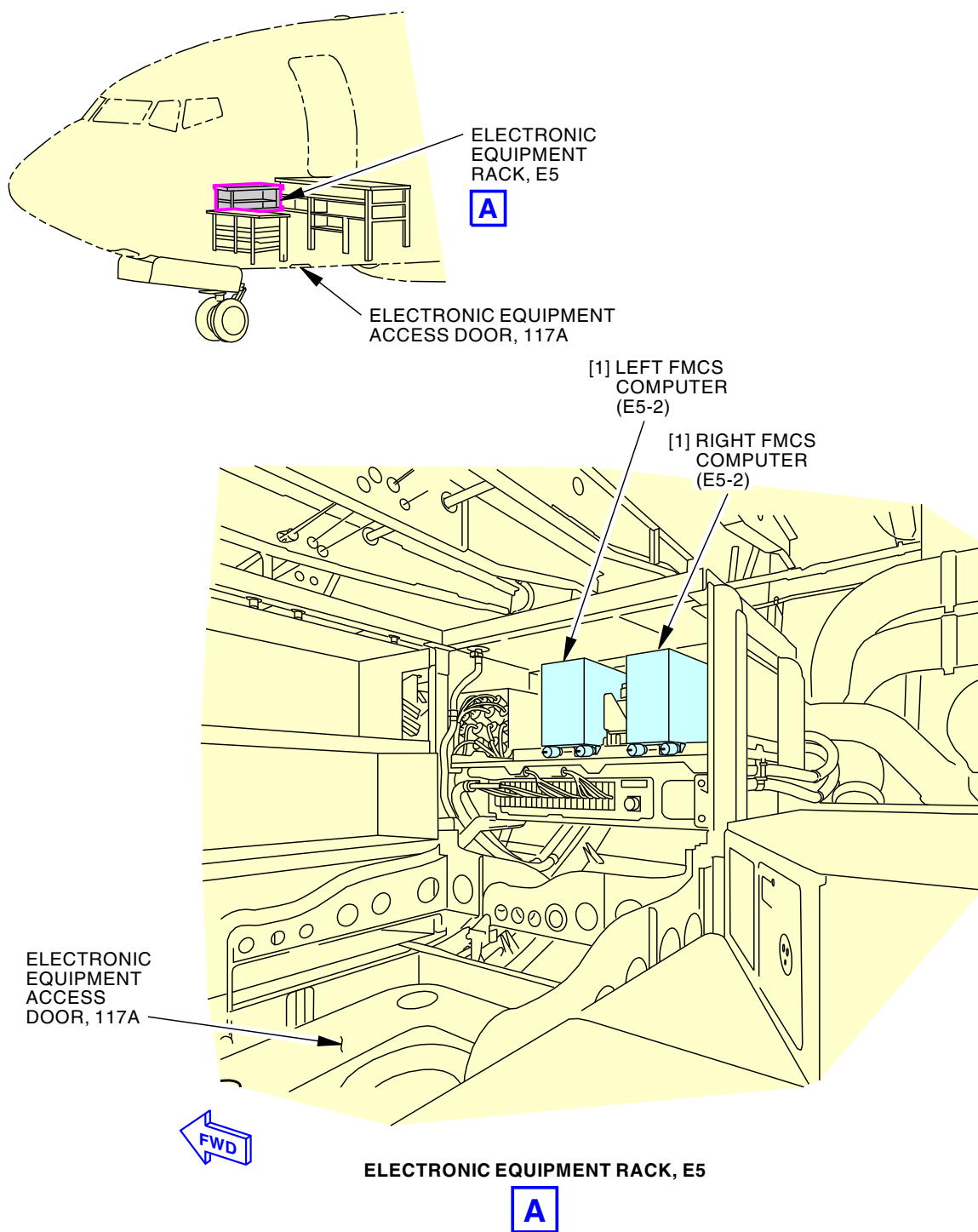
EFFECTIVITY
SIA ALL

34-61-02

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 401
Sep 15/2021



2414909 S00061536536_V1

FMCS - Computer Installation
Figure 401/34-61-02-990-801



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-02-400-801

3. FMCS Computer Installation

(Figure 401)

A. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-61-00-710-801	Flight Management Computer System - Operational Test (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	FMCS Computer	34-61-02-02B-005	SIA ALL
		34-61-02-02B-015	SIA ALL
		34-61-02-02B-105	SIA ALL
		34-61-02-02B-115	SIA ALL

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Installation Procedure

SUBTASK 34-61-02-860-004



DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE FMCS COMPUTER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE FMCS COMPUTER.

- (1) To install the FMCS Computer [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

SUBTASK 34-61-02-010-002

- (2) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-61-02-860-005

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2

EFFECTIVITY
SIA ALL

34-61-02

D633AM101-SIA

Page 403
Sep 15/2023



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

F. Installation Test

SUBTASK 34-61-02-710-001

- (1) Do this task: Flight Management Computer System - Operational Test,
TASK 34-61-00-710-801.

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-02

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

FMCS TRANSFER RELAYS - REMOVAL/INSTALLATION

1. General

- A. This procedure contains these tasks:
- (1) Flight Management Computer System (FMCS) Transfer Relay Removal.
 - (2) FMCS Transfer Relay Installation.
- B. There are two FMCS transfer relays installed on the E5-2 shelf in the electrical and electronics compartment.

TASK 34-61-03-000-801

2. FMCS Transfer Relay Removal

(Figure 401)

A. General

- (1) This task includes the steps to remove the FMCS transfer relay.
- (2) The removal procedure is the same for both FMCS transfer relays.

B. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 401)
34-61-02-000-801	FMCS Computer Removal (P/B 401)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Removal

SUBTASK 34-61-03-860-003

- (1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2
E	15	C01263	FMCS XFR

SUBTASK 34-61-03-010-001

- (2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-03

Page 401
Sep 15/2021



**737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL**

SUBTASK 34-61-03-010-003

- (3) If necessary for access, remove the FMC 2 from the electronic equipment shelf, E5-2 (TASK 34-61-02-000-801).

SUBTASK 34-61-03-020-002

- (4) Disconnect the electrical connectors [2] from the FMCS transfer relay [1] and install protective caps.

SUBTASK 34-61-03-010-002

- (5) Remove the FMCS transfer relay bracket (TASK 20-10-07-000-801).

F. FMCS Transfer Relay Removal

SUBTASK 34-61-03-020-001

- (1) Do these steps to remove the FMCS transfer relay [1]:
 - (a) Remove the nuts [5], washers [4] and screws [3] from the bracket.
 - (b) Remove the FMCS transfer relay [1].

————— **END OF TASK** —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

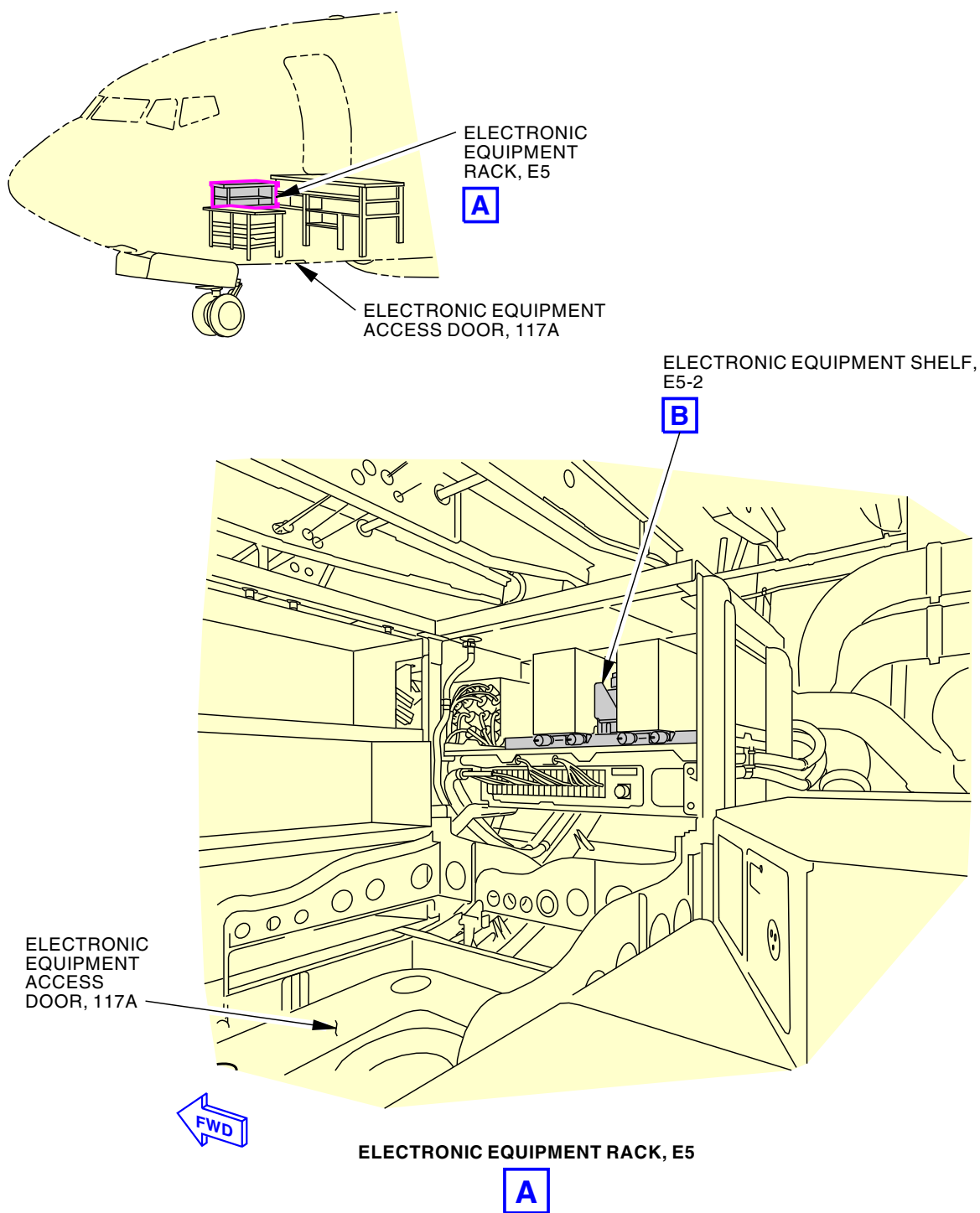
ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-03

Page 402
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL



2797374 S0000639348_V1

FMCS Transfer Relay Installation
Figure 401/34-61-03-990-801 (Sheet 1 of 2)

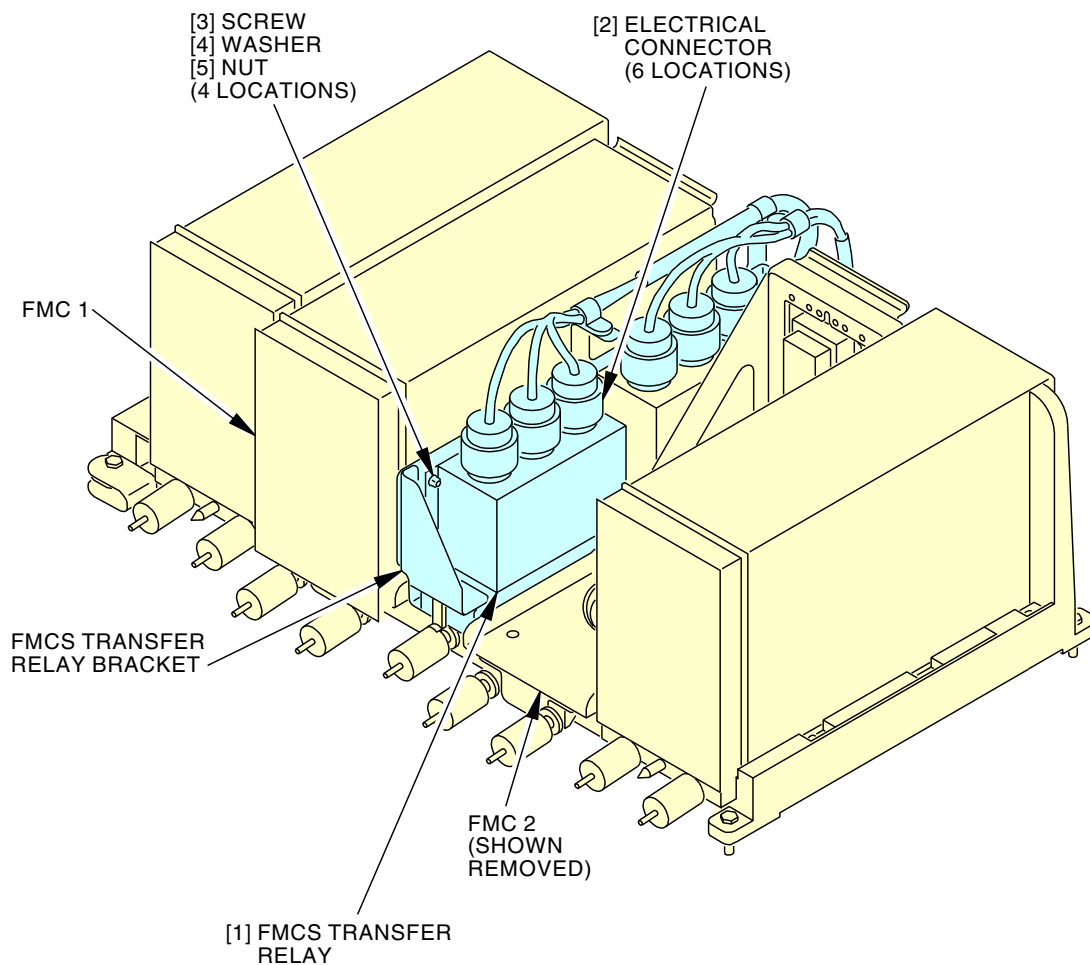
EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-03

Page 403
Sep 15/2021



ELECTRONIC EQUIPMENT SHELF, E5-2

B

2797396 S0000639349_V1

FMCS Transfer Relay Installation
Figure 401/34-61-03-990-801 (Sheet 2 of 2)

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-03

Page 404
Sep 15/2021



737-7/8/8200/9/10
AIRCRAFT MAINTENANCE MANUAL

TASK 34-61-03-400-801

3. **FMCS Transfer Relay Installation**

(Figure 401)

A. General

- (1) This task includes the steps to install the FMCS transfer relay.
- (2) The installation procedure is the same for both FMCS transfer relays.

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 401)
34-61-00-710-801	Flight Management Computer System - Operational Test (P/B 501)
34-61-00-730-801	Flight Management Computer System - System Test (P/B 501)
34-61-02-400-801	FMCS Computer Installation (P/B 401)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. FMCS Transfer Relay Installation

SUBTASK 34-61-03-860-005

- (1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2
E	15	C01263	FMCS XFR

SUBTASK 34-61-03-420-001

- (2) Do these steps to install FMCS transfer relay [1]:
 - (a) Put the FMCS transfer relay [1] on the bracket.
 - (b) Install the screws [3], washers [4] and nuts [5] to attach FMCS transfer relay [1] to the bracket.

SUBTASK 34-61-03-410-002

- (3) Install the bracket with the FMCS transfer relay [1] on the electronic equipment shelf, E5-2 (TASK 20-10-07-400-801).

SUBTASK 34-61-03-420-002

- (4) Remove protective caps and connect the applicable electrical connectors [2] to the FMCS transfer relay [1].

EFFECTIVITY
SIA ALL

34-61-03

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 405
Sep 15/2021



737-7/8/8200/9/10 AIRCRAFT MAINTENANCE MANUAL

SUBTASK 34-61-03-410-003

- (5) If was removed, install the FMC 2 on the electronic equipment shelf, E5-2 (TASK 34-61-02-400-801).

F. Prepare for the FMCS Transfer Relay Installation Test

SUBTASK 34-61-03-860-002

- (1) Make sure that the BAT switch, on the P5 forward overhead panel, is in the ON position.

SUBTASK 34-61-03-860-001

- (2) Set the STANDBY POWER switch, on the P5 forward overhead panel, to the AUTO position.

SUBTASK 34-61-03-860-004

- (3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1
A	7	C01018	FMCS CDU 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	15	C01050	FMCS CDU 2
D	16	C01262	FMCS CMPTR 2
E	15	C01263	FMCS XFR

G. FMCS Transfer Relay Installation Test

SUBTASK 34-61-03-710-003

- (1) Do the tests of the operational program, databases and the FMC FIXED OUTPUTS (TASK 34-61-00-710-801).

SUBTASK 34-61-03-710-001

- (2) Do the test of the annunciators (TASK 34-61-00-730-801).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-61-03-410-001

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117A	Electronic Equipment Access Door

————— END OF TASK —————

EFFECTIVITY
SIA ALL

D633AM101-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

34-61-03

Page 406
Sep 15/2021