CHAPTER

54

NACELLES/ PYLONS



CHAPTER 54 NACELLES/PYLONS

Subject/Page	Date	COC	Subject/Pa	ge Date	coc	Subject/Pa	ge Date	COC
54-EFFECTIV	E PAGES		54-05-03	(cont)		54-05-03	(cont)	
1 thru 6	SEP 05/2018		215	Sep 05/2017		251	Sep 05/2017	
54-CONTENTS	S		216	Sep 05/2017		252	Sep 05/2017	
1	Jan 05/2015		217	May 05/2015		253	Sep 05/2017	
2	Jan 05/2015		218	Sep 05/2017		254	May 05/2015	
3	Jan 05/2016		219	Sep 05/2017		255	Sep 05/2017	
4	May 05/2015		220	May 05/2015		256	Sep 05/2017	
5	Sep 05/2017		221	Jan 05/2015		257	Sep 05/2017	
6	Jan 05/2016		222	Sep 05/2017		258	Sep 05/2017	
7	Jan 05/2016		223	Sep 05/2017		259	Sep 05/2017	
8	Jul 25/2018		224	Sep 05/2017		260	May 05/2015	
9	Jul 25/2018		225	May 05/2015		261	Sep 05/2017	
10	BLANK		226	Sep 05/2017		262	Sep 05/2017	
54-05-01			227	Sep 05/2017		263	May 05/2015	
201	Sep 05/2016		228	Sep 05/2017		264	Sep 05/2017	
202	Sep 05/2016		229	Sep 05/2017		265	Sep 05/2017	
203	Sep 05/2016		230	Sep 05/2017		266	May 05/2015	
204	Sep 05/2016		231	May 05/2015		267	Sep 05/2017	
205	Sep 05/2016		232	Sep 05/2017		268	Sep 05/2017	
206	Sep 05/2016		233	Sep 05/2017		54-51-01	Config 2	
207	Sep 05/2016		234	May 05/2015		201	Jan 05/2016	
208	Sep 05/2016		235	Sep 05/2017		202	Sep 05/2017	
54-05-03			236	Sep 05/2017		203	May 05/2015	
201	May 05/2015		237	May 05/2015		204	May 05/2015	
202	Sep 05/2017		238	Sep 05/2017		205	Sep 05/2017	
203	Sep 05/2017		239	Sep 05/2017		206	Jan 05/2015	
204	May 05/2015		240	May 05/2015		207	Jan 05/2015	
205	Sep 05/2017		241	Sep 05/2017		208	Sep 05/2017	
206	May 05/2015		242	Sep 05/2017		209	Sep 05/2017	
207	Sep 05/2017		243	Jul 25/2018		210	May 05/2018	
208	Sep 05/2017		244	Sep 05/2017		211	Sep 05/2017	
209	May 05/2015		245	Sep 05/2017		212	Jan 05/2015	
210	Sep 05/2017		246	May 05/2015		213	Sep 05/2017	
211	May 05/2015		247	Sep 05/2017		214	Jan 05/2015	
212	Sep 05/2017		248	Sep 05/2017		54-51-01	Config 2	
213	Sep 05/2017		249	May 05/2015		401	May 05/2017	
214	Jul 25/2018		250	Jan 05/2015		402	May 05/2018	

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54-51-01 Con	fig 2 (cont)		54-51-01 Confi	ig 2 (cont)		54-51-02	(cont)	
403	May 05/2017		608	Jan 05/2016		433	May 05/2015	
404	Sep 05/2017		609	Jan 05/2016		434	May 05/2015	
405	Sep 05/2017		610	BLANK		435	May 05/2015	
406	Sep 05/2017		54-51-02			436	May 05/2015	
407	Sep 05/2017		401	Jan 05/2015		437	May 05/2015	
408	Jan 05/2015		402	May 05/2015		438	May 05/2015	
409	Jan 05/2015		403	Sep 05/2017		439	May 05/2015	
410	Jan 05/2015		404	Sep 05/2017		440	May 05/2015	
411	Jan 05/2015		405	Jan 05/2015		441	May 05/2015	
412	Jan 05/2015		406	Jan 05/2015		442	May 05/2015	
413	Jan 05/2015		407	May 05/2015		54-51-02		
414	Jan 05/2015		408	Sep 05/2017		601	Jan 05/2015	
415	Jan 05/2015		409	Sep 05/2017		602	Jan 05/2015	
416	May 05/2016		410	Jan 05/2015		603	Jan 05/2015	
417	Jan 05/2016		411	Jan 05/2015		604	Jan 05/2015	
418	Jan 05/2016		412	May 05/2015		605	Jul 25/2018	
419	Jan 05/2016		413	Sep 05/2017		606	Jul 25/2018	
420	Jan 05/2016		414	Sep 05/2017		607	Jan 05/2015	
421	Jan 05/2016		415	Jan 05/2015		608	Jan 05/2015	
422	Jan 05/2016		416	Jan 05/2015		609	Sep 05/2017	
423	Jan 05/2016		417	May 05/2015		610	Sep 05/2017	
424	May 05/2018		418	Sep 05/2017		611	Jan 05/2015	
425	May 05/2017		419	Sep 05/2017		612	Jan 05/2015	
426	Sep 05/2017		420	Jan 05/2015		613	Jan 05/2015	
427	Sep 05/2017		421	Jan 05/2015		614	Jan 05/2015	
428	Sep 05/2017		422	May 05/2015		615	Jan 05/2015	
429	Sep 05/2017		423	Sep 05/2017		616	Jan 05/2015	
430	Sep 05/2017		424	Sep 05/2017		617	Jan 05/2015	
54-51-01 Cor	nfig 2		425	Jan 05/2015		618	Jan 05/2015	
601	Jan 05/2015		426	Jan 05/2015		619	Jan 05/2015	
602	Jan 05/2015		427	May 05/2015		620	Jan 05/2015	
603	Jan 05/2016		428	May 05/2015		54-51-03		
604	Jan 05/2016		429	May 05/2015		401	Jan 05/2015	
605	Jan 05/2016		430	May 05/2015		402	Sep 05/2017	
606	Jan 05/2016		431	May 05/2015		403	Jan 05/2015	
607	Jan 05/2016		432	May 05/2015		404	Jan 05/2015	

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54-51-03	(cont)		54-51-05	(cont)		54-52-01 Conf	ig 1 (cont)	
405	Sep 05/2017		417	May 05/2015		603	May 05/2017	
406	Sep 05/2017		418	BLANK		604	Sep 05/2017	
54-51-03			54-51-05			54-52-03		
601	Jan 05/2015		601	Jan 05/2015		401	Jan 05/2015	
602	Jan 05/2015		602	Jan 05/2015		402	Jan 05/2015	
54-51-04			603	Jan 05/2015		403	Jan 05/2016	
401	May 05/2015		604	Jan 05/2015		404	Sep 05/2017	
402	May 05/2016		605	Jan 05/2015		405	Jan 05/2016	
403	Sep 05/2017		606	BLANK		406	Sep 05/2017	
404	Jan 05/2015		54-52-00	Config 1		407	Jan 05/2016	
405	Jan 05/2015		201	Jan 05/2015		408	Sep 05/2017	
406	Jan 05/2015		202	Sep 05/2017		409	Jan 05/2016	
407	May 05/2017		203	Sep 05/2017		410	Sep 05/2017	
408	Sep 05/2017		204	Sep 05/2017		411	Sep 05/2017	
409	Sep 05/2017		205	Sep 05/2017		412	Sep 05/2017	
410	Sep 05/2017		206	Sep 05/2017		413	May 05/2018	
54-51-04			207	Sep 05/2017		414	Jan 05/2016	
601	Jan 05/2015		208	Sep 05/2017		415	Jan 05/2016	
602	Jan 05/2015		209	Sep 05/2017		416	BLANK	
54-51-05			210	Sep 05/2017		54-52-03		
401	Jan 05/2015		211	Sep 05/2017		601	May 05/2018	
402	Jan 05/2015		212	Sep 05/2017		602	Jan 05/2015	
403	Jan 05/2015		213	Sep 05/2017		54-52-04		
404	Jan 05/2015		214	BLANK		401	May 05/2018	
405	Jan 05/2015		54-52-01	Config 1		402	May 05/2018	
406	Jan 05/2015		401	Jan 05/2015		403	May 05/2018	
407	Jan 05/2015		402	Jan 05/2015		404	May 05/2018	
408	Sep 05/2015		403	Sep 05/2017		405	Sep 05/2017	
409	Jan 05/2015		404	Sep 05/2015		406	Jan 05/2016	
410	Jan 05/2015		405	Jan 05/2015		407	Sep 05/2017	
411	May 05/2018		406	Sep 05/2017		408	Sep 05/2017	
412	May 05/2015		407	Sep 05/2015		409	Jan 05/2016	
413	May 05/2015		408	BLANK		410	Sep 05/2017	
414	May 05/2015		54-52-01	_		411	Sep 05/2017	
415	May 05/2015		601	May 05/2017		412	Sep 05/2017	
416	Sep 05/2015		602	May 05/2017		413	May 05/2018	

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54-52-04	(cont)		54-52-05	(cont)		54-53-01 Conf	ig 1 (cont)	
414	May 05/2018		504	Sep 05/2017		405	Sep 05/2017	
415	May 05/2018		505	Sep 05/2017		406	Sep 05/2017	
416	BLANK		506	BLANK		407	Sep 05/2017	
54-52-04			54-52-06			408	Sep 05/2017	
601	Sep 05/2015		401	Sep 05/2016		409	Jan 05/2015	
602	Jan 05/2015		402	Sep 05/2016		410	Sep 05/2017	
603	Jan 05/2015		403	Sep 05/2016		411	Jan 05/2015	
604	Jan 05/2015		404	Sep 05/2017		412	BLANK	
605	Jan 05/2015		405	Sep 05/2016		54-53-02 Con	fig 1	
606	BLANK		406	Sep 05/2017		401	Sep 05/2017	
54-52-05			407	Sep 05/2016		402	Sep 05/2017	
201	Sep 05/2017		408	Sep 05/2017		403	Sep 05/2017	
202	Jan 05/2015		409	Sep 05/2016		404	Sep 05/2017	
203	Jan 05/2016		410	Sep 05/2017		54-53-03 Con	fig 1	
204	Sep 05/2017		411	Sep 05/2016		401	Jan 05/2015	
205	Jan 05/2016		412	Sep 05/2017		402	Jan 05/2015	
206	Sep 05/2017		413	Sep 05/2016		403	Sep 05/2017	
207	Sep 05/2017		414	Sep 05/2017		404	Sep 05/2017	
208	Sep 05/2017		415	Sep 05/2017		405	Sep 05/2017	
54-52-05			416	Sep 05/2017		406	Sep 05/2015	
401	Jan 05/2016		417	Jan 05/2016		407	Jan 05/2015	
402	Jan 05/2016		418	Jan 05/2016		408	BLANK	
403	Jan 05/2016		419	Jan 05/2016		54-53-03		
404	Sep 05/2017		420	BLANK		501	May 05/2015	
405	Jan 05/2016		54-52-07			502	Jan 05/2015	
406	Sep 05/2017		401	Sep 05/2017		503	Sep 05/2017	
407	Sep 05/2017		402	Jan 05/2016		504	Sep 05/2017	
408	Jan 05/2016		403	Sep 05/2017		54-54-00 Con	fig 1	
409	Sep 05/2017		404	Sep 05/2017		601	May 05/2015	
410	Jan 05/2018		405	Jan 05/2016		602	May 05/2017	
411	Jan 05/2018		406	BLANK		603	May 05/2017	
412	BLANK		54-53-01	Config 1		604	Sep 05/2017	
54-52-05			401	Jan 05/2015		605	Sep 05/2017	
501	May 05/2015		402	Sep 05/2017		606	May 05/2017	
502	May 05/2015		403	Sep 05/2017		607	Sep 05/2017	
503	Sep 05/2017		404	Sep 05/2017		608	BLANK	

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54-54-01	Config 1		54-54-01 Conf	ig 1 (cont)		54-54-03 Cor	nfig 1 (cont)	
401	Jan 05/2015		437	Jan 05/2016		415	Jul 25/2018	
402	Jan 05/2015		438	Jan 05/2016		416	Jul 25/2018	
403	Jan 05/2015		439	Jan 05/2016		417	Jul 25/2018	
404	Sep 05/2017		440	Jan 05/2016		418	Jul 25/2018	
405	Sep 05/2017		441	Jan 05/2016		54-54-03		
406	Sep 05/2017		442	Jan 05/2016		601	Jan 05/2016	
407	Sep 05/2017		443	Jan 05/2016		602	Jan 05/2016	
408	Sep 05/2017		444	May 05/2016		603	Jan 05/2016	
409	Jan 05/2015		445	Jan 05/2018		604	May 05/2017	
410	Jan 05/2015		446	Jan 05/2018		605	Sep 05/2017	
411	Jan 05/2015		447	Jan 05/2018		606	BLANK	
412	Jan 05/2015		448	Jan 05/2016		54-55-01 Co	nfig 1	
413	Sep 05/2017		449	Jan 05/2016		201	Jan 05/2016	
414	Sep 05/2017		450	Jan 05/2016		202	Jan 05/2016	
415	Sep 05/2017		54-54-01			203	Jan 05/2016	
416	Sep 05/2017		801	Sep 05/2015		204	Sep 05/2017	
417	Sep 05/2017		802	Sep 05/2017		205	Sep 05/2017	
418	Jan 05/2015		803	Sep 05/2017		206	Jan 05/2016	
419	Jan 05/2015		804	Sep 05/2017		207	May 05/2017	
420	Jan 05/2015		805	Sep 05/2017		208	May 05/2017	
421	Sep 05/2017		806	BLANK		209	Jan 05/2016	
422	Sep 05/2017		54-54-03 Con	fig 1		210	Sep 05/2017	
423	Jan 05/2016		401	Sep 05/2016		54-55-01 Co	nfig 1	
424	Jan 05/2016		402	Sep 05/2016		601	Jan 05/2015	
425	Jan 05/2016		403	May 05/2017		602	May 05/2017	
426	Jan 05/2016		404	Jan 05/2018		603	Sep 05/2017	
427	Jan 05/2016		405	Jul 25/2018		604	Jan 05/2015	
428	Jan 05/2016		406	Sep 05/2017		605	Sep 05/2017	
429	Jan 05/2016		407	Jan 05/2018		606	Jan 05/2015	
430	Jan 05/2016		408	Sep 05/2017		607	May 05/2017	
431	Jan 05/2016		409	Jul 25/2018		608	May 05/2017	
432	Jan 05/2016		410	Jul 25/2018		609	May 05/2017	
433	Sep 05/2017		411	Jul 25/2018		610	May 05/2017	
434	Sep 05/2017		412	Jul 25/2018		611	Sep 05/2017	
435	Sep 05/2017		413	Jul 25/2018		612	May 05/2017	
436	Jan 05/2016		414	Jul 25/2018		613	Sep 05/2017	

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54-55-01 Confi	g 1 (cont)							
614	Sep 05/2017							
615	Sep 05/2017							
616	Sep 05/2017							
617	Sep 05/2017							
618	Sep 05/2017							
619	Sep 05/2017							
620	Sep 05/2017							
621	Sep 05/2017							
622	Sep 05/2017							
623	Sep 05/2017							
624	Sep 05/2017							
625	Sep 05/2017							
626	Sep 05/2017							
627	May 05/2017							
628	May 05/2017							
629	May 05/2017							
630	May 05/2017							

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SUBJECT	SUBJECT	CONF PAGE	EFFECT
NACELLES/PYLONS - CORROSION INSPECTIONS - MAINTENANCE PRACTICES		201	ARO ALL
INTERNAL - GENERAL VISUAL: AFT STRUT FAIRING - LEFT NACELLE STRUT TASK 54-05-01-210-803		201	ARO ALL
INTERNAL - GENERAL VISUAL: AFT STRUT FAIRING - RIGHT NACELLE STRUT TASK 54-05-01-210-804		205	ARO ALL
NACELLES/PYLONS - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES	54-05-03	201	ARO ALL
EXTERNAL - GENERAL VISUAL: POWERPLANT, LEFT TASK 54-05-03-210-812		201	ARO ALL
EXTERNAL - DETAILED: POWERPLANT, LEFT TASK 54-05-03-211-811		204	ARO ALL
EXTERNAL - GENERAL VISUAL: POWERPLANT, RIGHT TASK 54-05-03-210-813		206	ARO ALL
EXTERNAL - DETAILED: POWERPLANT, RIGHT TASK 54-05-03-211-812		209	ARO ALL
INTERNAL - DETAILED: LEFT NACELLE STRUT TASK 54-05-03-211-813		211	ARO ALL
INTERNAL - SPECIAL DETAILED: LEFT NACELLE STRUT TASK 54-05-03-211-814		214	ARO ALL
INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - LEFT NACELLE STRUT TASK 54-05-03-210-814		217	ARO ALL
INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - LEFT NACELLE STRUT TASK 54-05-03-210-832		220	ARO ALL
INTERNAL-GENERAL VISUAL: AFT TORQUE BOX-LEFT NACELLE STRUT TASK 54-05-03-210-838		225	ARO ALL
INTERNAL - DETAILED: AFT TORQUE BOX - LEFT NACELLE STRUT TASK 54-05-03-211-832		231	ARO ALL



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INTERNAL - GENERAL VISUAL: AFT TORQUE BOX-LEFT NACELLE STRUT TASK 54-05-03-210-837			237	ARO ALL
INTERNAL - DETAILED: RIGHT NACELLE STRUT TASK 54-05-03-211-818			240	ARO ALL
INTERNAL - SPECIAL DETAILED: RIGHT NACELLE STRUT TASK 54-05-03-211-819			243	ARO ALL
INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT TASK 54-05-03-210-818			246	ARO ALL
INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT TASK 54-05-03-210-833			249	ARO ALL
INTERNAL-GENERAL VISUAL:AFT TORQUE BOX-RIGHT NACELLE STRUT TASK 54-05-03-210-839			254	ARO ALL
INTERNAL - DETAILED: AFT TORQUE BOX - RIGHT NACELLE STRUT TASK 54-05-03-211-835			260	ARO ALL
INTERNAL - DETAILED: STRUT FORWARD TORQUE BOX TASK 54-05-03-211-834			263	ARO ALL
INTERNAL - GENERAL VISUAL: AFT TORQUE BOX-RIGHT NACELLE STRUT TASK 54-05-03-210-836			266	ARO ALL
NACELLE STRUT - MAINTENANCE PRACTICES	54-51-01	2	201	ARO ALL
Prepare the Strut for Maintenance Operations TASK 54-51-01-040-802-002		2	201	ARO ALL
Put the Strut Back to its Usual Condition TASK 54-51-01-440-802-002		2	202	ARO ALL
Support the Strut with the Engine Installed TASK 54-51-01-580-805-002		2	203	ARO ALL



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Remove Support from the Strut with the Engine Installed		2	208	ARO ALL
TASK 54-51-01-580-806-002				
Support the Strut with the Engine Removed TASK 54-51-01-580-807-002		2	209	ARO ALL
Remove Support from the Strut with the Engine Removed TASK 54-51-01-580-808-002		2	213	ARO ALL
NACELLE STRUT - REMOVAL/INSTALLATION	54-51-01	2	401	ARO ALL
Nacelle Strut Removal TASK 54-51-01-000-805-002		2	401	ARO ALL
Install Nacelle Strut TASK 54-51-01-400-805-002		2	423	ARO ALL
NACELLE STRUT - INSPECTION/CHECK	54-51-01	2	601	ARO ALL
Nacelle Strut Examination TASK 54-51-01-200-803-002		2	601	ARO ALL
Strut Bushing Examination TASK 54-51-01-200-804-002		2	606	ARO ALL
STRUT ATTACH PIN - REMOVAL/INSTALLATION	54-51-02		401	ARO ALL
Remove the Forward Pin from the Diagonal Brace TASK 54-51-02-000-801			401	ARO ALL
Remove the Aft Fuse Pin from the Diagonal Brace TASK 54-51-02-000-802			407	ARO ALL
Remove the Forward Fuse Pin from the Upper Link TASK 54-51-02-000-803			412	ARO ALL
Remove the Aft Pin from the Upper Link TASK 54-51-02-000-804			417	ARO ALL
Remove the Aft Upper Spar Fuse Pin TASK 54-51-02-000-805			422	ARO ALL
Install the Aft Upper Spar Fuse Pin TASK 54-51-02-000-806			427	ARO ALL
Install the Aft Pin in the Upper Link TASK 54-51-02-000-807			430	ARO ALL



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<u>SUBJECT</u>	SUBJECT CO	NF PAGE	<u>EFFECT</u>
Install the Forward Fuse Pin in the Upper Link TASK 54-51-02-000-808		433	ARO ALL
Install the Aft Fuse Pin in the Diagonal Brace TASK 54-51-02-000-809		436	ARO ALL
Install the Forward Pin in the Diagonal Brace TASK 54-51-02-400-801		439	ARO ALL
STRUT ATTACH PIN - INSPECTION/CHECK	54-51-02	601	ARO ALL
Diagonal Brace Aft Fuse Pin Examination TASK 54-51-02-200-801		601	ARO ALL
Diagonal Brace Forward Pin Examination TASK 54-51-02-200-802		605	ARO ALL
Upper Link Forward Fuse Pin Examination TASK 54-51-02-200-803		609	ARO ALL
Upper Link Aft Pin Examination TASK 54-51-02-200-804		613	ARO ALL
Aft Upper Spar Fuse Pin Examination TASK 54-51-02-200-805		617	ARO ALL
UPPER LINK - REMOVAL/INSTALLATION	54-51-03	401	ARO ALL
Upper Link Removal TASK 54-51-03-000-801		401	ARO ALL
Upper Link Installation TASK 54-51-03-400-801		405	ARO ALL
UPPER LINK - INSPECTION/CHECK	54-51-03	601	ARO ALL
Upper Link Bushings Examination TASK 54-51-03-200-801		601	ARO ALL
DIAGONAL BRACE - REMOVAL/INSTALLATION	54-51-04	401	ARO ALL
Remove the Diagonal Brace TASK 54-51-04-000-801		401	ARO ALL
Install the Diagonal Brace TASK 54-51-04-400-801		407	ARO ALL
Install a Custom Fitted Diagonal Brace TASK 54-51-04-320-801		409	ARO ALL



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SUBJECT	SUBJECT	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
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Diagonal Brace Bushing Examination TASK 54-51-04-200-801			601	ARO ALL
SIDE LINK - REMOVAL/INSTALLATION	54-51-05		401	ARO ALL
Side Link Removal TASK 54-51-05-000-801			401	ARO ALL
Original Side Link Installation TASK 54-51-05-400-801			408	ARO ALL
New Side Link Installation TASK 54-51-05-400-802			410	ARO ALL
Lower Pin Removal TASK 54-51-05-000-802			414	ARO ALL
Lower Pin Installation TASK 54-51-05-400-803			415	ARO ALL
STRUT SIDE LINK - INSPECTION/CHECK	54-51-05		601	ARO ALL
Strut Side Link Examination TASK 54-51-05-200-801			601	ARO ALL
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Aerodynamic Smoothness Requirements TASK 54-52-00-910-807-001		1	201	ARO ALL
Fall Arrest Lifeline Procedure TASK 54-52-00-910-804-001		1	211	ARO ALL
FORWARD FAIRINGS - REMOVAL/INSTALLATION	54-52-01	1	401	ARO ALL
Forward Fairings Removal TASK 54-52-01-000-801-001		1	401	ARO ALL
Forward Fairings Installation TASK 54-52-01-400-801-001		1	404	ARO ALL
Fan Cowl Support Beam Fairings Removal TASK 54-52-01-000-802-001		1	405	ARO ALL
Fan Cowl Support Beam Fairings Installation TASK 54-52-01-400-802-001		1	407	ARO ALL



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CHAPTER SECTION

	SECTION			
SUBJECT	SUBJECT	CONF	<u>PAGE</u>	<u>EFFECT</u>
FORWARD FAIRINGS - INSPECTION/CHECK	54-52-01	1	601	ARO ALL
Forward Fairings Examination TASK 54-52-01-000-805-001		1	601	ARO ALL
UNDERWING FAIRING - REMOVAL/INSTALLATION	54-52-03		401	ARO ALL
Underwing Fairing Removal TASK 54-52-03-000-801			401	ARO ALL
Underwing Fairing Installation TASK 54-52-03-400-801			413	ARO ALL
UNDERWING FAIRING - INSPECTION/CHECK	54-52-03		601	ARO ALL
Underwing Fairing Examination TASK 54-52-03-000-802			601	ARO ALL
AFT FAIRING - REMOVAL/INSTALLATION	54-52-04		401	ARO ALL
Aft Fairing Removal TASK 54-52-04-000-801			401	ARO ALL
Aft Fairing Installation TASK 54-52-04-400-801			413	ARO ALL
AFT FAIRING - INSPECTION/CHECK	54-52-04		601	ARO ALL
Aft Fairing Examination TASK 54-52-04-000-802			601	ARO ALL
AFT FAIRING ACCESS DOORS - MAINTENANCE PRACTICES	54-52-05		201	ARO ALL
Aft Fairing Access Doors Operation TASK 54-52-05-800-801			201	ARO ALL
AFT FAIRING ACCESS DOOR - REMOVAL/INSTALLATION	54-52-05		401	ARO ALL
Aft Fairing Access Door Removal TASK 54-52-05-000-801			401	ARO ALL
Aft Fairing Access Door Installation TASK 54-52-05-400-801			410	ARO ALL
AFT FAIRING ACCESS DOORS - ADJUSTMENT/TEST	54-52-05		501	ARO ALL
Aft Fairing Access Door Adjustment TASK 54-52-05-200-801			501	ARO ALL



CHAPTER 54 NACELLES/PYLONS

CHAPTER SECTION

	SECTION			
SUBJECT	SUBJECT	CONF	<u>PAGE</u>	EFFECT
AFT FAIRING ACCESS PANELS - REMOVAL/INSTALLATION	54-52-06		401	ARO ALL
Aft Fairing Access Panel Removal TASK 54-52-06-000-801			401	ARO ALL
Aft Fairing Access Panel Installation TASK 54-52-06-400-801			417	ARO ALL
STRUT TRAILING EDGE - REMOVAL/INSTALLATION	54-52-07		401	ARO ALL
Strut Trailing Edge Removal TASK 54-52-07-000-801			401	ARO ALL
Strut Trailing Edge Installation TASK 54-52-07-400-801			405	ARO ALL
STRUT ACCESS DOORS - REMOVAL/INSTALLATION	54-53-01	1	401	ARO ALL
Strut Access Doors Removal TASK 54-53-01-000-802-001		1	401	ARO ALL
Strut Access Doors Installation TASK 54-53-01-400-802-001		1	409	ARO ALL
STRUT FAIRINGS - REMOVAL/INSTALLATION	54-53-02	1	401	ARO ALL
Strut Fairings Removal TASK 54-53-02-000-801-001		1	401	ARO ALL
Strut Fairings Installation TASK 54-53-02-400-801-001		1	404	ARO ALL
STRUT PRESSURE RELIEF DOOR LATCHES - REMOVAL/INSTALLATION	54-53-03	1	401	ARO ALL
Strut Pressure Relief Door Latch Removal TASK 54-53-03-000-803-001		1	401	ARO ALL
Strut Pressure Relief Door Latch Installation TASK 54-53-03-000-804-001		1	406	ARO ALL
STRUT PRESSURE RELIEF DOOR LATCHES - ADJUSTMENT/TEST	54-53-03		501	ARO ALL
Strut Pressure Relief Door Latch Test TASK 54-53-03-200-801			501	ARO ALL



CHAPTER 54 NACELLES/PYLONS

CHAPTER SECTION

	SECTION			
SUBJECT	SUBJECT	CONF	<u>PAGE</u>	EFFECT
STRUT FIRE SEAL AND FIREWALL - INSPECTION/CHECK	54-54-00	1	601	ARO ALL
Strut Fireseal and Firewall Examination TASK 54-54-00-200-802-001		1	601	ARO ALL
THERMAL BLANKET - REMOVAL/INSTALLATION	54-54-01	1	401	ARO ALL
Strut Forward Thermal Blanket Removal TASK 54-54-01-000-803-001		1	401	ARO ALL
Strut Mid Thermal Blanket Removal TASK 54-54-01-000-804-001		1	409	ARO ALL
Strut Aft Thermal Blanket Removal TASK 54-54-01-000-805-001		1	418	ARO ALL
Aft Fairing Heatshield Thermal Blanket Removal TASK 54-54-01-000-818-001		1	423	ARO 001-013
Aft Fairing Heatshield Thermal Blanket Removal TASK 54-54-01-000-821-001		1	431	ARO 014-999
Strut Forward Thermal Blanket Installation TASK 54-54-01-400-803-001		1	436	ARO ALL
Strut Mid Thermal Blanket Installation TASK 54-54-01-400-804-001		1	438	ARO ALL
Strut Aft Thermal Blanket Installation TASK 54-54-01-400-805-001		1	442	ARO ALL
Aft Fairing Heatshield Thermal Blanket Installation TASK 54-54-01-400-818-001		1	444	ARO 001-013
Aft Fairing Heatshield Thermal Blanket Installation TASK 54-54-01-400-821-001		1	448	ARO 014-999
STRUT THERMAL INSULATION BLANKET - REPAIRS	54-54-01		801	ARO ALL
Repair For Small Area of Localized Damage TASK 54-54-01-300-801			801	ARO ALL
AFT FAIRING HEATSHIELD SEAL - REMOVAL/INSTALLATION	54-54-03	1	401	ARO ALL
Aft Fairing Heatshield Seal Removal TASK 54-54-03-000-801-001		1	401	ARO ALL
Aft Fairing Heatshield Seal Installation TASK 54-54-03-400-801-001		1	403	ARO ALL



CHAPTER 54 NACELLES/PYLONS

CHAPTER SECTION

	SECTION			
SUBJECT	SUBJECT	CONF	<u>PAGE</u>	EFFECT
AFT FAIRING HEATSHIELD SEAL - INSPECTION/CHECK	54-54-03		601	ARO ALL
Aft Fairing Heatshield Seal Inspection TASK 54-54-03-000-804			601	ARO ALL
STRUT DRAINS - MAINTENANCE PRACTICES	54-55-01	1	201	ARO ALL
Strut Drain Clean TASK 54-55-01-100-801-001		1	201	ARO ALL
Aft Fairing Drain Clean TASK 54-55-01-100-802-001		1	209	ARO ALL
STRUT DRAINS - INSPECTION/CHECK	54-55-01	1	601	ARO ALL
Leak Check of the Strut Forward Vapor Barrier TASK 54-55-01-200-807-001		1	601	ARO ALL
Leak Check of the Left Strut Upper Spar TASK 54-55-01-200-840-001		1	610	ARO ALL
Leak Check of the Right Strut Upper Spar TASK 54-55-01-200-841-001		1	613	ARO ALL
Leak Check of the Strut Lower Spar TASK 54-55-01-200-809-001		1	617	ARO ALL
Leak Check of the Strut Aft Vapor Barrier TASK 54-55-01-200-810-001		1	621	ARO ALL
Leak Check of the Aft Fairing TASK 54-55-01-200-811-001		1	624	ARO ALL



NACELLES/PYLONS - CORROSION INSPECTIONS - MAINTENANCE PRACTICES

1. General

A. This procedure contains MSG-3 task card data.

TASK 54-05-01-210-803

2. INTERNAL - GENERAL VISUAL: AFT STRUT FAIRING - LEFT NACELLE STRUT

_		
Λ	References	
—	Deletelles	

Reference	Title
51-05-01-210-807	777 Basic Task Description (P/B 201)

B. Inspection

SUBTASK 54-05-01-210-003

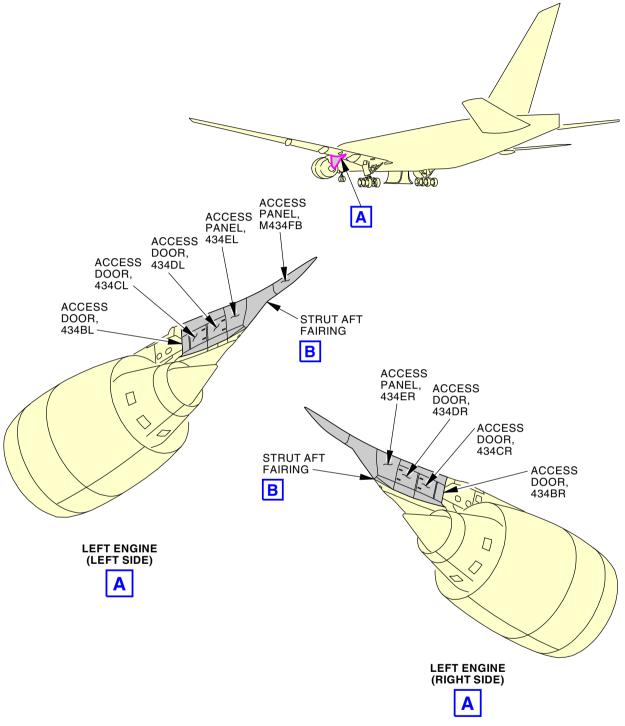
(1) Do the inspection777 Basic Task Description, TASK 51-05-01-210-807.

----- END OF TASK -----

ARO ALL

54-05-01





K25957 S0006397587_V3

Aft Strut Fairing - Left Nacelle Strut Figure 201/54-05-01-990-807 (Sheet 1 of 3)

EFFECTIVITY

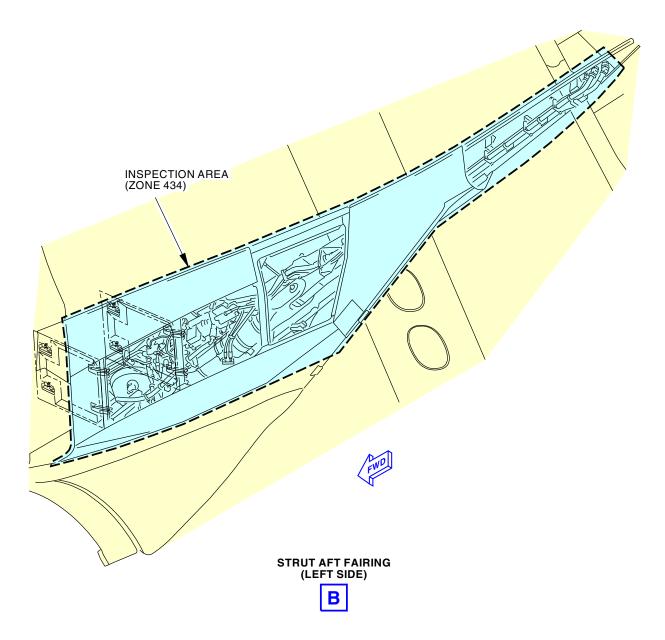
ARO ALL

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K25960 S0006397588_V3

Aft Strut Fairing - Left Nacelle Strut Figure 201/54-05-01-990-807 (Sheet 2 of 3)

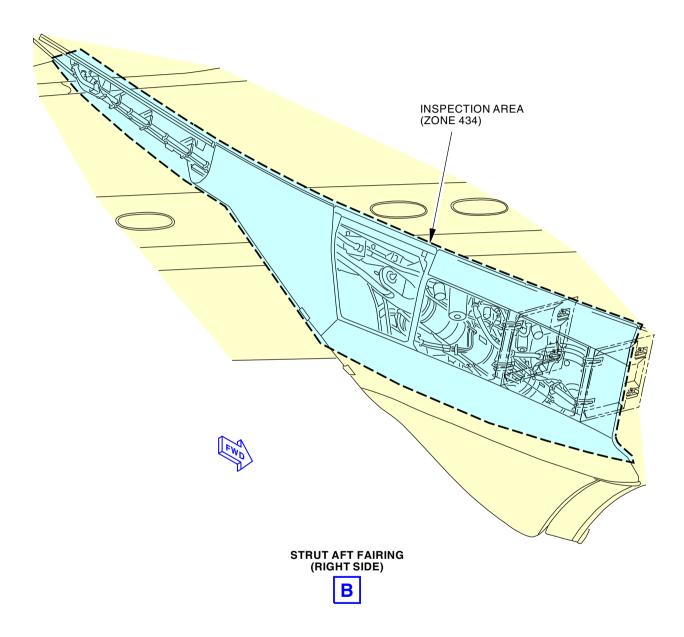
ARO ALL

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K25961 S0006397589_V3

Aft Strut Fairing - Left Nacelle Strut Figure 201/54-05-01-990-807 (Sheet 3 of 3)

ARO ALL
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TASK 54-05-01-210-804

3. INTERNAL - GENERAL VISUAL: AFT STRUT FAIRING - RIGHT NACELLE STRUT

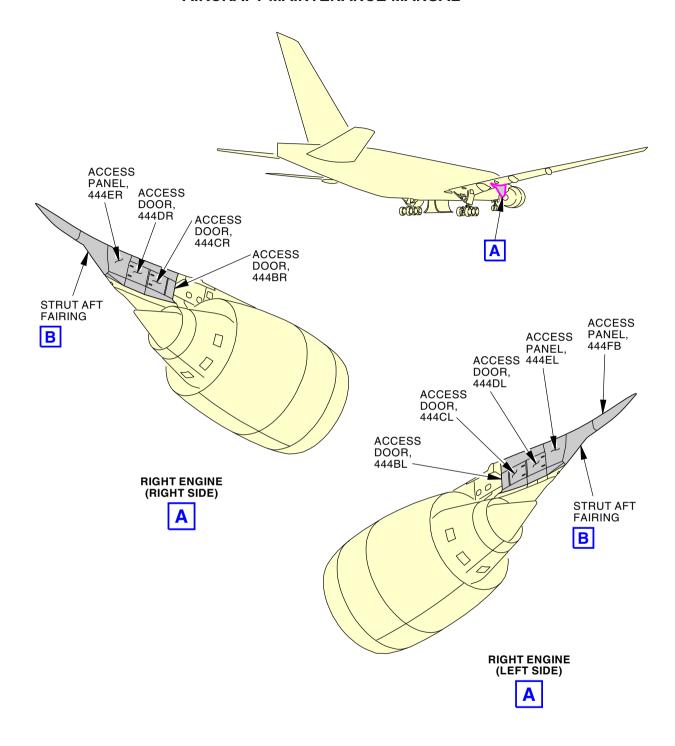
A.	References			
	Reference	Title		
	51-05-01-210-802	777 Basic Task Description (P/B 201)		
B.	B. Inspection SUBTASK 54-05-01-210-004			
	(1) Do the inspection777 Basic Task Description, TASK 51-05-01-210-802.			

----- END OF TASK -----

ARO ALL

54-05-01





K33790 S0006397601_V3

Aft Strut Fairing - Right Nacelle Strut Figure 202/54-05-01-990-811 (Sheet 1 of 3)

ARO ALL

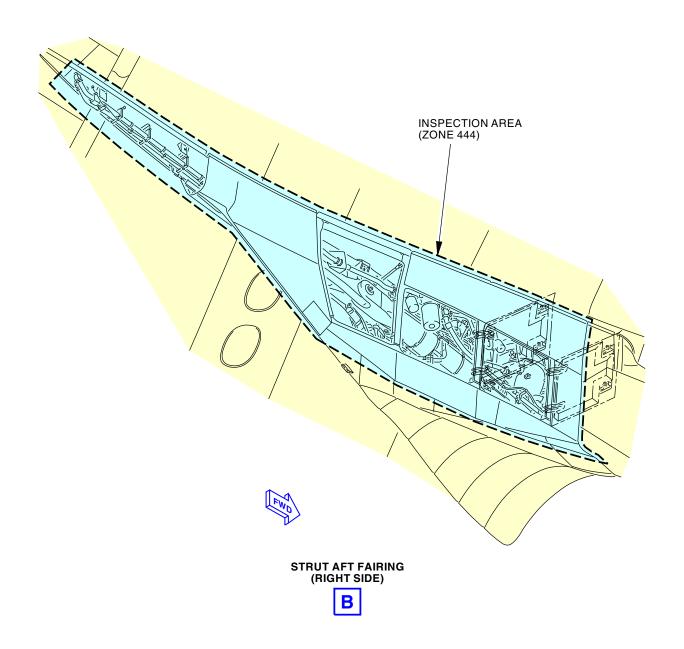
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54-05-01

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K33792 S0006397602_V3

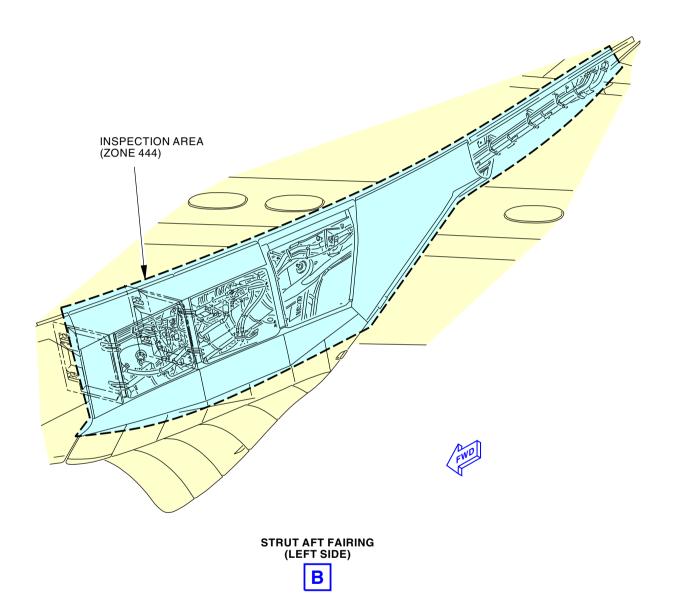
Aft Strut Fairing - Right Nacelle Strut Figure 202/54-05-01-990-811 (Sheet 2 of 3)

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54-05-01

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K33793 S0000128537_V2

Aft Strut Fairing - Right Nacelle Strut Figure 202/54-05-01-990-811 (Sheet 3 of 3)

ARO ALL
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NACELLES/PYLONS - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES

1. General

A. This procedure contains MSG-3 task card data.

TASK 54-05-03-210-812

2. EXTERNAL - GENERAL VISUAL: POWERPLANT, LEFT

(Figure 201)

A. Inspection

SUBTASK 54-05-03-210-012

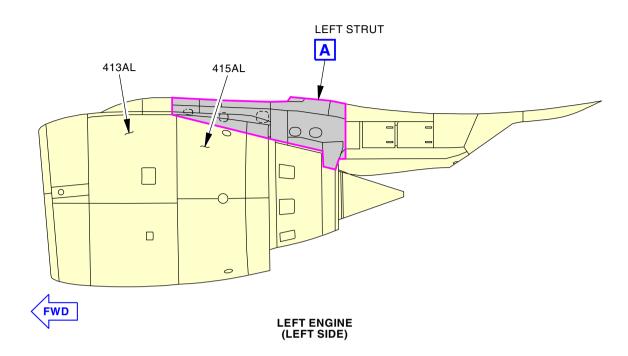
(1) Do the inspection.

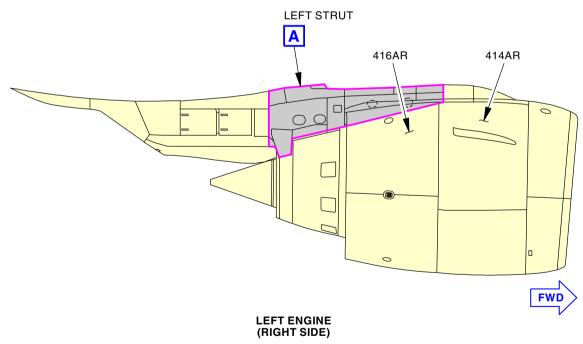
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ARO ALL

54-05-03







G75277 S0006427053_V2

Left Strut Forward and Aft Engine Mount Bulkheads (Left GE90 Series Engine) General Visual (External) Figure 201/54-05-03-990-811 (Sheet 1 of 2)

EFFECTIVITY

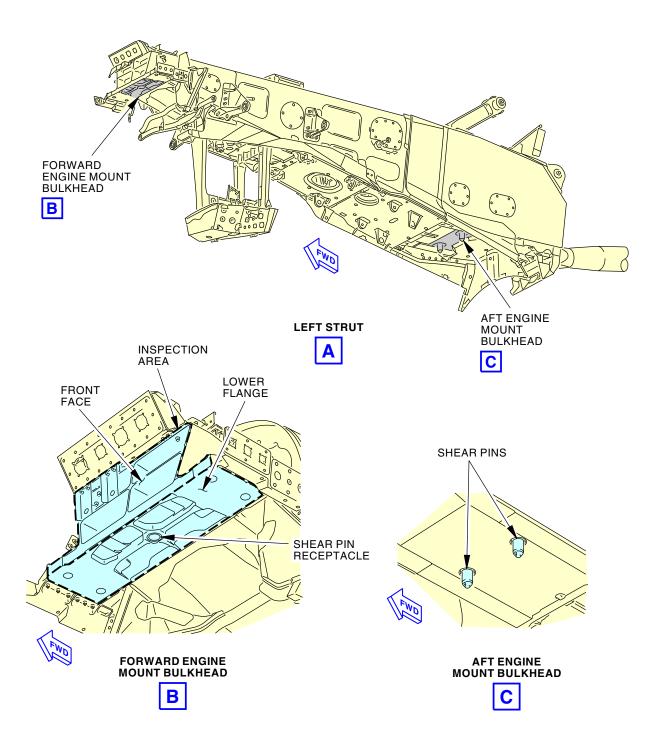
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G91326 S0006427054_V2

Left Strut Forward and Aft Engine Mount Bulkheads (Left GE90 Series Engine) General Visual (External) Figure 201/54-05-03-990-811 (Sheet 2 of 2)

ARO ALL

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TASK 54-05-03-211-811

3. EXTERNAL - DETAILED: POWERPLANT, LEFT

(Figure 202)

A. Inspection

SUBTASK 54-05-03-211-011

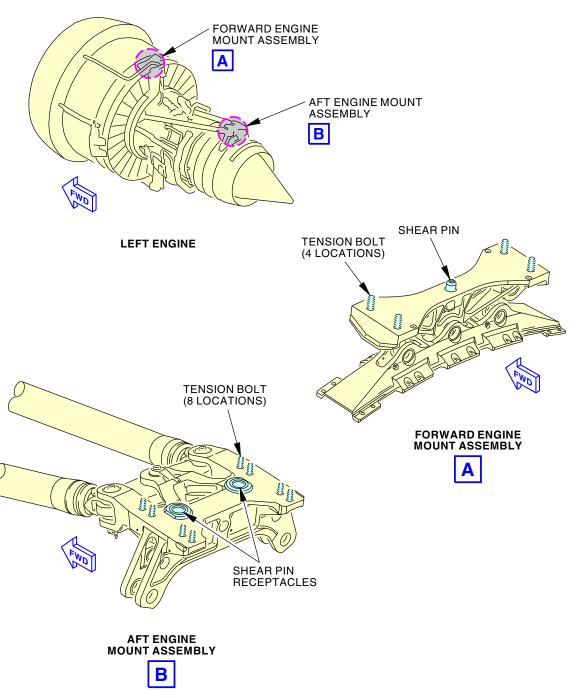
(1) Do the inspection.

----- END OF TASK -----

ARO ALL

54-05-03





G92945 S0006427056_V2

Forward and Aft Engine Mount Assemblies (Left GE90 Series Engine) (External) Figure 202/54-05-03-990-812

EFFECTIVITY

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TASK 54-05-03-210-813

4. EXTERNAL - GENERAL VISUAL: POWERPLANT, RIGHT

(Figure 203)

A. Inspection

SUBTASK 54-05-03-210-013

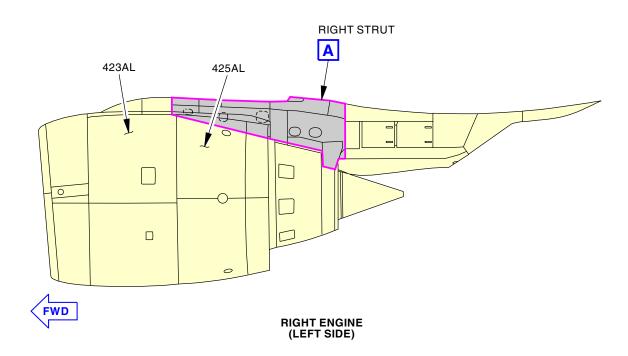
(1) Do the inspection.

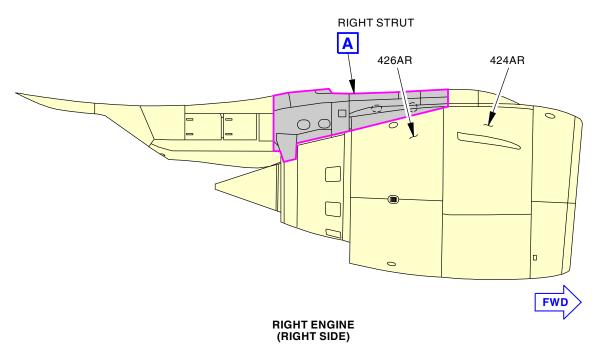
----- END OF TASK -----

ARO ALL

54-05-03







G77552 S0006427058_V2

Right Strut Forward and Aft Engine Mount Bulkheads (Right GE90 Series Engine) General Visual (External)

Figure 203/54-05-03-990-813 (Sheet 1 of 2)

EFFECTIVITY

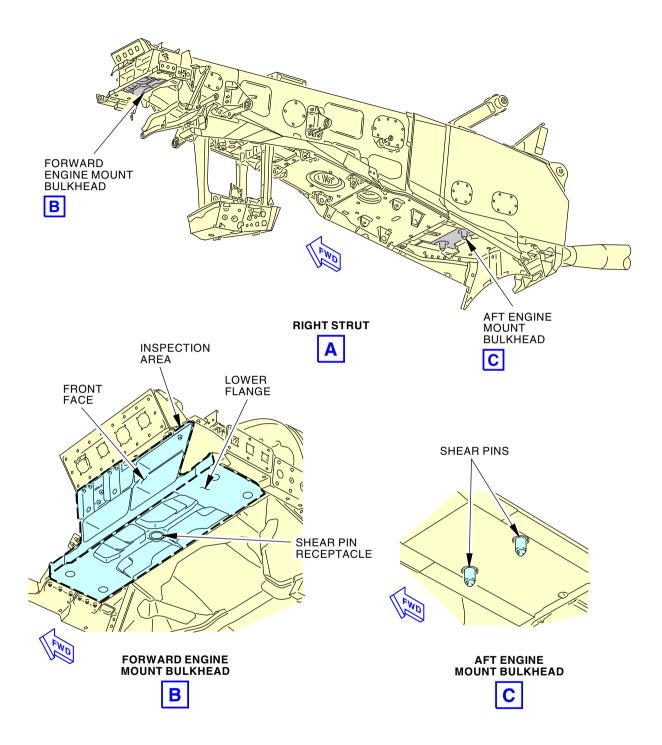
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G91380 S0006427059_V2

Right Strut Forward and Aft Engine Mount Bulkheads (Right GE90 Series Engine) General Visual (External)

Figure 203/54-05-03-990-813 (Sheet 2 of 2)

EFFECTIVITY

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TASK 54-05-03-211-812

5. EXTERNAL - DETAILED: POWERPLANT, RIGHT

(Figure 204)

A. Inspection

SUBTASK 54-05-03-211-012

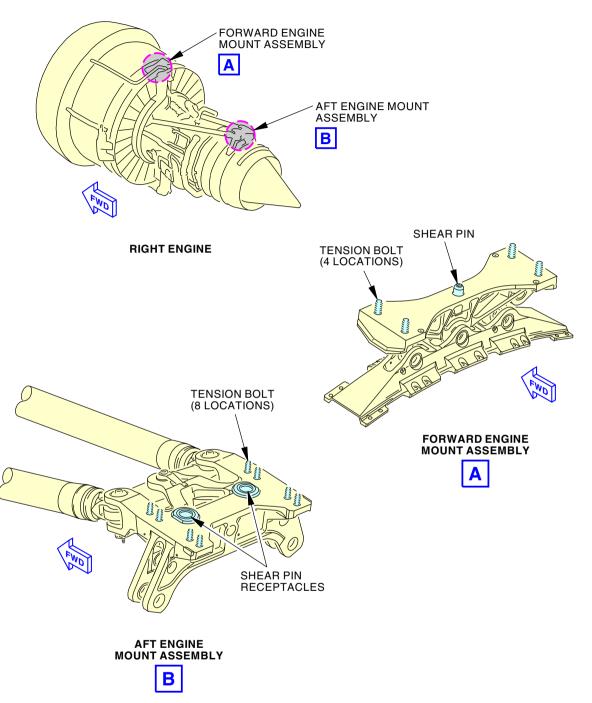
(1) Do the inspection.

----- END OF TASK -----

ARO ALL

54-05-03





G92993 S0006427061_V2

Forward and Aft Engine Mount Assemblies (Right GE90 Series Engine) (External) Figure 204/54-05-03-990-814

EFFECTIVITY

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TASK 54-05-03-211-813

6. INTERNAL - DETAILED: LEFT NACELLE STRUT

(Figure 205)

A. Inspection

SUBTASK 54-05-03-211-013

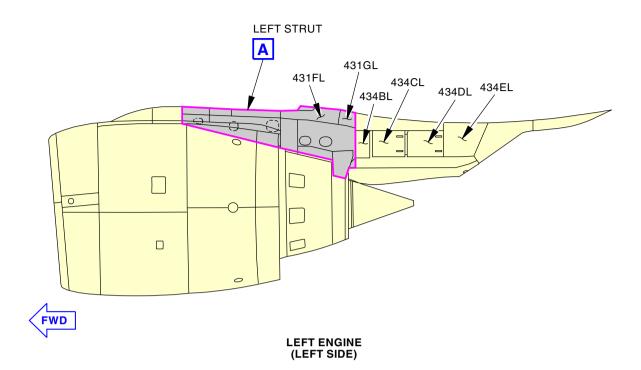
(1) Do the inspection.

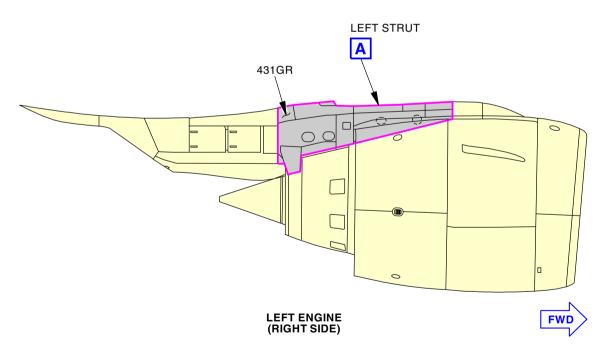
----- END OF TASK -----

ARO ALL

54-05-03







G75607 S0006427063_V2

Left Strut to Wing Attachments (Left GE90 Series Engine) (Internal) Figure 205/54-05-03-990-815 (Sheet 1 of 2)

EFFECTIVITY

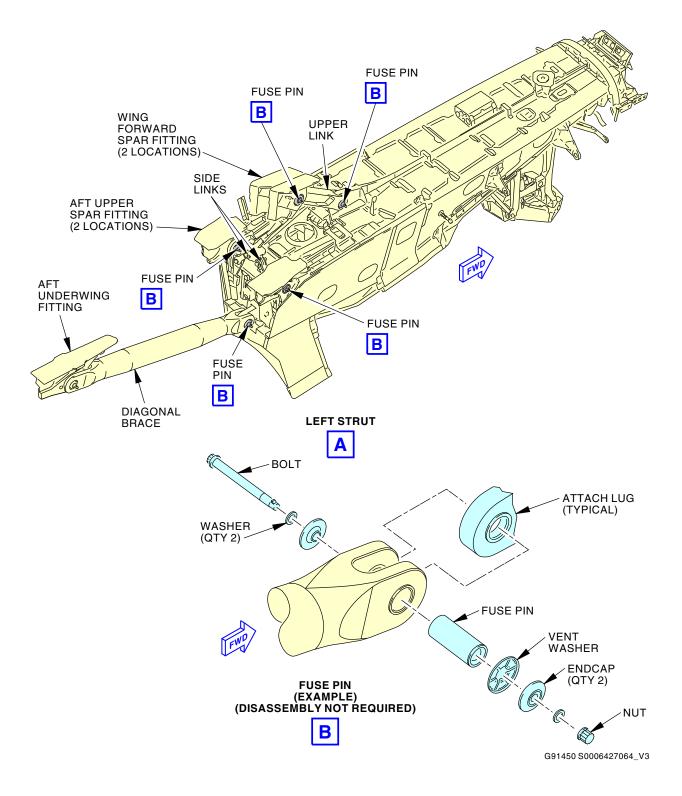
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Left Strut to Wing Attachments (Left GE90 Series Engine) (Internal) Figure 205/54-05-03-990-815 (Sheet 2 of 2)

EFFECTIVITY

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TASK 54-05-03-211-814

7. INTERNAL - SPECIAL DETAILED: LEFT NACELLE STRUT

(Figure 206)

A. Job Set-up

SUBTASK 54-05-03-010-001

- (1) Open access panels, reference Figure 206
- B. Inspection

SUBTASK 54-05-03-211-014

- (1) Do the inspection.
- C. Job Close-up

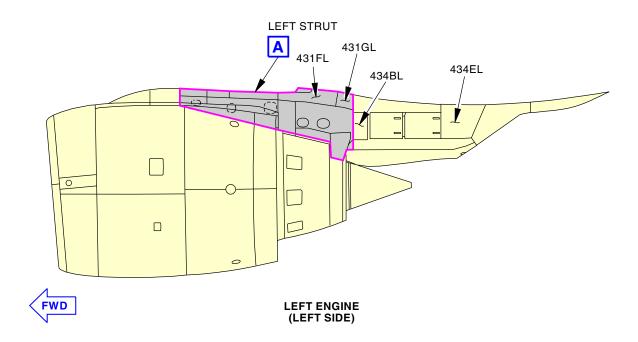
SUBTASK 54-05-03-410-001

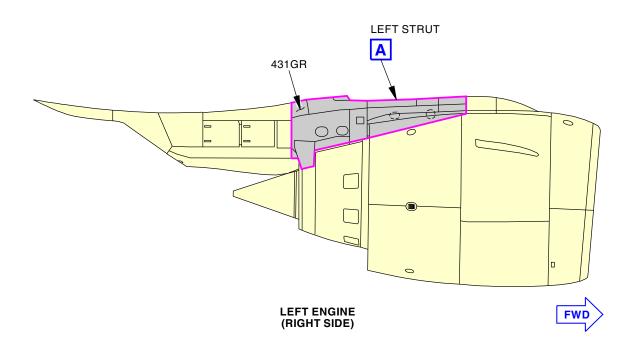
(1) Close access panels, reference Figure 206

——— END OF TASK ———

ARO ALL







G75892 S0006427066_V2

Left Strut to Wing Fuse Pins (Left GE90 Series Engine) (Internal) Figure 206/54-05-03-990-816 (Sheet 1 of 2)

EFFECTIVITY

ARO ALL

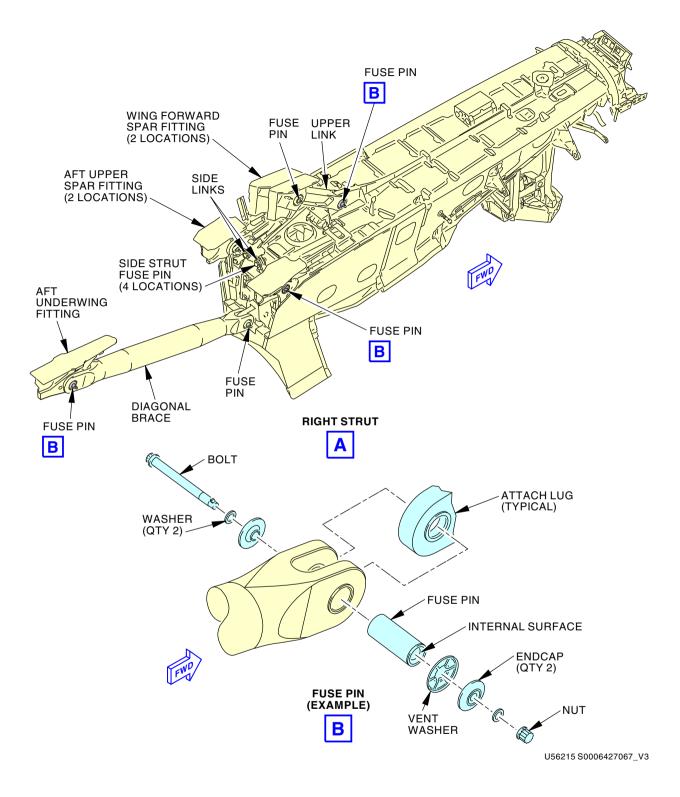
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Left Strut to Wing Fuse Pins (Left GE90 Series Engine) (Internal) Figure 206/54-05-03-990-816 (Sheet 2 of 2)

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TASK 54-05-03-210-814

8. INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - LEFT NACELLE STRUT (Figure 207)

A. Inspection

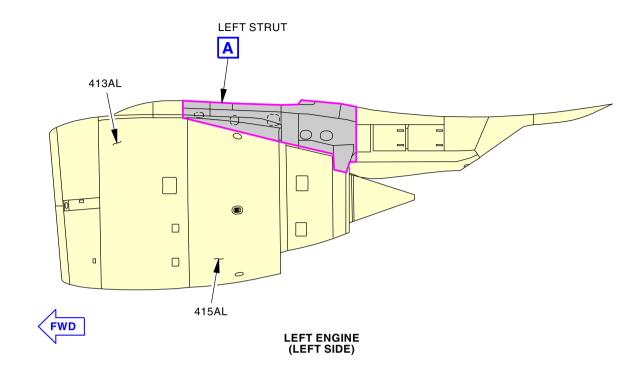
SUBTASK 54-05-03-210-014

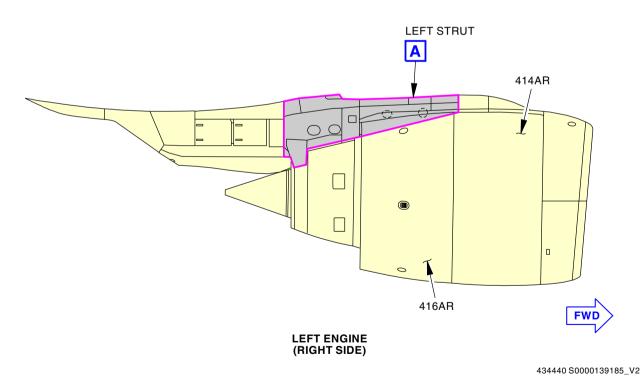
(1) Do the inspection.

----- END OF TASK -----

ARO ALL







Forward Torque Box - Left Nacelle Strut (Left GE90 Series Engine) General Visual Figure 207/54-05-03-990-817 (Sheet 1 of 2)

EFFECTIVITY

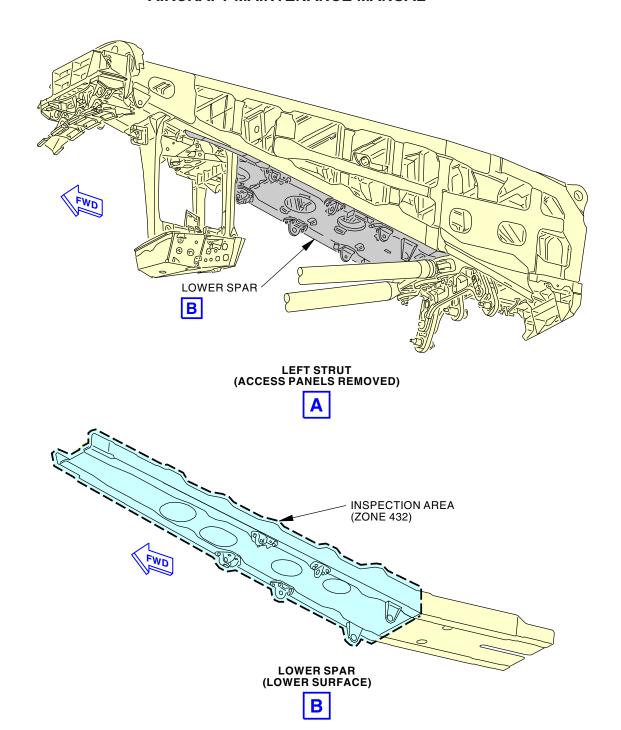
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N78391 S0006427071_V4

Forward Torque Box - Left Nacelle Strut (Left GE90 Series Engine) General Visual Figure 207/54-05-03-990-817 (Sheet 2 of 2)

EFFECTIVITY

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TASK 54-05-03-210-832

9. INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - LEFT NACELLE STRUT Figure 208

A. Inspection

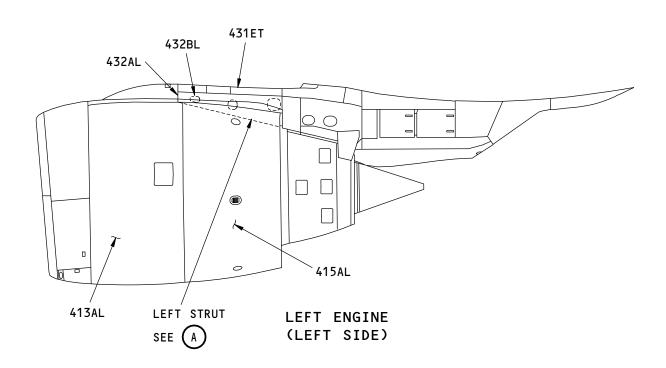
SUBTASK 54-05-03-210-039

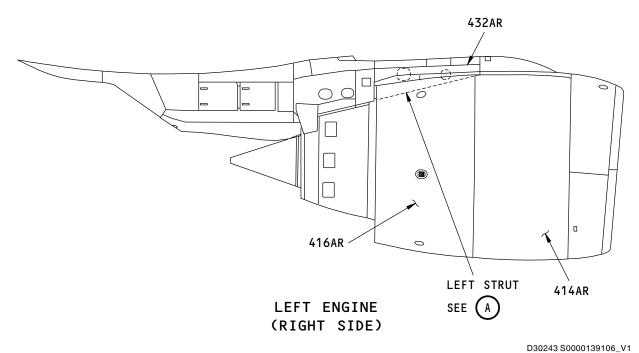
(1) Do the inspection.

----- END OF TASK -----

ARO ALL







Forward Torque Box - Left Nacelle Strut (GE90-115B Series Engine) General Visual (Internal) Figure 208/54-05-03-990-850 (Sheet 1 of 4)

FFECTIVITY

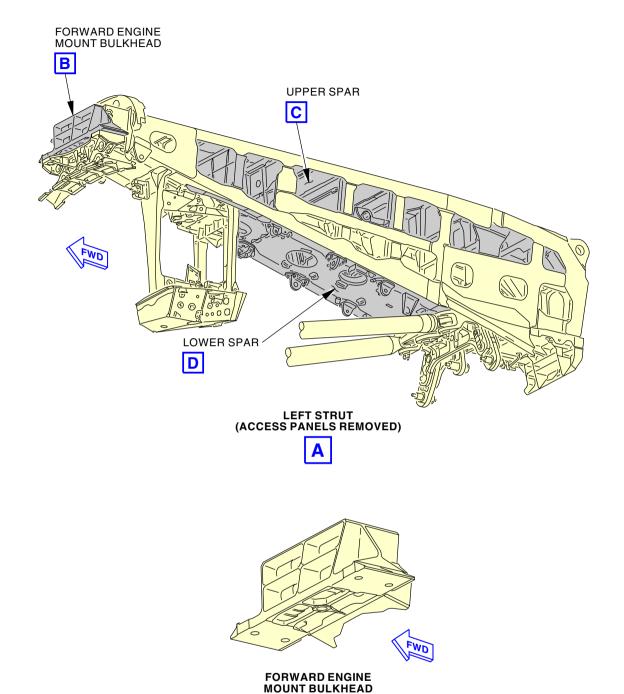
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D30262 S0000139118_V2

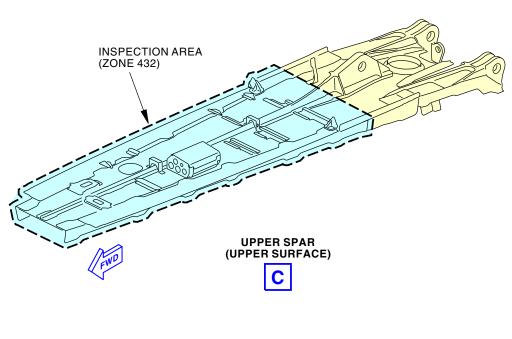
Forward Torque Box - Left Nacelle Strut (GE90-115B Series Engine) General Visual (Internal) Figure 208/54-05-03-990-850 (Sheet 2 of 4)

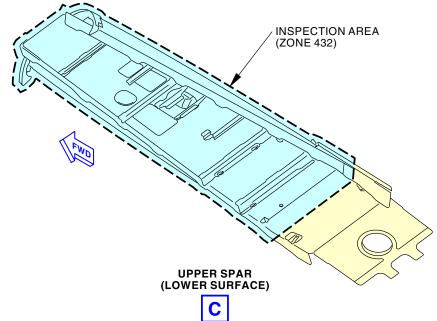
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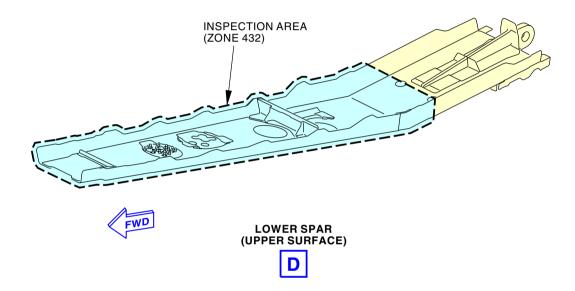


D30267 S0000139119_V2

Forward Torque Box - Left Nacelle Strut (GE90-115B Series Engine) General Visual (Internal) Figure 208/54-05-03-990-850 (Sheet 3 of 4)

ARO ALL
D633W101-ARO





D30268 S0000139120_V2

Forward Torque Box - Left Nacelle Strut (GE90-115B Series Engine) General Visual (Internal) Figure 208/54-05-03-990-850 (Sheet 4 of 4)

ARO ALL



TASK 54-05-03-210-838

10. INTERNAL-GENERAL VISUAL: AFT TORQUE BOX-LEFT NACELLE STRUT

Figure 209

A. Inspection

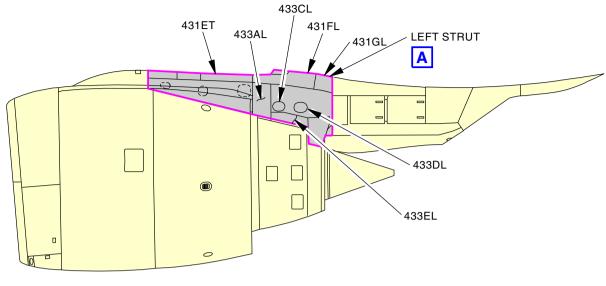
SUBTASK 54-05-03-210-035

(1) Do the inspection.

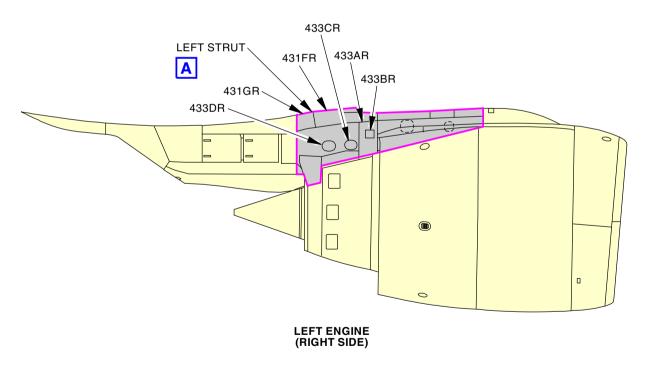
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ARO ALL









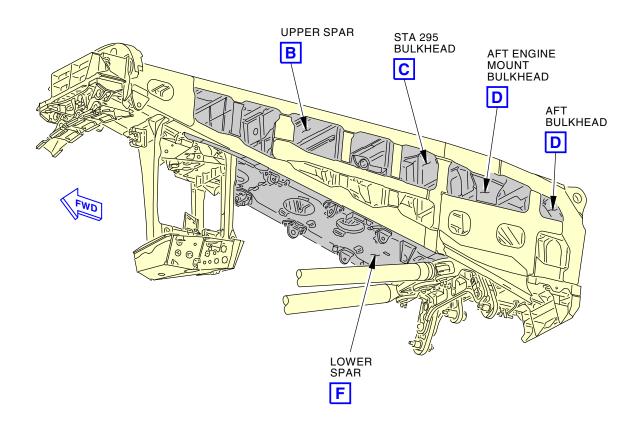
428559 S0000139068_V3

LEFT NACELLE STRUT AFT TORQUE BOX Figure 209/54-05-03-990-867 (Sheet 1 of 5)

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LEFT STRUT (ACCESS PANELS REMOVED)



424382 S0000139069_V2

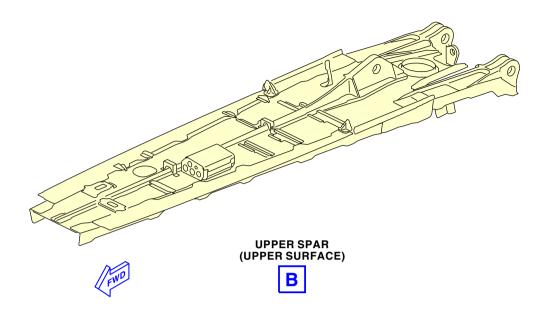
LEFT NACELLE STRUT AFT TORQUE BOX Figure 209/54-05-03-990-867 (Sheet 2 of 5)

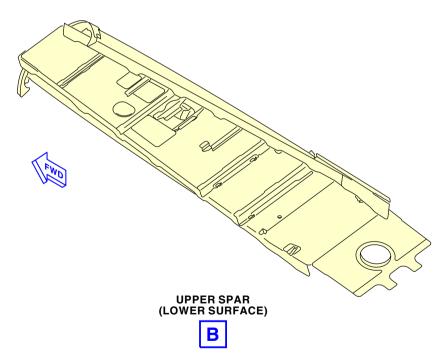
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424383 S0000139071_V2

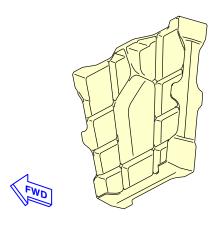
LEFT NACELLE STRUT AFT TORQUE BOX Figure 209/54-05-03-990-867 (Sheet 3 of 5)

ARO ALL

54-05-03

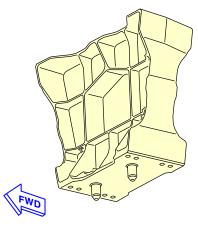
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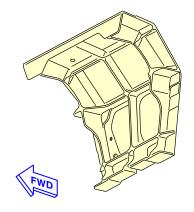
STA 295 BULKHEAD





AFT ENGINE MOUNT BULKHEAD





AFT BULKHEAD

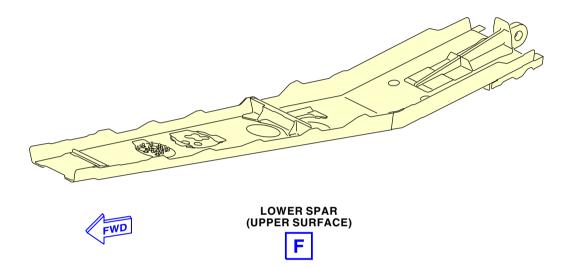


424384 S0000139072_V2

LEFT NACELLE STRUT AFT TORQUE BOX Figure 209/54-05-03-990-867 (Sheet 4 of 5)

ARO ALL





424385 S0000139073_V2

LEFT NACELLE STRUT AFT TORQUE BOX Figure 209/54-05-03-990-867 (Sheet 5 of 5)

ARO ALL

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TASK 54-05-03-211-832

11. INTERNAL - DETAILED: AFT TORQUE BOX - LEFT NACELLE STRUT Figure 210

A. Inspection

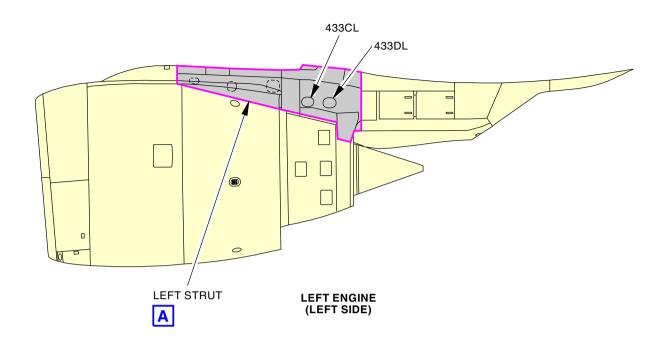
SUBTASK 54-05-03-210-038

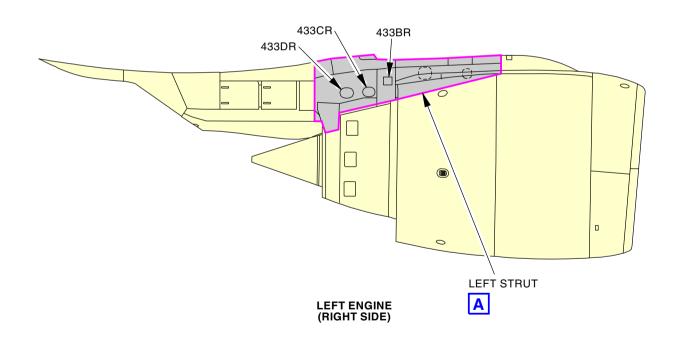
(1) Do the inspection.

----- END OF TASK -----

ARO ALL







D30684 S0000139140_V3

INTERNAL - DETAILED: AFT TORQUE BOX - LEFT NACELLE STRUT Figure 210/54-05-03-990-851 (Sheet 1 of 2)

EFFECTIVITY

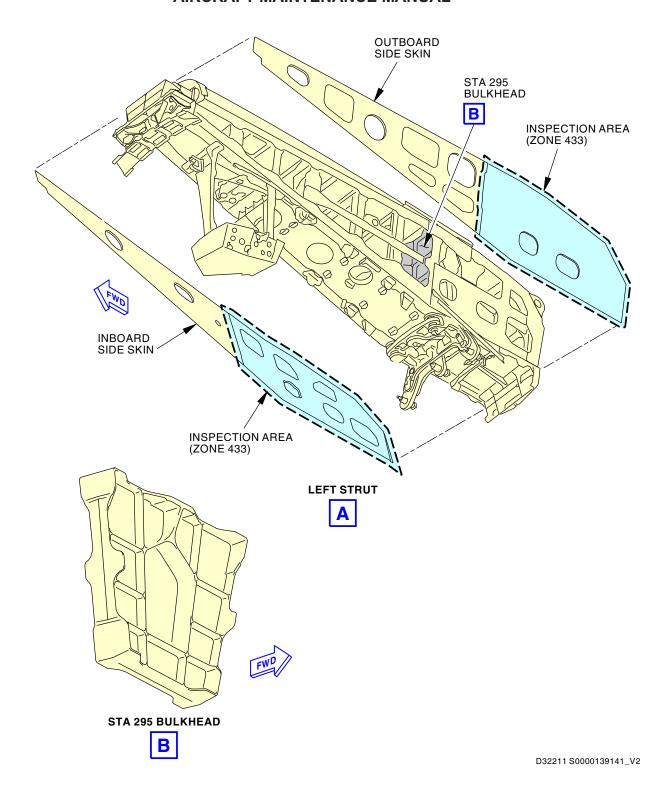
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INTERNAL - DETAILED: AFT TORQUE BOX - LEFT NACELLE STRUT Figure 210/54-05-03-990-851 (Sheet 2 of 2)

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TASK 54-05-03-211-833

- 12. INTERNAL DETAILED: STRUT FORWARD TORQUE BOX
 - A. Inspection

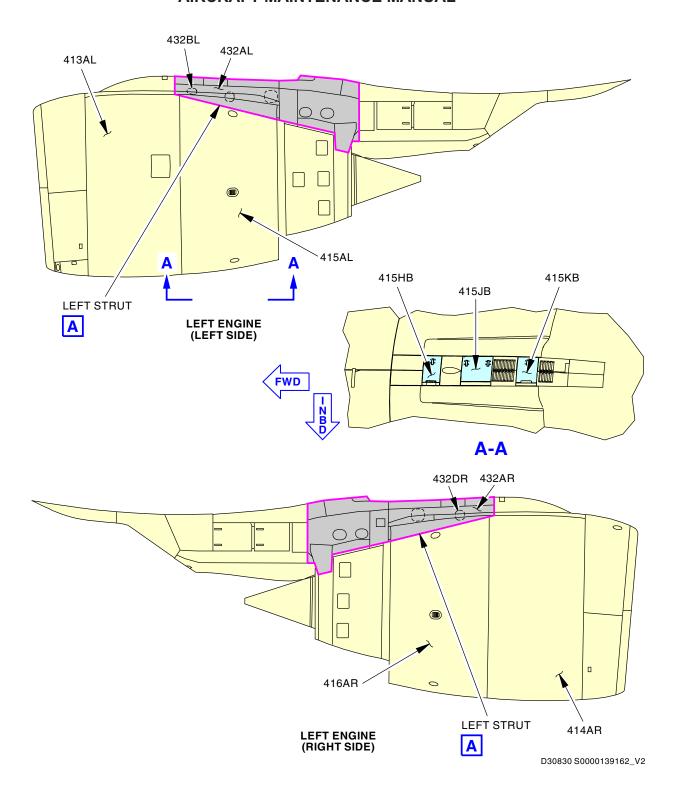
SUBTASK 54-05-03-211-034

(1) Do the inspection.

----- END OF TASK -----

ARO ALL

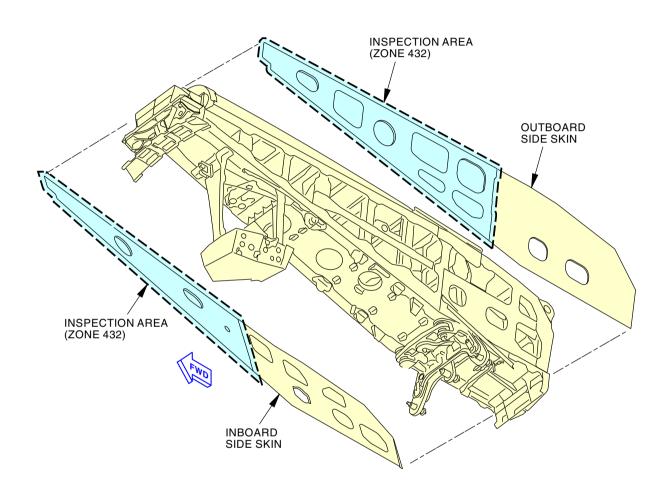




INTERNAL - DETAILED: LEFT STRUT FORWARD TORQUE BOX Figure 211/54-05-03-990-853 (Sheet 1 of 2)







LEFT STRUT



D32209 S0000150380_V2

INTERNAL - DETAILED: LEFT STRUT FORWARD TORQUE BOX Figure 211/54-05-03-990-853 (Sheet 2 of 2)

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TASK 54-05-03-210-837

- 13. INTERNAL GENERAL VISUAL: AFT TORQUE BOX-LEFT NACELLE STRUT
 - A. Inspection

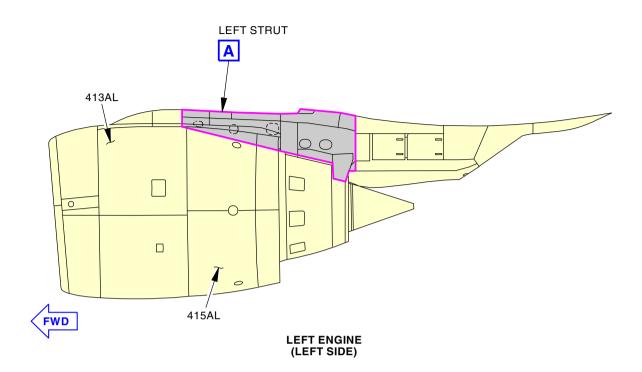
SUBTASK 54-05-03-210-033

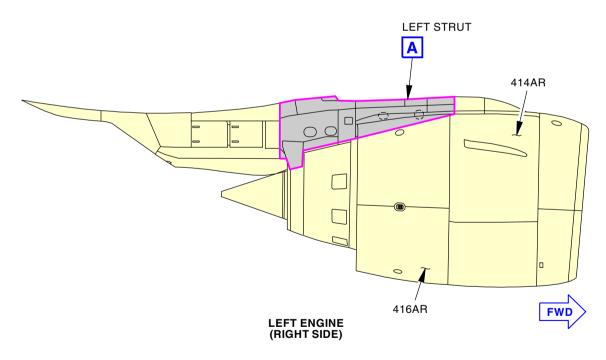
(1) Do the inspection.

----- END OF TASK -----

ARO ALL







N78389 S0006427070_V4

Aft Torque Box - Left Nacelle Strut(Left GE90-115B Series Engine) General Visual Figure 212/54-05-03-990-865 (Sheet 1 of 2)

EFFECTIVITY

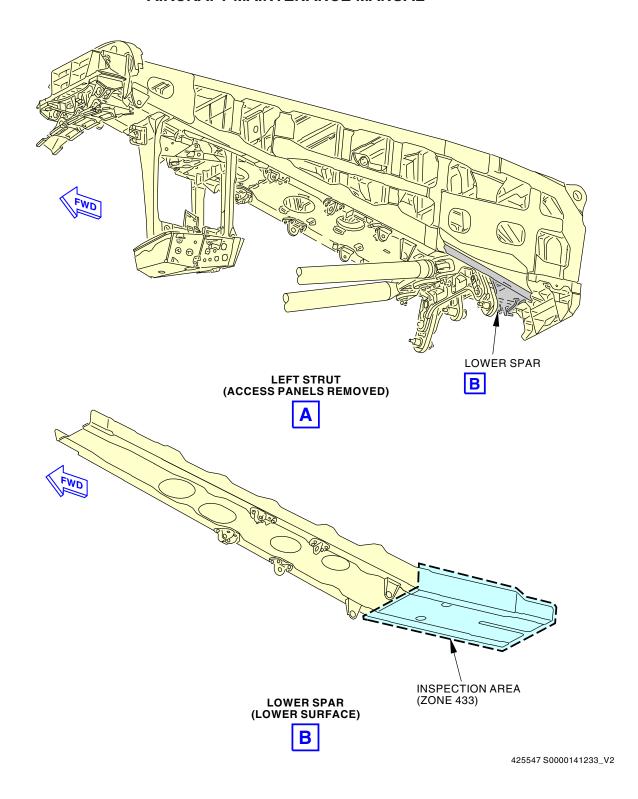
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Aft Torque Box - Left Nacelle Strut(Left GE90-115B Series Engine) General Visual Figure 212/54-05-03-990-865 (Sheet 2 of 2)

EFFECTIVITY

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TASK 54-05-03-211-818

14. INTERNAL - DETAILED: RIGHT NACELLE STRUT

(Figure 213)

A. Inspection

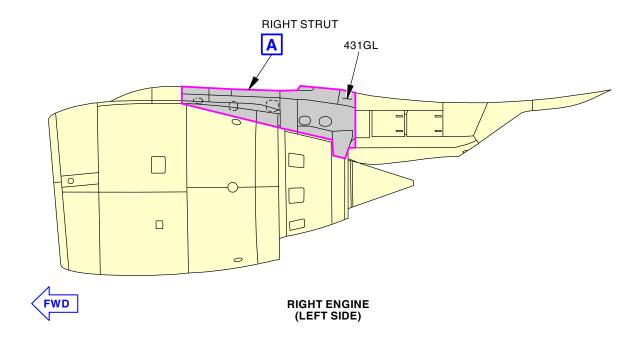
SUBTASK 54-05-03-211-018

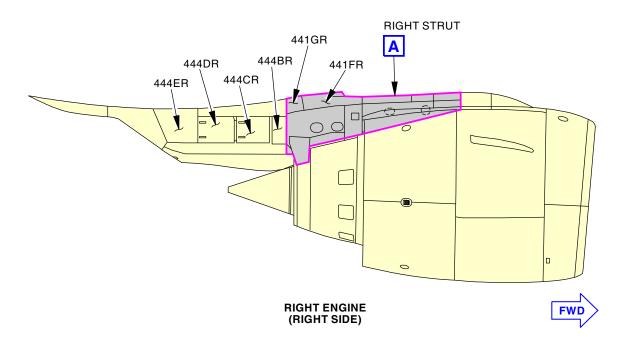
(1) Do the inspection.

----- END OF TASK -----

ARO ALL







G79040 S0006427083_V2

Right Strut to Wing Attachments (Right GE90 Series Engine) (Internal) Figure 213/54-05-03-990-820 (Sheet 1 of 2)

EFFECTIVITY

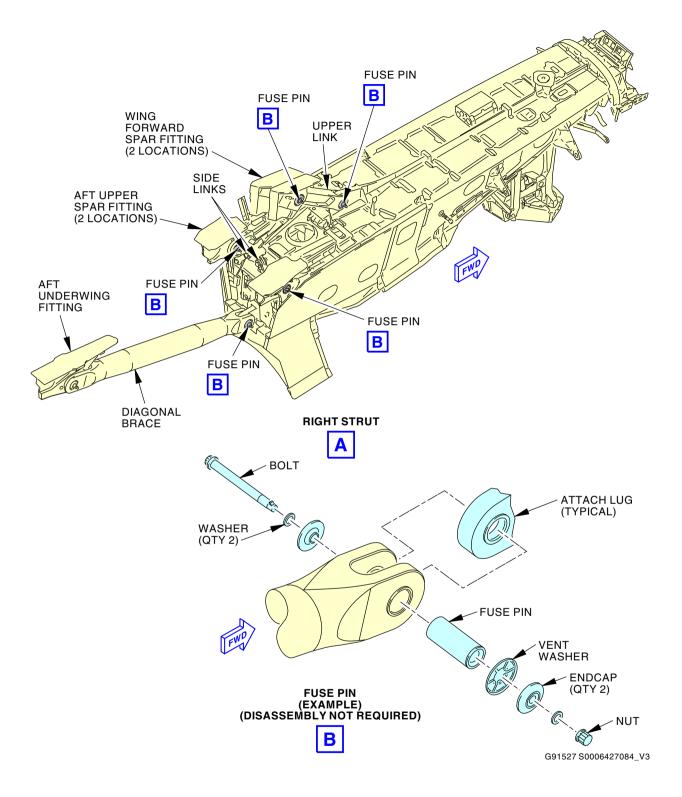
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Right Strut to Wing Attachments (Right GE90 Series Engine) (Internal) Figure 213/54-05-03-990-820 (Sheet 2 of 2)

EFFECTIVITY

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TASK 54-05-03-211-819

15. INTERNAL - SPECIAL DETAILED: RIGHT NACELLE STRUT

(Figure 214)

A. Job Set-up

SUBTASK 54-05-03-010-002

- (1) Open access panels, reference Figure 214
- B. Inspection

SUBTASK 54-05-03-211-019

- (1) Do the inspection.
- C. Job Close-up

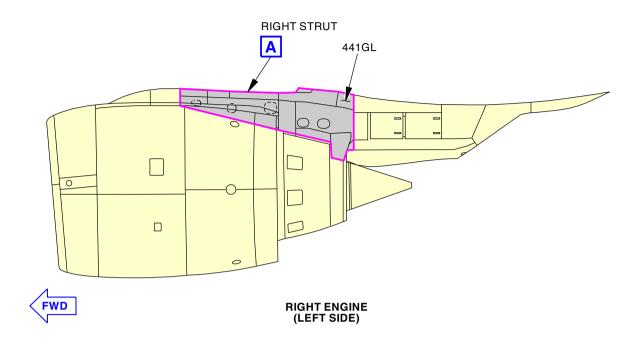
SUBTASK 54-05-03-410-002

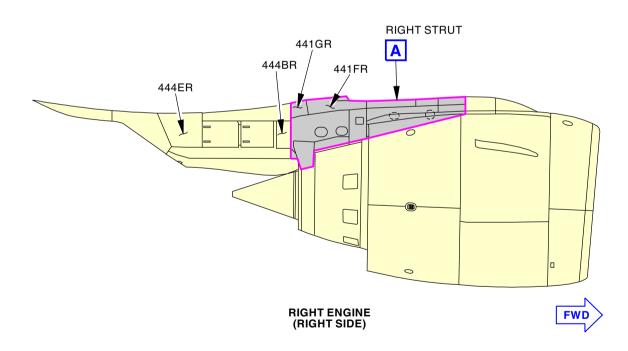
(1) Close access panels, reference Figure 214

----- END OF TASK -----

ARO ALL







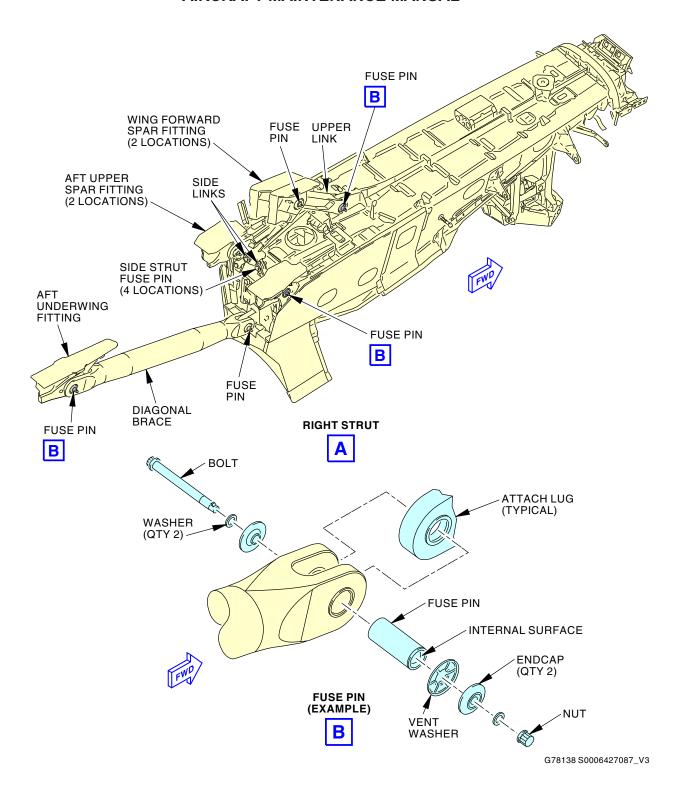
G78079 S0006427086_V2

Right Strut to Wing Fuse Pins (Right GE90 Series Engine) (Internal) Figure 214/54-05-03-990-821 (Sheet 1 of 2)

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Right Strut to Wing Fuse Pins (Right GE90 Series Engine) (Internal) Figure 214/54-05-03-990-821 (Sheet 2 of 2)

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TASK 54-05-03-210-818

16. INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT (Figure 215)

A. Inspection

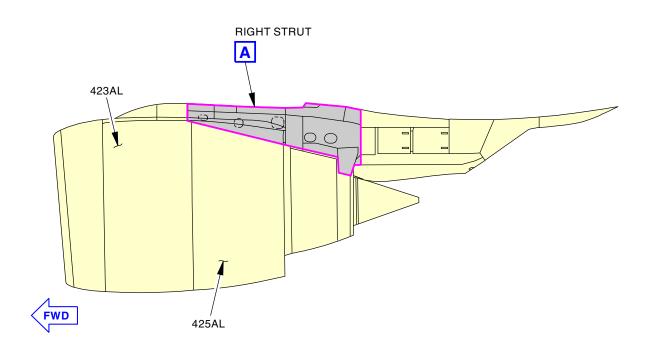
SUBTASK 54-05-03-210-018

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





RIGHT ENGINE (LEFT SIDE)

428801 S0000141173_V3

Right Strut Torque Box (Right GE90 Series Engine) General Visual Figure 215/54-05-03-990-822 (Sheet 1 of 2)

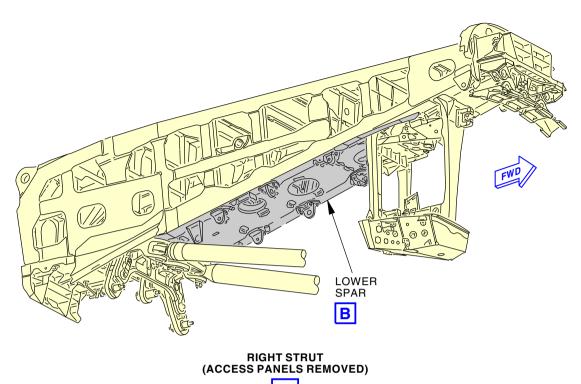
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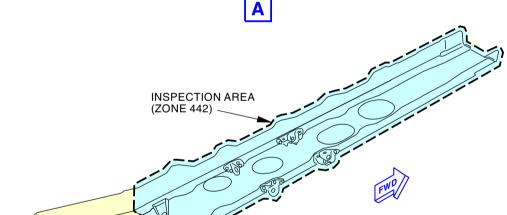
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LOWER SPAR (LOWER SURFACE)

425551 S0000139104_V2

Right Strut Torque Box (Right GE90 Series Engine) General Visual Figure 215/54-05-03-990-822 (Sheet 2 of 2)

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TASK 54-05-03-210-833

- 17. INTERNAL GENERAL VISUAL: FORWARD TORQUE BOX RIGHT NACELLE STRUT
 - A. Inspection

SUBTASK 54-05-03-210-040

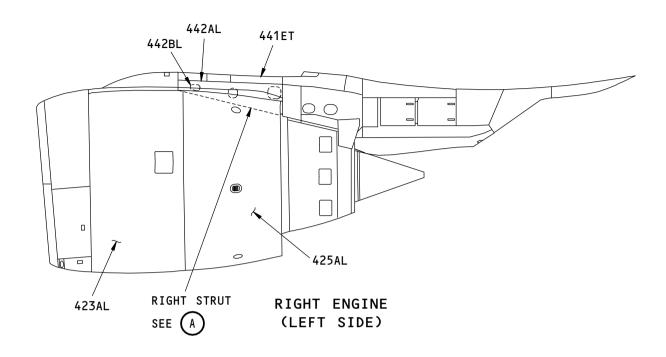
(1) Do the inspection.

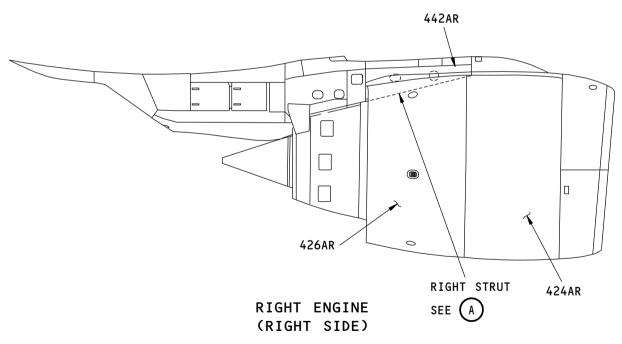
——— END OF TASK ———

ARO ALL

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D30520 S0000149934_V1

INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT Figure 216/54-05-03-990-855 (Sheet 1 of 4)

EFFECTIVITY

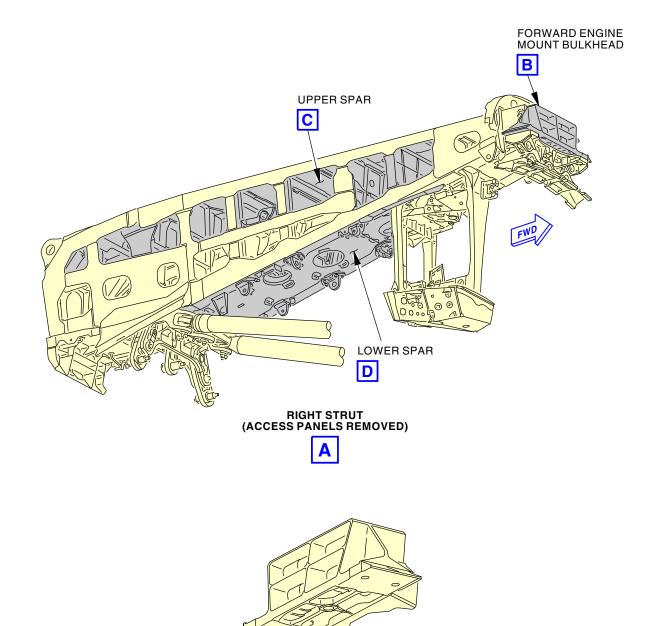
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D30543 S0000139200_V2

INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT Figure 216/54-05-03-990-855 (Sheet 2 of 4)

FORWARD ENGINE MOUNT BULKHEAD

EFFECTIVITY

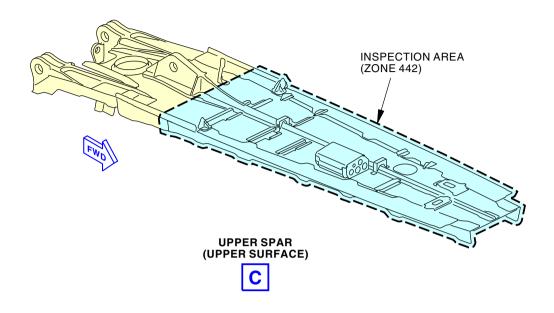
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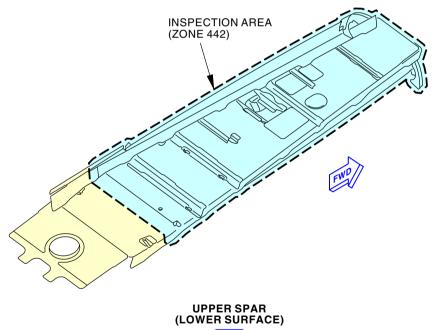
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D30558 S0000139201_V2

INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT Figure 216/54-05-03-990-855 (Sheet 3 of 4)

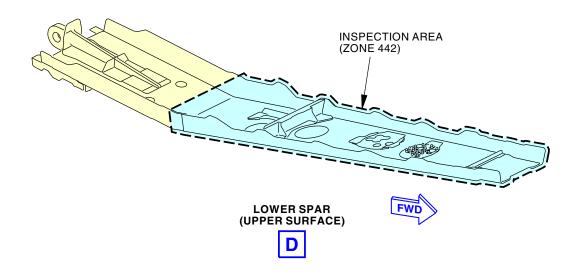
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D30562 S0000139203_V2

INTERNAL - GENERAL VISUAL: FORWARD TORQUE BOX - RIGHT NACELLE STRUT Figure 216/54-05-03-990-855 (Sheet 4 of 4)

EFFECTIVITY

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TASK 54-05-03-210-839

18. INTERNAL-GENERAL VISUAL:AFT TORQUE BOX-RIGHT NACELLE STRUT

A. Inspection

SUBTASK 54-05-03-210-036

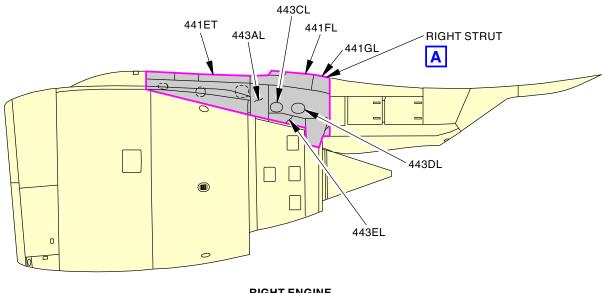
(1) Do the inspection.

——— END OF TASK ———

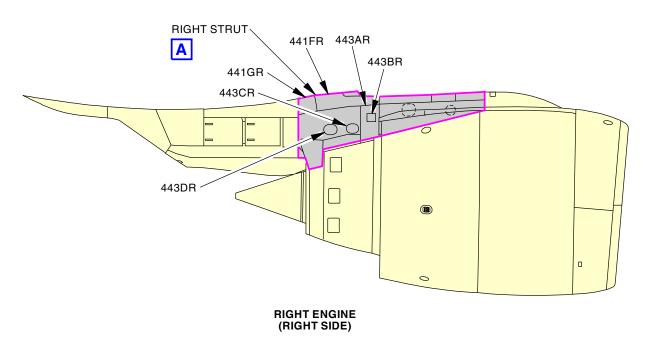
ARO ALL

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RIGHT ENGINE (LEFT SIDE)



424387 S0000139074_V2

Right Strut Aft Torque Box GE115B GE90 Series Engine General Visual Figure 217/54-05-03-990-868 (Sheet 1 of 5)

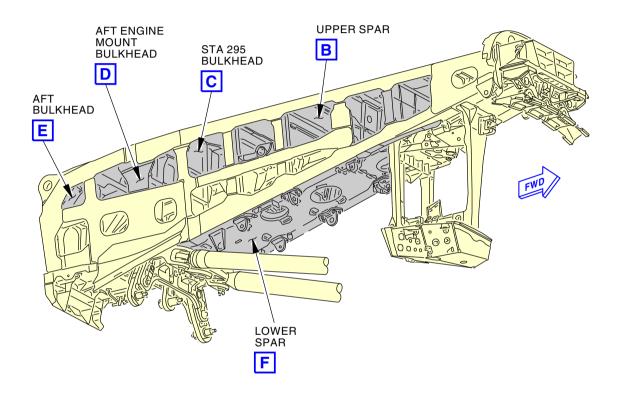
EFFECTIVITY

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RIGHT STRUT (ACCESS PANELS REMOVED)



424388 S0000139075_V2

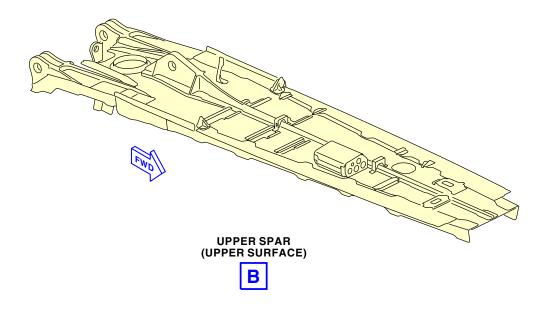
Right Strut Aft Torque Box GE115B GE90 Series Engine General Visual Figure 217/54-05-03-990-868 (Sheet 2 of 5)

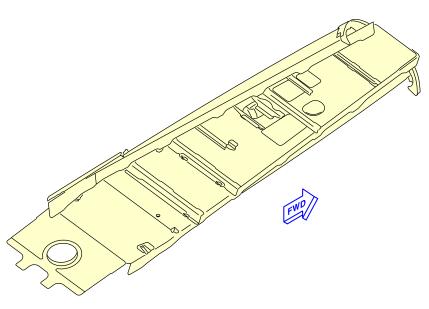
ARO ALL

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UPPER SPAR (LOWER SURFACE)



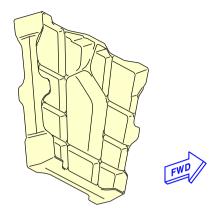
424389 S0000139076_V2

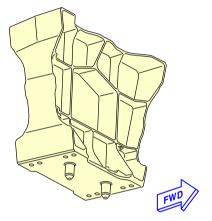
Right Strut Aft Torque Box GE115B GE90 Series Engine General Visual Figure 217/54-05-03-990-868 (Sheet 3 of 5)

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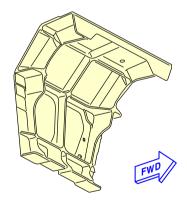






STA 295 BULKHEAD





AFT BULKHEAD

424390 S0000139077_V2

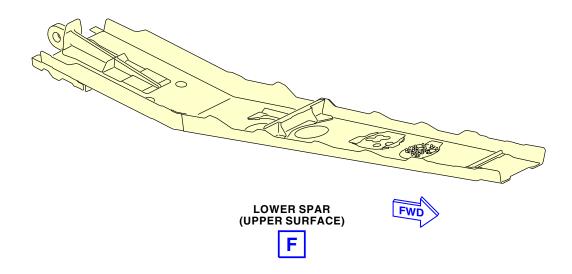
Right Strut Aft Torque Box GE115B GE90 Series Engine General Visual Figure 217/54-05-03-990-868 (Sheet 4 of 5)

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424386 S0000139078_V2

Right Strut Aft Torque Box GE115B GE90 Series Engine General Visual Figure 217/54-05-03-990-868 (Sheet 5 of 5)

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TASK 54-05-03-211-835

- 19. INTERNAL DETAILED: AFT TORQUE BOX RIGHT NACELLE STRUT
 - A. Inspection

SUBTASK 54-05-03-211-032

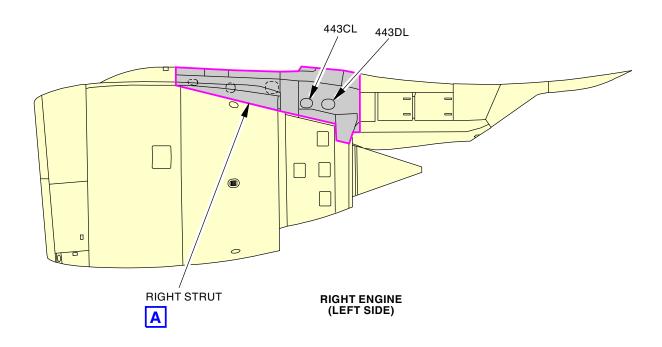
(1) Do the inspection.

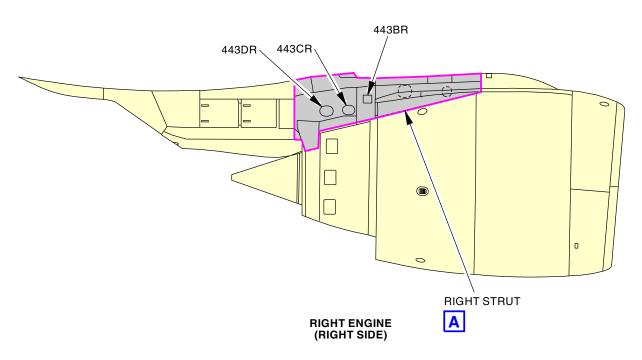
——— END OF TASK ———

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D32212 S0000139669_V3

Right Strut Side Skins GE90 Series Engine Internal Figure 218/54-05-03-990-859 (Sheet 1 of 2)

EFFECTIVITY

ARO ALL

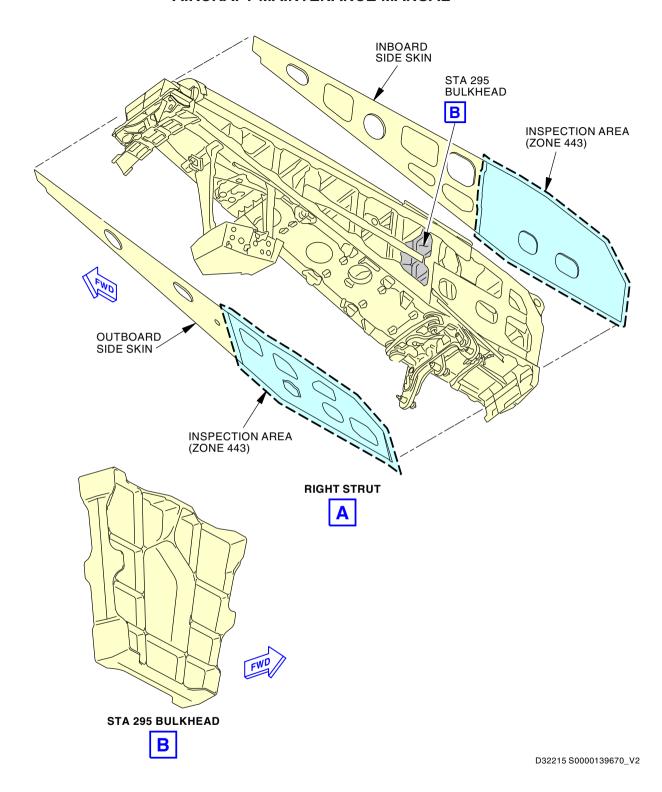
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Right Strut Side Skins GE90 Series Engine Internal Figure 218/54-05-03-990-859 (Sheet 2 of 2)

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TASK 54-05-03-211-834

20. INTERNAL - DETAILED: STRUT FORWARD TORQUE BOX

A. Inspection

SUBTASK 54-05-03-211-033

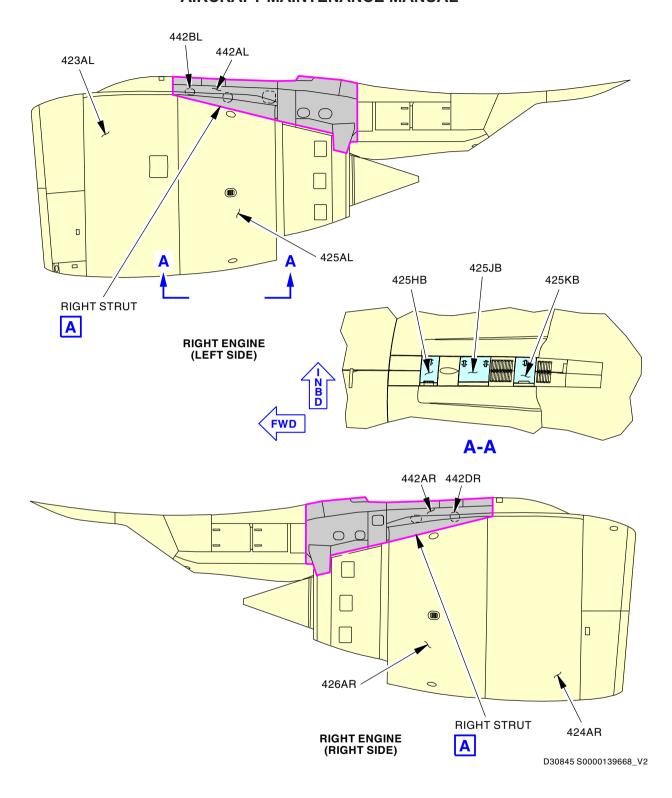
(1) Do the inspection.

----- END OF TASK -----

ARO ALL

54-05-03

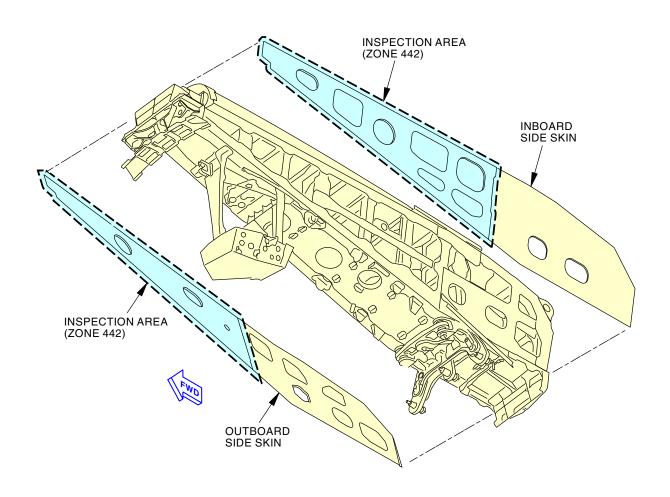




INTERNAL - DETAILED: STRUT FORWARD TORQUE BOX Figure 219/54-05-03-990-857 (Sheet 1 of 2)







RIGHT STRUT



D32210 S0000150377_V3

INTERNAL - DETAILED: STRUT FORWARD TORQUE BOX Figure 219/54-05-03-990-857 (Sheet 2 of 2)

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TASK 54-05-03-210-836

- 21. INTERNAL GENERAL VISUAL: AFT TORQUE BOX-RIGHT NACELLE STRUT
 - A. Inspection

SUBTASK 54-05-03-210-037

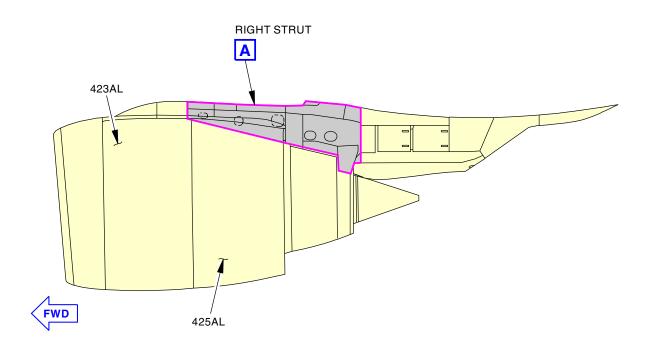
(1) Do the inspection.

——— END OF TASK ———

ARO ALL

54-05-03





RIGHT ENGINE (LEFT SIDE)

428801 S0000141173_V3

Aft Torque Box-Right Nacelle Strut (Right GE90-115 Series Engine) General Visual Figure 220/54-05-03-990-863 (Sheet 1 of 2)

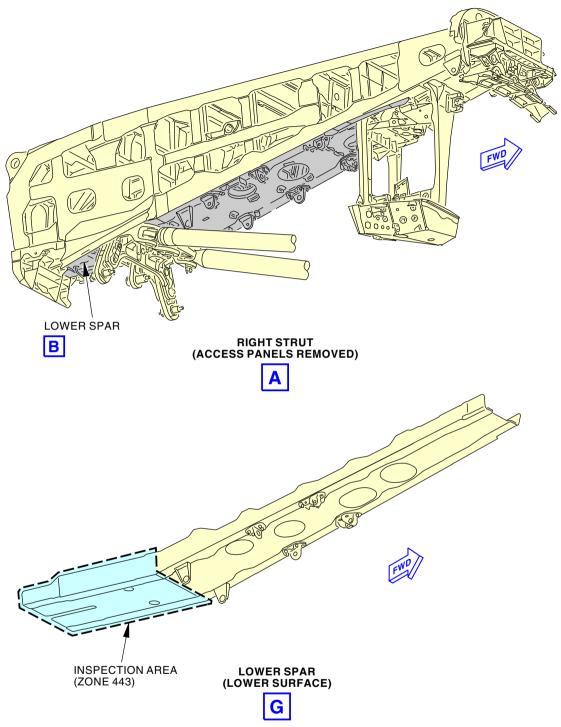
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425552 S0000141228_V2

Aft Torque Box-Right Nacelle Strut (Right GE90-115 Series Engine) General Visual Figure 220/54-05-03-990-863 (Sheet 2 of 2)

EFFECTIVITY

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NACELLE STRUT - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
 - (1) Prepare the strut for maintenance operations.
 - (2) Put the strut back to its usual condition.
 - (3) Support the strut with the engine installed.
 - (4) Remove support from the strut with the engine installed.
 - (5) Support the strut with the engine removed.
 - (6) Remove support from the strut with the engine removed.

TASK 54-51-01-040-802-002

2. Prepare the Strut for Maintenance Operations

A. General

- (1) This task prepares the strut for maintenance operations. Always do this task when you do maintenance operations on or near the nacelle strut.
- (2) This task has these steps:
 - (a) Make the airplane statically grounded.
 - (b) Retract the leading edge slats.
 - (c) Deactivate the leading edge slats.
 - (d) Deactivate the thrust reversers.

B. References

Reference	Title
20-41-00-910-801	Static Grounding (P/B 201)
27-81-00-040-801	Leading Edge Slat - Deactivation (P/B 201)
27-81-00-860-805	Retract the Leading Edge Slats (P/B 201)
54-52-00-910-804-001	Fall Arrest Lifeline Procedure (P/B 201)
78-31-00-040-806-H00	Thrust Reverser Deactivation For Ground Maintenance (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare the Strut for Maintenance Operations

SUBTASK 54-51-01-910-005-002

(1) Make sure the airplane is statically grounded (TASK 20-41-00-910-801).

ARO ALL

54-51-01



SUBTASK 54-51-01-040-065-002



MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE LE FLAPS, TE FLAPS, AND FLAP DRIVE MECHANISMS BEFORE YOU MOVE THE FLAP CONTROL LEVER. WITH HYDRAULIC POWER REMOVED, THE FLAPS WILL MOVE AUTOMATICALLY BY ELECTRICAL POWER WHEN YOU MOVE THE FLAP CONTROL LEVER. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (2) Do these tasks to deactivate the leading edge slats:
 - (a) Do this task: Retract the Leading Edge Slats, TASK 27-81-00-860-805.
 - (b) Do this task: Leading Edge Slat Deactivation, TASK 27-81-00-040-801.

SUBTASK 54-51-01-040-066-002



DO THE DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) To deactivate the thrust reversers, do this task: Thrust Reverser Deactivation For Ground Maintenance, TASK 78-31-00-040-806-H00.

SUBTASK 54-51-01-910-006-002

(4) If it is necessary to use a fall arrest lifeline on the strut, do this task: Fall Arrest Lifeline Procedure, TASK 54-52-00-910-804-001.



TASK 54-51-01-440-802-002

3. Put the Strut Back to its Usual Condition

A. General

- (1) This task puts the strut back to its usual condition after maintenance operations. Always do this task when all maintenance operations on the nacelle strut are complete.
- (2) This task has these steps:
 - (a) Activate the thrust reversers.
 - (b) Activate the leading edge slats.
 - (c) Remove the static ground from the airplane.

B. References

Reference	Title
27-81-00-440-801	Leading Edge Slat Reactivation (P/B 201)
78-31-00-440-805-H00	Thrust Reverser Activation After Ground Maintenance (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

ARO ALL

54-51-01



D. Put the Strut Back to its Usual Condition

SUBTASK 54-51-01-440-005-002

(1) To activate the thrust reversers, do this task: Thrust Reverser Activation After Ground Maintenance, TASK 78-31-00-440-805-H00.

SUBTASK 54-51-01-440-006-002

(2) To activate the leading edge slats, do this task: Leading Edge Slat Reactivation, TASK 27-81-00-440-801.

SUBTASK 54-51-01-910-007-002

(3) If you used a fall arrest lifeline on the strut, make sure you remove the fall arrest lifeline from the strut.

SUBTASK 54-51-01-910-008-002

(4) Remove the static ground from the airplane.



TASK 54-51-01-580-805-002

4. Support the Strut with the Engine Installed

A. General

- (1) This task is the procedure to support the nacelle strut with the engine installed.
- (2) When you remove a strut attach pin, use this procedure to remove the load from the strut pin assembly (that you will remove). Each pin assembly has a pin, bolt, end caps, washers and nut.
- (3) This task has these steps:
 - (a) Prepare the strut for maintenance operations.
 - (b) Make the airplane level.
 - (c) Remove the fan cowl panels.
 - (d) Open the thrust reverser panels.
 - (e) Install the engine support sling.
 - (f) Carefully lift the engine to remove the load from the pin assembly (that you will remove).

B. References

Reference	Title
08-21-00-580-801	Make the Airplane Level (P/B 201)
71-11-04-000-805-H01	Fan Cowl Panels Removal (P/B 401)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (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-4929	Sling - Strut Unload Sling, Engine On-Wing, GE90
	Part #: J54014-105 Supplier: 81205
	Opt Part #: J54014-1 Supplier: 81205
STD-1172	Load Measuring Device - 0-20,000 lb Capacity, +/- 2% Accuracy
STD-1173	Hoist - Chain, 12,000 lb Capacity

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(Continued)

Reference	Description
STD-12291	Load Measuring Device - 0-40,000 lb Capacity, +/- 2% Accuracy
STD-12294	Crane - Lift, 40,000 Lb Capacity

D. Location Zones

Zone	Area	
410	PowerPlant, Left	
420	PowerPlant, Right	
430	Subzone 430 - Left Nacelle Strut	
440	Subzone 440 - Right Nacelle Strut	

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Prepare to Support the Engine

SUBTASK 54-51-01-040-067-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-01-580-014-002

(2) Do this task: Make the Airplane Level, TASK 08-21-00-580-801.

SUBTASK 54-51-01-010-016-002

(3) Remove the applicable fan cowl panels:

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

Fan Cowl Panels Removal, TASK 71-11-04-000-805-H01

SUBTASK 54-51-01-010-017-002

(4)

Open the applicable thrust reverser panels:

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

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SUBTASK 54-51-01-480-021-002

- (5) Install this engine support equipment as shown:
 - (a) strut unload sling, SPL-4929, quantity (1).
 - (b) 40,000 lb capacity lift crane, STD-12294 quantity (1).
 - (c) Load Measuring Device, STD-12291 quantity (1).
 - (d) 0-20,000 lb capacity, +/- 2% accuracy, load measuring device, STD-1172 quantity (2).
 - (e) 12,000 lb capacity chain hoist, STD-1173 quantity (2).

G. Remove the Load from the Applicable Strut Pin Assembly

SUBTASK 54-51-01-580-015-002



DO NOT LIFT THE ENGINE WITH A FORCE WHICH IS MORE THAN NECESSARY TO PERMIT THE PIN ASSEMBLY TO TURN WHEN YOU APPLY 125 POUND-INCHES MAXIMUM TORQUE. DO NOT APPLY A TOTAL LOAD OF MORE THAN 24,600 POUNDS (MORE THAN THE WEIGHT OF THE EQUIPMENT). DO NOT APPLY A LOAD OF MORE THAN 12,300 POUNDS AT ONE ATTACH POINT. DO NOT APPLY A LOAD WITH A DIFFERENCE BETWEEN THE TWO SIDES OF MORE THAN 1,500 POUNDS. LIFT THE ENGINE VERTICALLY. IF YOU LIFT THE ENGINE WITH TOO MUCH FORCE, OR AT AN INCORRECT ANGLE, DAMAGE TO THE ENGINE CAN OCCUR.

- (1) Do these steps to remove the load from the pin assembly (that you will remove):
 - (a) Slowly apply a small load with a crane.
 - (b) Adjust the chain hoists so the loads on the inboard and outboard dynamometers are approximately equal.
 - (c) Move the crane, if it is necessary, to apply a vertical load at the tool attach points.
 - 1) At the side of the engine, visually align the strut sling to make sure you apply the load vertically.
 - 2) At the front or rear of the engine, visually align the sling vertically side-to-side.
 - 3) Monitor the angle of the engine sling side-to-side and forward-aft during the procedure.
 - 4) Monitor the load on the dynamometers during the procedure.
 - (d) Slowly increase the load until you can turn the pin assembly (that you will remove) with a maximum torque of 125 pound-inches.
 - NOTE: If you will remove a diagonal brace pin, the usual load is between 18,000 lb (8165 kg) and 25,000 lb (11,340 kg).
 - NOTE: If you will remove an upper link pin, the usual load is between 20,000 lb (9072 kg) and 24,000 lb (10,886 kg).
 - NOTE: If you will remove an inboard midspar pin, the usual load is between 0 lb (0 kg) and 46,000 lb (20,865 kg).
 - NOTE: If you will remove an outboard midspar pin, the usual load is between 17,000 lb (7711 kg) and 30,000 lb (13,608 kg).
 - 1) Make sure the pin, bolt, end caps, washers and nut turn together as an assembly.
 - 2) You can adjust the chain hoists to more accurately find the correct load.
 - NOTE: When you remove the load correctly, the pin assembly (that you will remove) will turn easily.

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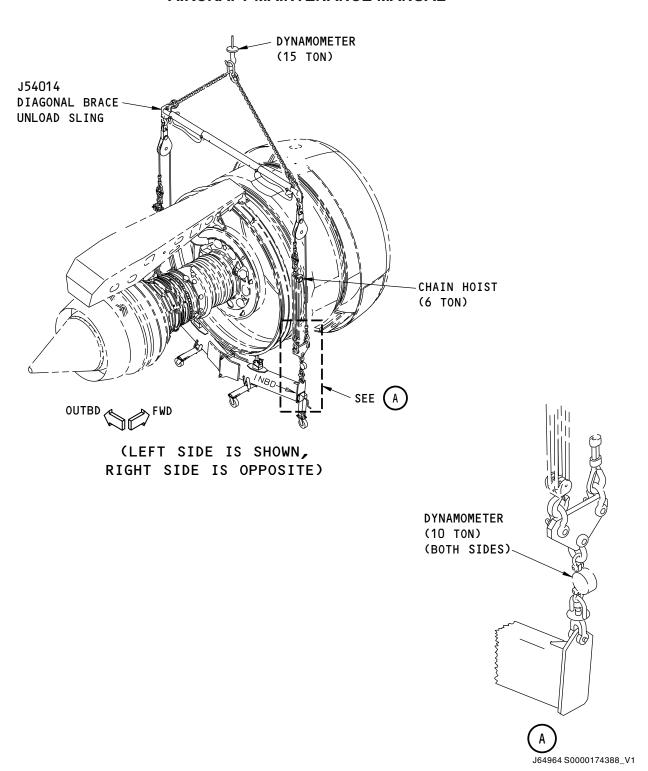


	END OF TASK
	assembly again.
(e)	Make sure the load on the engine support sling is kept the same until you install the pil

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Diagonal Brace Unload Sling (Engine Installed) Figure 201/54-51-01-990-847-002

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TASK 54-51-01-580-806-002

5. Remove Support from the Strut with the Engine Installed

A. General

- (1) This task removes support from the nacelle strut with the engine installed.
- (2) This task has these steps:
 - (a) Remove the load from the engine support sling.
 - (b) Remove the engine support sling.
 - (c) Put the airplane back to its usual condition.

B. References

Reference	Title
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (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-4929	Sling - Strut Unload Sling, Engine On-Wing, GE90
	Part #: J54014-105 Supplier: 81205 Opt Part #: J54014-1 Supplier: 81205
STD-1172	Load Measuring Device - 0-20,000 lb Capacity, +/- 2% Accuracy
STD-1173	Hoist - Chain, 12,000 lb Capacity
STD-12291	Load Measuring Device - 0-40,000 lb Capacity, +/- 2% Accuracy
STD-12294	Crane - Lift, 40,000 Lb Capacity

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Remove the Support from the Applicable Strut Pin Assembly

SUBTASK 54-51-01-210-015-002



DO NOT REMOVE THE LOAD ON THE ENGINE SUPPORT SLING UNTIL THE WORKSTANDS ARE CLEAR. IF YOU DO NOT REMOVE THE WORKSTANDS, DAMAGE TO THE STRUT, WING STRUCTURE, OR WORKSTANDS CAN OCCUR.

(1) Make sure the workstands are clear of the airplane.

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SUBTASK 54-51-01-580-016-002

(2) Slowly remove the load from the crane and the sling.

SUBTASK 54-51-01-080-023-002

- (3) Remove this engine support equipment:
 - (a) strut unload sling, SPL-4929, quantity (1).
 - (b) 40,000 lb capacity lift crane, STD-12294 quantity (1).
 - (c) Load Measuring Device, STD-12291 quantity (1).
 - (d) 0-20,000 lb capacity, +/- 2% accuracy, load measuring device, STD-1172 quantity (2).
 - (e) 12,000 lb capacity chain hoist, STD-1173 quantity (2).

G. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-01-010-018-002

(1)

Close the thrust reverser panels:

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00

SUBTASK 54-51-01-440-007-002

(2) If all maintenance operations on the strut are complete, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-51-01-580-807-002

6. Support the Strut with the Engine Removed

(Figure 202)

A. General

- This task is the procedure to support the nacelle strut with the engine removed.
- (2) When you remove a strut attach pin, use this procedure to remove the load from the strut pin assembly (that you will remove). Each pin assembly has a pin, bolt, end caps, washers and nut.
- (3) This task has these steps:
 - (a) Prepare the strut for maintenance operations.
 - (b) Make the airplane level.
 - (c) Remove the thrust reverser.
 - (d) Remove the engine.
 - (e) Install the strut support sling.
 - (f) Carefully lift the strut to remove the load from the pin assembly (that you will remove).

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B. References

Reference	Title
08-21-00-580-801	Make the Airplane Level (P/B 201)
71-00-02-000-811-H00	Power Plant Removal (P/B 401)
78-31-01 P/B 401	THRUST REVERSER - REMOVAL/INSTALLATION

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-2013	Sling - Strut Unload, Diagonal Brace Alignment, GE90 (Engine Removed)
	Part #: J54001-92 Supplier: 81205
SPL-2022	Sling - GE Engine Strut Removal/Installation
	Part #: J54003-50 Supplier: 81205
STD-1143	Crane - Lift, 7500 lb (3402kg) Capacity
STD-1144	Load Cell - 0-7500 pound capacity, +/- 2% Accuracy, 30 foot display cable length

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Prepare to Support the Strut

SUBTASK 54-51-01-040-068-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-01-580-017-002

(2) Do this task: Make the Airplane Level, TASK 08-21-00-580-801.

SUBTASK 54-51-01-000-071

(3) Do this task: THRUST REVERSER - REMOVAL/INSTALLATION, PAGEBLOCK 78-31-01/401.

SUBTASK 54-51-01-000-067-002

(4) Do this task: Power Plant Removal, TASK 71-00-02-000-811-H00.

SUBTASK 54-51-01-400-054-002

(5) Install the strut support diagonal brace alignment sling, SPL-2013 with a 7500 lb capacity lift crane, STD-1143 and a Load Cell, STD-1144 to remove the diagonal brace pins.

SUBTASK 54-51-01-400-057-002

(6) Install the strut support GE engine strut sling, SPL-2022 with a 7500 lb capacity lift crane, STD-1143 and a Load Cell, STD-1144 to remove the forward upper link fuse pin or the midspar fuse pins.

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F. Remove the Load from the Applicable Strut Pin

SUBTASK 54-51-01-580-018-002



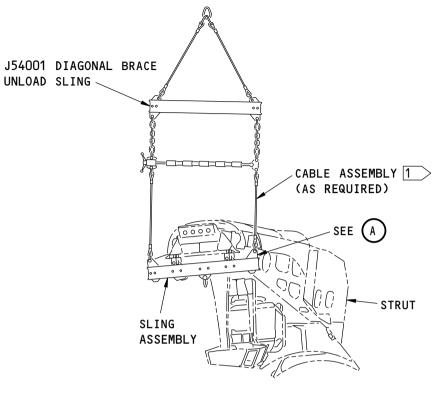
DO NOT EXCEED THE UPLOAD OR DOWNLOAD NECESSARY TO PERMIT THE PIN ASSEMBLY TO TURN WHEN YOU APPLY 125 INCH-POUNDS MAXIMUM TORQUE. DO NOT LIFT THE STRUT OR PULL DOWN ON THE STRUT WITH MORE THAN 3000 POUNDS OF FORCE. APPLY THE LOAD VERTICALLY. IF YOU LIFT UP OR PULL DOWN ON THE STRUT WITH TOO MUCH FORCE, OR AT AN INCORRECT ANGLE, DAMAGE TO THE AIRPLANE CAN OCCUR.

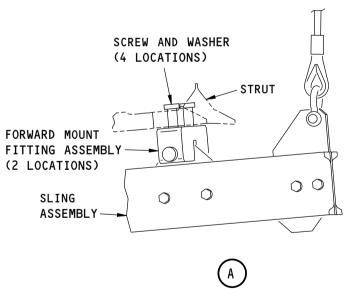
- (1) Do these steps to remove the load from the pin assembly (that you will remove):
 - (a) Slowly apply a small load with a crane.
 - (b) Move the crane, if it is necessary, to apply a vertical load at the tool attach points.
 - At the side of the strut, visually align the strut sling to make sure you apply the load vertically.
 - 2) At the front or rear of the strut, visually align the sling vertically side-to-side.
 - Monitor the angle of the strut sling side-to-side and forward-aft during the procedure.
 - 4) Monitor the load on the dynamometer during the procedure.
 - (c) Slowly increase the load until you can turn the pin assembly (that you will remove) with a maximum torque of 125 in-lb (14 N·m).
 - Make sure the pin, bolt, end caps, washers and nut turn together as an assembly.
 NOTE: When you remove the load correctly, the pin assembly (that you will remove) will turn easily.
 - (d) Make sure the load on the strut sling is kept the same until you install the pin assembly again.



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1 > CAN BE REPLACED WITH A CUSTOMER FURNISHED 1-1/2 TON LEVER CHAIN HOIST.

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J54001 Diagonal Brace Unload Sling (Engine Removed) Figure 202/54-51-01-990-845-002

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TASK 54-51-01-580-808-002

7. Remove Support from the Strut with the Engine Removed

(Figure 202)

A. General

- (1) This task removes support from the nacelle strut with the engine removed.
- (2) This task has these steps:
 - (a) Remove the load from the strut support sling.
 - (b) Remove the strut support sling.
 - (c) Install the engine.
 - (d) Put the airplane back to its usual condition.

B. References

Reference	Title
71-00-02-400-811-H00	Power Plant 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
SPL-2013	Sling - Strut Unload, Diagonal Brace Alignment, GE90 (Engine Removed)
	Part #: J54001-92 Supplier: 81205
STD-1143	Crane - Lift, 7500 lb (3402kg) Capacity
STD-1144	Load Cell - 0-7500 pound capacity, +/- 2% Accuracy, 30 foot display cable length

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Remove the Support from the Applicable Strut Pin Assembly

SUBTASK 54-51-01-210-016-002



DO NOT REMOVE THE LOAD ON THE STRUT SUPPORT SLING UNTIL THE WORKSTANDS ARE CLEAR. IF YOU DO NOT REMOVE THE WORKSTANDS, DAMAGE TO THE STRUT, WING STRUCTURE, OR WORKSTANDS CAN OCCUR.

(1) Make sure the workstands are clear of the airplane.

SUBTASK 54-51-01-580-019-002

(2) Slowly remove the load from the 7500 lb capacity lift crane, STD-1143.

SUBTASK 54-51-01-000-068-002

(3) Remove the strut support diagonal brace alignment sling, SPL-2013 and the Load Cell, STD-1144.

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F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-01-400-055-002

(1) Do this task: Power Plant Installation, TASK 71-00-02-400-811-H00.

SUBTASK 54-51-01-440-008-002

(2) If all maintenance operations on the strut are complete, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

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NACELLE STRUT - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the nacelle strut.
 - (2) An installation of the nacelle strut.

TASK 54-51-01-000-805-002

2. Nacelle Strut Removal

(Figure 401, Figure 402, Figure 403, Figure 404, Figure 405, Figure 406)

A. General

- (1) This task is the removal of the nacelle strut.
- (2) This task has these steps:
 - (a) Prepare for the removal.
 - (b) Remove the power plant.
 - (c) Disconnect the strut systems.
 - (d) Remove the strut.

B. References

Reference	Title
20-10-09-000-801	Flareless Tubing Assembly Removal (P/B 401)
20-10-10-000-801	Flexible Hose Removal (P/B 401)
20-10-10-400-801	Flexible Hose Installation (P/B 401)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
26-18-02-000-804-001	Strut Overheat Detectors Removal (P/B 401)
28-22-15-000-802-001	Fuel Line, Fitting and Coupling - Removal (P/B 401)
29-11-00-860-807	Main Hydraulic System and the Reservoir Depressurization (P/B 201)
36-00-00-860-801	Depressurize the Pneumatic System (P/B 201)
36-12-04-000-805	Strut Duct Removal (P/B 401)
36-12-04-000-806	Wing Leading Edge Duct Removal (P/B 401)
36-12-04-000-807	Crossover Duct Removal (P/B 401)
36-12-04-000-808	APU Supply Duct Removal (P/B 401)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-02-000-803	Remove the Forward Fuse Pin from the Upper Link (P/B 401)
54-51-02-000-805	Remove the Aft Upper Spar Fuse Pin (P/B 401)
54-51-04-000-801	Remove the Diagonal Brace (P/B 401)
54-51-05-000-802	Lower Pin Removal (P/B 401)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-03-000-801	Underwing Fairing Removal (P/B 401)
54-52-04-000-801	Aft Fairing Removal (P/B 401)
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)
71-00-02-000-811-H00	Power Plant Removal (P/B 401)

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(Continued)

Reference	Title
SWPM 20-30-13	ASSEMBLY AND REPAIR OF THE AMP AND BACS52N
	COPALUM SPLICES

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-2013	Sling - Strut Unload, Diagonal Brace Alignment, GE90 (Engine
	Removed)
	Part #: J54001-92 Supplier: 81205
SPL-2022	Sling - GE Engine Strut Removal/Installation
	Part #: J54003-50 Supplier: 81205

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut
511PB	Inboard Fixed Leading Edge Panel
511QB	Inboard Fixed Leading Edge Panel
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
521AB	Wing Anti-Ice Valve Door
611PB	Inboard Fixed Leading Edge Panel
611QB	Inboard Fixed Leading Edge Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel
621AB	Wing Anti-Ice Valve Door

F. Prepare for the Removal

SUBTASK 54-51-01-040-042-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

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SUBTASK 54-51-01-010-012-002

- (2) Do these steps to remove the access panels and fairings:
 - (a) Do this task:

Forward Fairings Removal, TASK 54-52-01-000-801-001

<u>Number</u>	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut

- (b) Do this task: Aft Fairing Removal, TASK 54-52-04-000-801.
- (c) Do this task:

Underwing Fairing Removal, TASK 54-52-03-000-801

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut

(d) Do this task:

Wing Leading Edge Panel Removal, TASK 57-41-10-000-801

<u>Number</u>	Name/Location
511PB	Inboard Fixed Leading Edge Panel
511QB	Inboard Fixed Leading Edge Panel
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
521AB	Wing Anti-Ice Valve Door
611PB	Inboard Fixed Leading Edge Panel
611QB	Inboard Fixed Leading Edge Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel
621AB	Wing Anti-Ice Valve Door

G. Power Plant Removal

SUBTASK 54-51-01-000-044-002

(1) Do this task: Power Plant Removal, TASK 71-00-02-000-811-H00.

H. Strut Systems Disconnection

SUBTASK 54-51-01-040-043-002

(1) Make sure the pneumatic system pressure was removed (TASK 36-00-00-860-801).

SUBTASK 54-51-01-000-045-002

- (2) Remove the ECS duct between the wing and the strut (TASK 36-12-04-000-805 or TASK 36-12-04-000-806 or TASK 36-12-04-000-807 or TASK 36-12-04-000-808) (Figure 401).
 - (a) Remove the coupling [1], and coupling [3].
 - (b) Carefully remove the pneumatic duct [2] or pneumatic duct [12], and seal [4]

SUBTASK 54-51-01-000-046-002

(3) To remove the wing TAI duct between the wing and the strut, do these steps (Figure 401):

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- (a) Remove the clamp [8], coupling [9], and coupling [5].
- (b) Carefully remove the wing TAI duct [7] or wing TAI duct [11] and seal [6].

SUBTASK 54-51-01-040-044-002

(4) Make sure that electrical power was removed (TASK 24-22-00-860-806).

NOTE: The removal of electrical power is necessary to disconnect the electrical connectors.

SUBTASK 54-51-01-000-047-002



BE CAREFUL WITH THE POWER FEEDER CABLES. DO NOT BEND OR WIND THE CABLES INTO COILS TOO TIGHTLY. IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE CABLES.

- (5) Do these steps to disconnect the IDG power feeder cables from the wing leading edge: (Figure 402)
 - (a) Put a tag on each IDG power feeder cable to identify its position for connection and installation in the wing forward spar clamp block.
 - 1) Remove the three screw [31], three washer [32] and channel [33].
 - 2) Remove the three spacer [34], two block [35] and block [36].
 - (b) Carefully cut the cables (8 locations) near the splices, as specified in this procedure: Assembly of Copalum Splices (SWPM 20-30-13).

NOTE: You will splice the cables together when you install the strut. Keep the cable ends clean.

- (c) Remove all of the clamp [37], screw [38], washer [39] and nut [40], which attach the power feeder cables to the wing forward spar.
- (d) Carefully wind the power feeder cables into coils, and temporarily attach them to the top of the strut.

SUBTASK 54-51-01-020-029-002



MAKE SURE THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU DISCONNECT THEM. THE CONTAMINATION OF THE ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO THE EQUIPMENT.

(6) Disconnect the strut overheat detectors (4 locations) at the wing forward spar (TASK 26-18-02-000-804-001) (Figure 403).

NOTE: It is not necessary to remove the strut overheat detectors.

SUBTASK 54-51-01-020-030-002



MAKE SURE THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU DISCONNECT THEM. THE CONTAMINATION OF THE ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (7) Disconnect the strut wire bundles (11 locations) at the wing forward spar disconnect panel as follows (Figure 403):
 - (a) Put a tag on the wire bundles at the AW0405 (left) or AW0406 (right) disconnect panel to identify their positions for installation.
 - (b) Disconnect the wire bundles at the wing forward spar disconnect panel.
 - (c) Install the caps on the connectors and the receptacles.

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- (d) Remove the clamp [37], screw [38], washer [39], and nut [40], which attach the wire bundles to the wing forward spar.
- (e) Carefully, wind the wire bundles into coils, and temporarily attach them to the top of the strut.

SUBTASK 54-51-01-040-045-002

- (8) Make sure that the main hydraulic system pressure was removed (TASK 29-11-00-860-807).
 - (a) Make sure the hydraulic reservoir pressure has been bled to zero.

SUBTASK 54-51-01-020-031-002

- (9) Disconnect the aft fairing hydraulic systems as follows (Figure 404):
 - (a) Remove the upper tube [61] or upper tube [71] between the strut aft upper spar and the hydraulic filter module (TASK 20-10-09-000-801).
 - (b) Remove the two screw[68], two washer [69], two nut [70], clamp [64], and the hydraulic reservoir pressurization tube [63] or hydraulic reservoir pressurization tube [72] between the strut aft bulkhead and the T-fitting (TASK 20-10-09-000-801).
 - (c) Remove the lower flex hose [62] between the shutoff valve on the strut aft bulkhead and the hydraulic reservoir assembly (TASK 20-10-10-000-801).
 - (d) Disconnect the hydraulic lines (5 locations) at the aft end of the strut (TASK 20-10-09-000-801).

SUBTASK 54-51-01-040-046-002

- (10) Make sure that electrical power was removed (TASK 24-22-00-860-806).
 - NOTE: The removal of electrical power is necessary to disconnect the electrical connectors. You can supply electrical power after all electrical connectors are disconnected, and protective caps are installed.

SUBTASK 54-51-01-020-032-002



MAKE SURE THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU DISCONNECT THEM. THE CONTAMINATION OF THE ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO THE EQUIPMENT.

(11) Disconnect the wire bundles in the aft fairing as follows (Figure 405):

NOTE: The wire bundle connectors for the left and right aft fairing are specified (left/right).

- (a) Disconnect the DV29102/DV29202 connector from the shutoff valve assembly.
- (b) Disconnect the DM29102/DM29202 and DM29105/DM29205 connectors from the hydraulic reservoir assembly.
- (c) Disconnect the DV78101/DV78201 connector from the sync-lock control valve.
- (d) Disconnect the DM29104A/DM29204A connector from the hydraulic pump assembly.
- (e) Disconnect the DS78101/DS78201, DV78102A/DV78202A, and DV78102B/DV78202B connectors from the hydraulic isolator valve assembly.
- (f) Disconnect the DM29106/DM29206 and DM29108/DM29208 connectors from the EDP filter module.
- (g) Disconnect the DM29110/DM29210 connector from the ACMP filter module.
- (h) Disconnect the DS29105/DS29205 connector from the absolute pressure switch.
- (i) Disconnect the DM29109/DM29209 connector from the hydraulic pump pressure transducer.

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- (j) Disconnect the wire (W8450/W8460) to the aft spar fuel control valve as follows:
 - 1) Carefully cut the wire (W8450/W8460) in the location shown (Figure 405).

NOTE: Do not cut the nylon wire support rod.

NOTE: You will splice the ends of the wire together when you install the strut. Keep the ends of the wire clean.

- 2) Put a tag on the two ends of the wire for identification.
- (k) Disconnect the ground terminals at the strut aft bulkhead as follows:
 - 1) Remove the nut [84], two washer [83], washer [82] and screw [81] from the ground terminals (8 locations total).

NOTE: Keep the ends of the ground terminals clean.

- (I) Carefully collect the aft fairing wire bundles, and temporarily attach them to the strut aft bulkhead.
- (m) After all electrical connectors are disconnected, you can supply electrical power (TASK 24-22-00-860-805).

SUBTASK 54-51-01-680-005-002

(12) Make sure the main fuel supply line has been drained.

SUBTASK 54-51-01-020-033-002



BE CAREFUL WHEN YOU DISCONNECT THE FUEL LINE. A SMALL AMOUNT OF FUEL CAN COLLECT IN THE FUEL LINE. MOVE TO A POSITION WHERE FUEL CANNOT GET ON YOU. IF FUEL GETS ON YOU, INJURY CAN OCCUR.

(13) Disconnect the fuel line where the flex hose attaches to the strut (TASK 28-22-15-000-802-001) (Figure 401).

SUBTASK 54-51-01-020-034-002

(14) Remove the hose assy [10] or hose assy [13] in the fire extinguisher line, between the strut and the wing (TASK 20-10-400-801) (Figure 401).

SUBTASK 54-51-01-000-048-002

(15) Remove the screw [65], washer [66] and nut [67] which attach the bonding jumper to the wing (Figure 404).

NOTE: Keep the end of the bonding jumper clean.

I. Remove the Nacelle Strut

SUBTASK 54-51-01-480-015-002

(1) Install the diagonal brace unload diagonal brace alignment sling, SPL-2013.

SUBTASK 54-51-01-480-023-002

(2) Apply 2000 pound (907 kg) load on sling and gradually increase until the fuse pin turns easily. NOTE: Do not exceed 3,000 pounds (1,361 kg).

SUBTASK 54-51-01-000-049-002

(3) Do this task: Remove the Diagonal Brace, TASK 54-51-04-000-801.

SUBTASK 54-51-01-000-050-002

(4) To remove the lower bolt from the two side link assemblies, do this task: Lower Pin Removal, TASK 54-51-05-000-802.

NOTE: It is not necessary to remove the side links from the under wing fitting.

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(a) Use some tape to temporarily attach the lower end of the side links to the bottom of the wing.

SUBTASK 54-51-01-080-017-002

(5) Remove the diagonal brace unload diagonal brace alignment sling, SPL-2013.

SUBTASK 54-51-01-480-016-002

(6) Install the strut removal sling GE engine strut sling, SPL-2022 (Figure 406).

SUBTASK 54-51-01-000-051-002

(7) Do this task: Remove the Forward Fuse Pin from the Upper Link, TASK 54-51-02-000-803.

SUBTASK 54-51-01-000-052-002

(8) To remove the two aft upper spar fuse pins, do this task: Remove the Aft Upper Spar Fuse Pin, TASK 54-51-02-000-805.

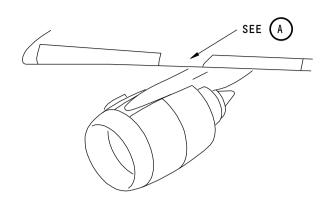
SUBTASK 54-51-01-580-012-002

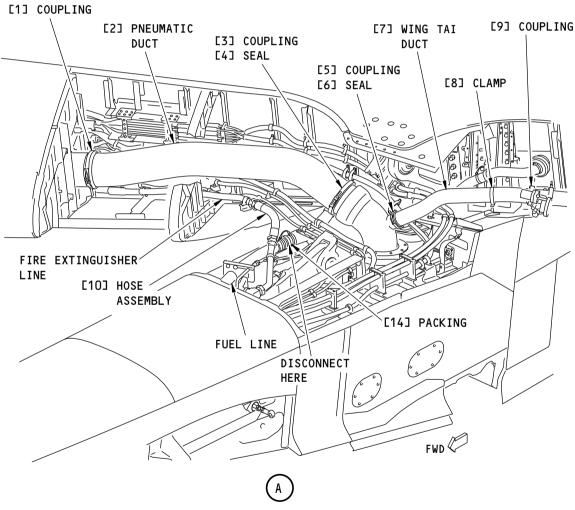
(9) Carefully, lower the strut with the strut removal GE engine strut sling, SPL-2022.



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K45125 S0006427209_V1

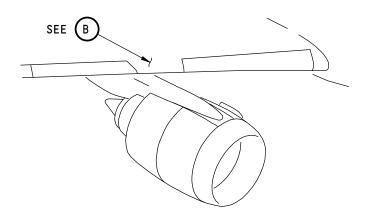
Strut Plumbing Disconnects Figure 401/54-51-01-990-829-002 (Sheet 1 of 2)

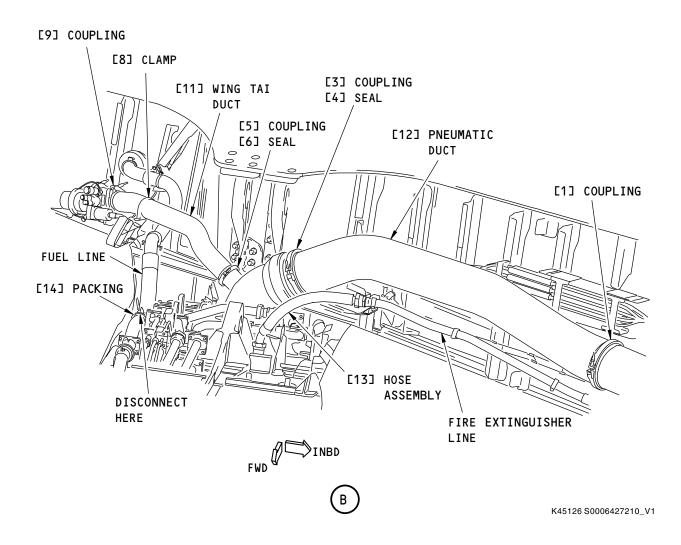
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Strut Plumbing Disconnects Figure 401/54-51-01-990-829-002 (Sheet 2 of 2)

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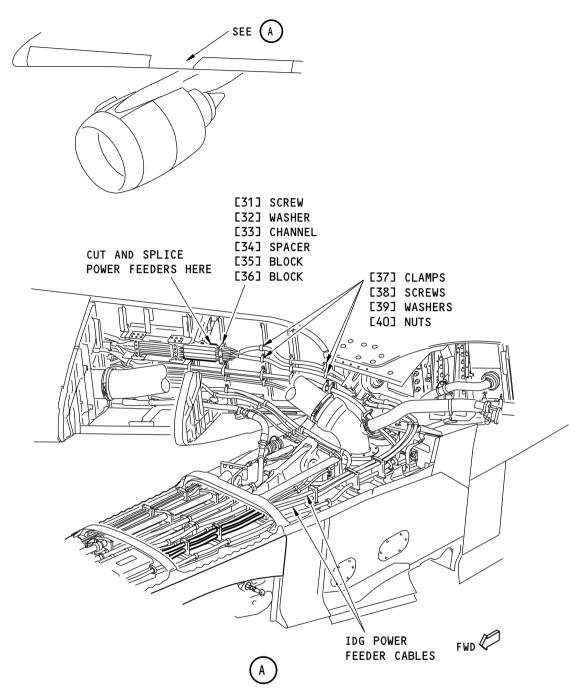
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NOTE: LEFT STRUT IS SHOWN,
RIGHT STRUT IS EQUIVALENT.

K45127 S0006427211_V1

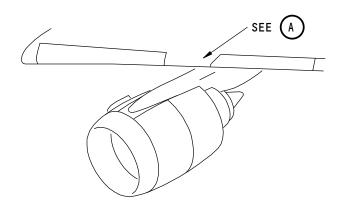
IDG Power Feeder Cables Figure 402/54-51-01-990-830-002

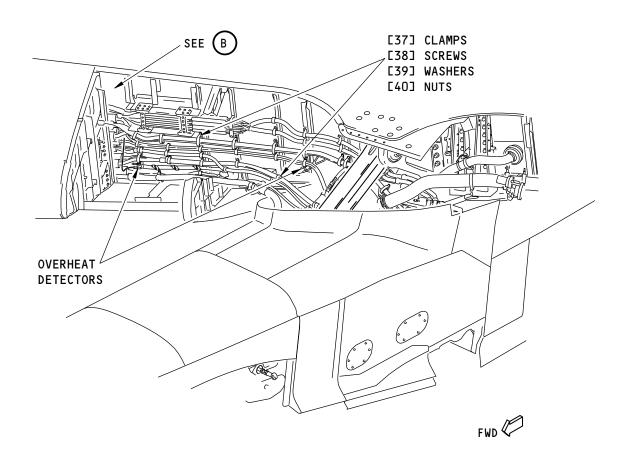
ARO ALL

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NOTE: LEFT STRUT IS SHOWN,

RIGHT STRUT IS EQUIVALENT.



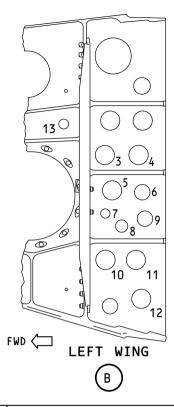
K45128 S0006427212_V1

Strut Wiring Disconnects Figure 403/54-51-01-990-831-002 (Sheet 1 of 3)

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POS	M/W STRU	T (LEFT)
F 0 3	DISC	W/B
3	D7170P	W8145
4	D7172P	W8143
5	D7178P	W8143
6	D7183P	W8247
7	D7175P	W8851
8	D7180P	W8144
9	D7177P	W8851
10	D7173P	W8541
11	D7171P	W8541
12	D7176P	W8850
13	D7174P	W8450

DISCONNECT PANEL AW0405 (REF)(STRUT/WING INSTALLATION LEFT)

K45129 S0006427213_V1

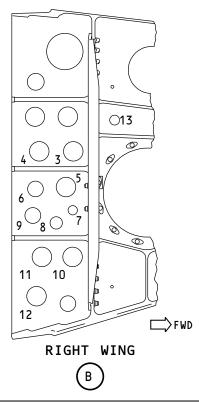
Strut Wiring Disconnects
Figure 403/54-51-01-990-831-002 (Sheet 2 of 3)

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POS	M/W STRU	T (RIGHT)
P03	DISC	W/B
3	D7270P	W8245
4	D7272P	W8243
5	D7278P	W8243
6	D7283P	W8147
7	D7275P	W8861
8	D7280P	W8244
9	D7277P	W8861
10	D7273P	W8641
11	D7271P	W8641
12	D7276P	W8860
13	D7274P	w8460

DISCONNECT PANEL AW0406 (REF)(STRUT/WING INSTALLATION RIGHT)

K45130 S0006427214_V1

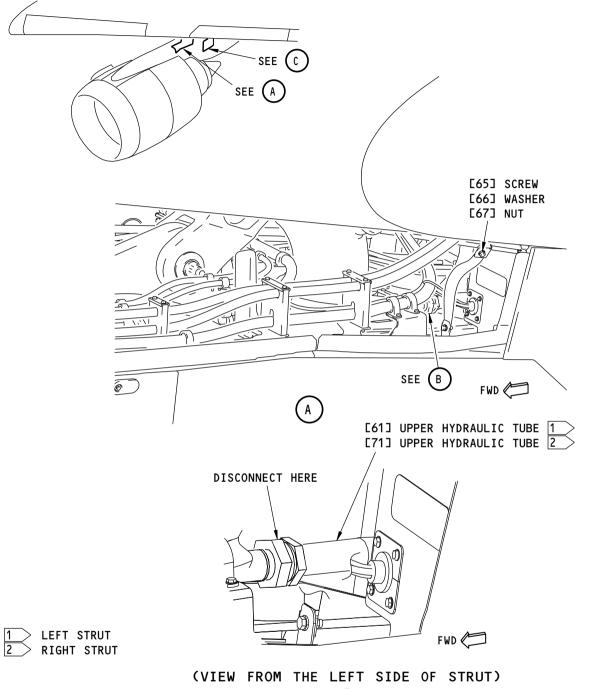
Strut Wiring Disconnects
Figure 403/54-51-01-990-831-002 (Sheet 3 of 3)

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NOTE: LEFT STRUT IS SHOWN,
RIGHT STRUT IS EQUIVALENT.

B

K45132 S0006427215_V1

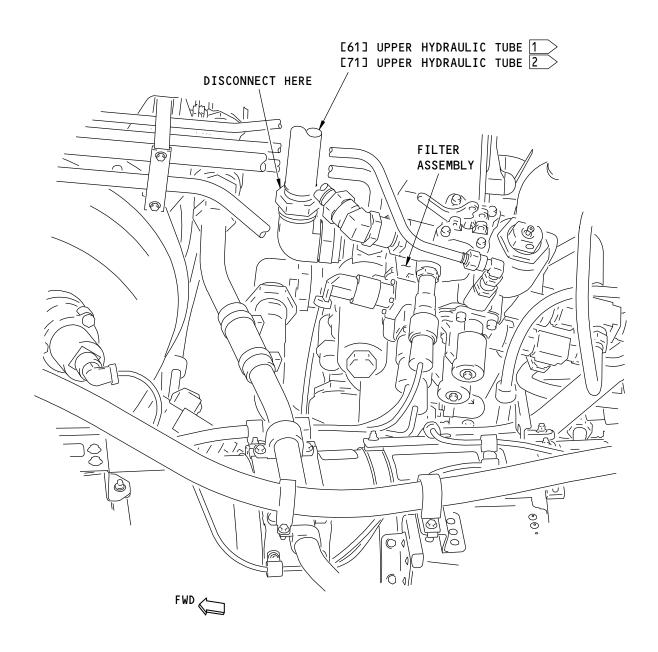
Aft Fairing Hydraulic Disconnects Figure 404/54-51-01-990-832-002 (Sheet 1 of 3)

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1 LEFT STRUT 2 RIGHT STRUT (VIEW FROM THE LEFT SIDE OF STRUT)



K45131 S0006427216_V1

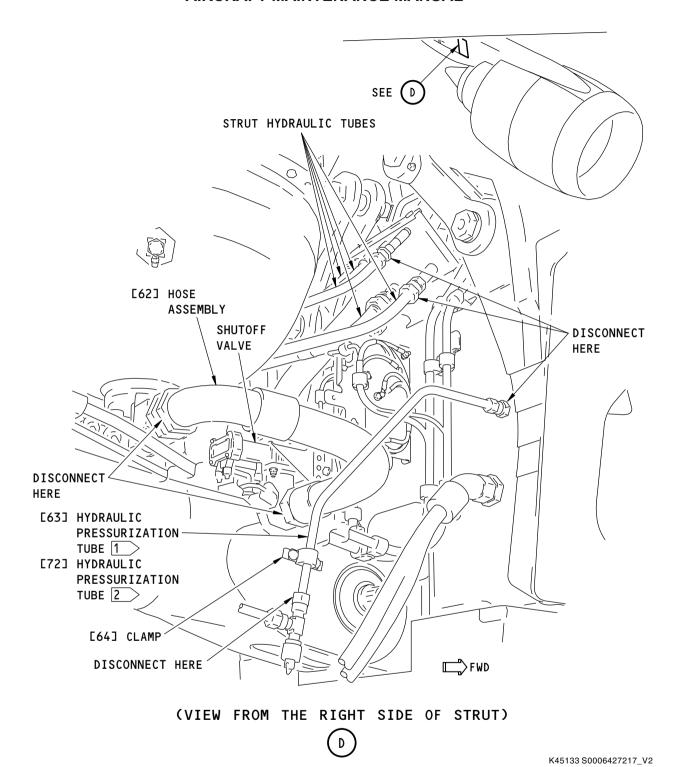
Aft Fairing Hydraulic Disconnects Figure 404/54-51-01-990-832-002 (Sheet 2 of 3)

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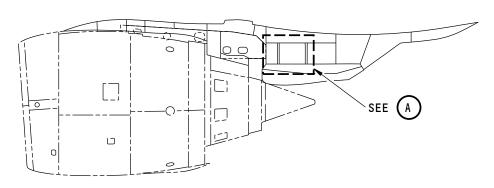
Aft Fairing Hydraulic Disconnects Figure 404/54-51-01-990-832-002 (Sheet 3 of 3)

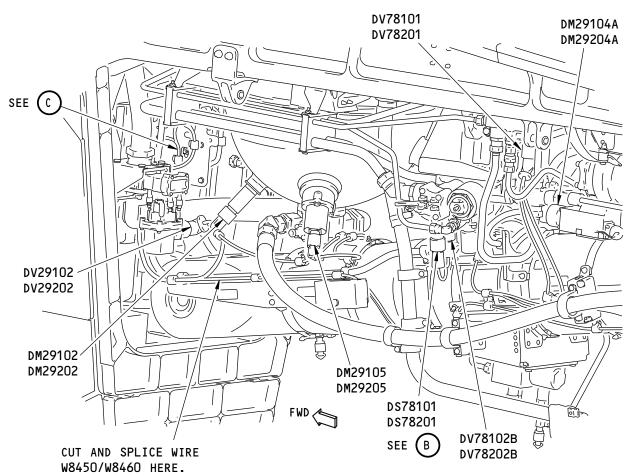
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(VIEW FROM THE LEFT SIDE OF THE STRUT)

NOTE: LEFT STRUT IS SHOWN,

RIGHT STRUT IS EQUIVALENT.

K45134 S0006427218_V1

Aft Fairing Wiring Disconnects
Figure 405/54-51-01-990-833-002 (Sheet 1 of 5)

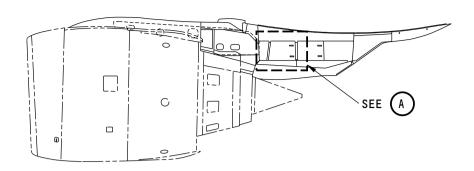
ARO 001-013

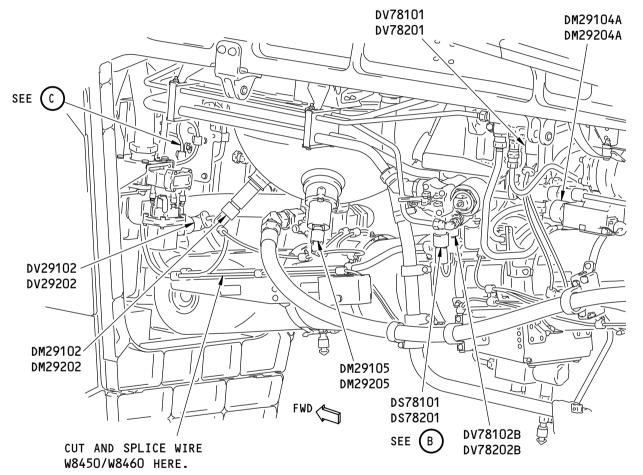
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(VIEW FROM THE LEFT SIDE OF THE STRUT)

NOTE: LEFT STRUT IS SHOWN,

RIGHT STRUT IS EQUIVALENT.

2436750 S0000565042_V1

Aft Fairing Wiring Disconnects Figure 405/54-51-01-990-833-002 (Sheet 2 of 5)

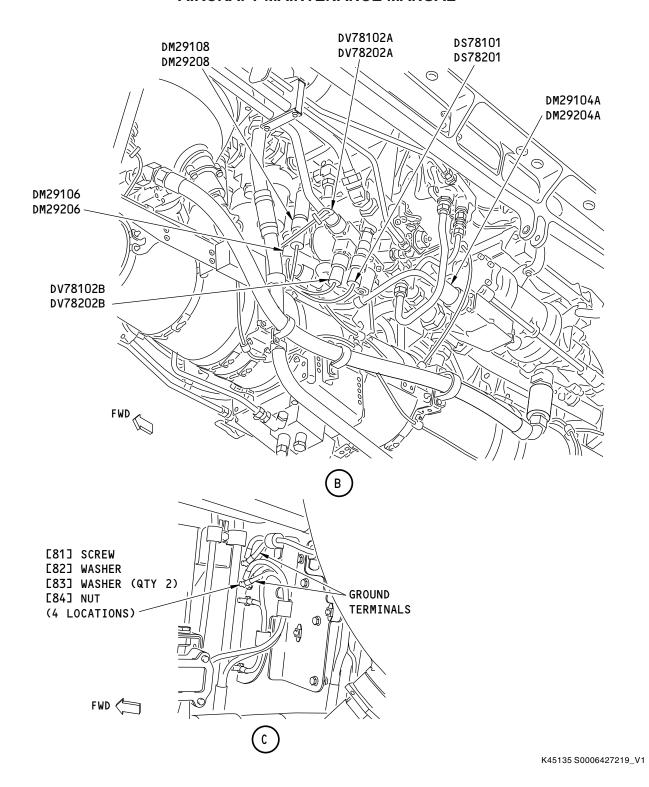
ARO 014-999

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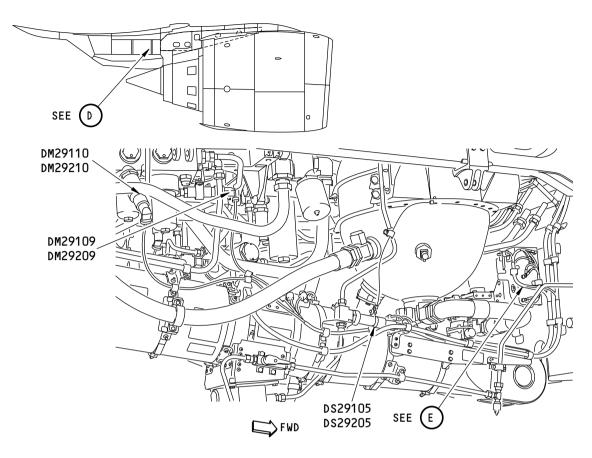
Aft Fairing Wiring Disconnects
Figure 405/54-51-01-990-833-002 (Sheet 3 of 5)

ARO ALL
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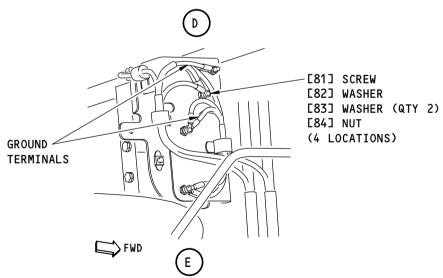
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(VIEW FROM THE RIGHT SIDE OF THE STRUT)



K45136 S0006427220_V1

Aft Fairing Wiring Disconnects Figure 405/54-51-01-990-833-002 (Sheet 4 of 5)

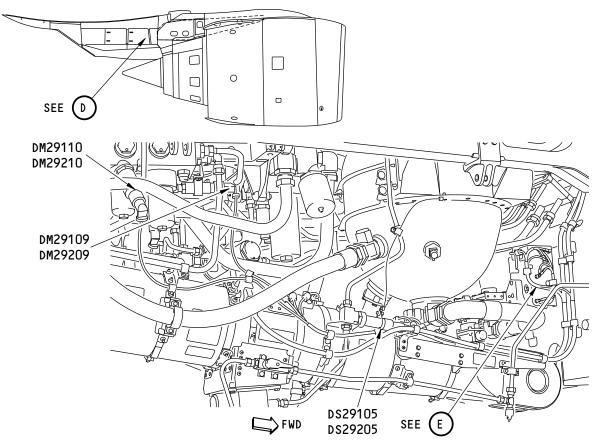
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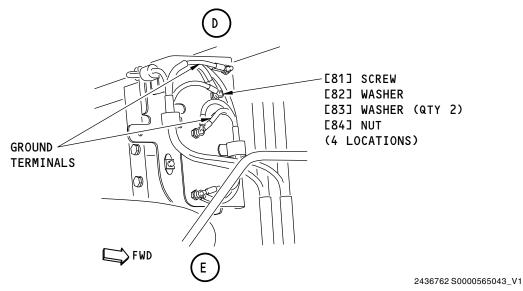
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(VIEW FROM THE RIGHT SIDE OF THE STRUT)



Aft Fairing Wiring Disconnects
Figure 405/54-51-01-990-833-002 (Sheet 5 of 5)

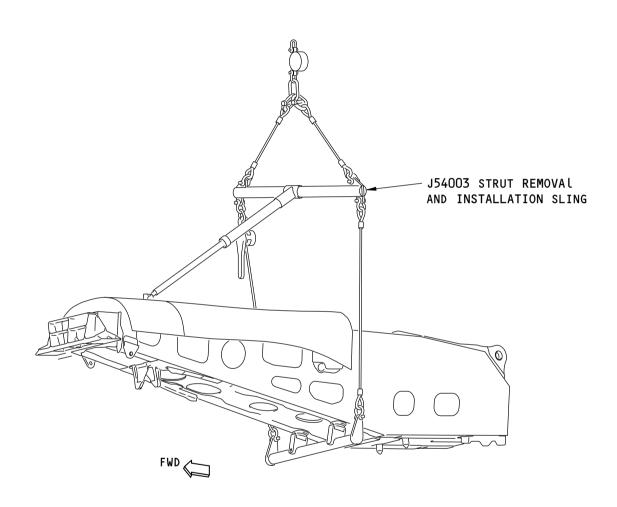
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K45137 S0006427221_V1

J54003 Strut Removal and Installation Sling Figure 406/54-51-01-990-834-002

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TASK 54-51-01-400-805-002

3. Install Nacelle Strut

(Figure 401, Figure 402, Figure 403, Figure 404, Figure 405, Figure 406)

A. General

- (1) This task is the installation of the nacelle strut.
- (2) This task has these steps:
 - (a) Install the nacelle strut.
 - (b) Connect the strut systems.
 - (c) Install the power plant.
 - (d) Test the strut systems.
 - (e) Put the airplane back to its usual condition.

B. References

Reference	Title
20-10-09-400-801	Flareless Tubing Assembly Installation (P/B 401)
20-10-10-400-801	Flexible Hose Installation (P/B 401)
24-11-00-700-801	The Operational Test For The Left IDG (P/B 501)
24-11-00-700-802	The Operational Test For The Right IDG (P/B 501)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
26-18-02-400-804-001	Strut Overheat Detectors Installation (P/B 401)
26-21-00-200-801	Engine Fire Switch Circuit and Isolation - Functional Test (P/B 501)
26-21-00-730-802	Engine Fire Extinguishing Tubing - Functional Test (P/B 501)
28-22-15-400-802-001	Fuel Line, Fitting and Coupling - Installation (P/B 401)
29-11-00-730-803	Hydraulic Reservoir Pressurization System - System Test (P/B 501)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
36-00-00-860-802	Pressurize the Pneumatic System (P/B 201)
36-12-04-400-805	Strut Duct Installation (P/B 401)
36-12-04-400-806	Wing Leading Edge Duct Installation (P/B 401)
36-12-04-400-807	Crossover Duct Installation (P/B 401)
36-12-04-400-808	APU Supply Duct Installation (P/B 401)
51-31-01-390-804	Fillet Seal Application (P/B 201)
51-31-01-390-805	Fastener Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-02-000-806	Install the Aft Upper Spar Fuse Pin (P/B 401)
54-51-02-000-808	Install the Forward Fuse Pin in the Upper Link (P/B 401)
54-51-04-400-801	Install the Diagonal Brace (P/B 401)
54-51-05-400-803	Lower Pin Installation (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-52-03-400-801	Underwing Fairing Installation (P/B 401)
54-52-04-400-801	Aft Fairing Installation (P/B 401)
54-55-01-200-810-001	Leak Check of the Strut Aft Vapor Barrier (P/B 601)

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(Continued)

Reference	Title
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)
71-00-00-700-802-H01	Test No. 2 - Dry Motor leak Check (P/B 501)
71-00-00-700-815-H01	Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test) (P/B 501)
71-00-02-400-811-H00	Power Plant Installation (P/B 401)
SWPM 20-10-11	WIRING ASSEMBLY AND INSTALLATION CONFIGURATION
SWPM 20-20-00	Standard Wiring Practices Manual
SWPM 20-30-12	Assembly of Splices
SWPM 20-30-13	ASSEMBLY AND REPAIR OF THE AMP AND BACS52N COPALUM SPLICES
SWPM 20-60-01	Cleaning of Electrical Connectors
SWPM 20-60-06	Standard Wiring Practices Manual

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-2013	Sling - Strut Unload, Diagonal Brace Alignment, GE90 (Engine Removed)	
	Part #: J54001-92 Supplier: 81205	
SPL-2022	Sling - GE Engine Strut Removal/Installation	
	Part #: J54003-50 Supplier: 81205	

D. Consumable Materials

Reference	Description	Specification
A01035	Sealant - Firewall, Silicone-Based - PR1991	
A50027	Sealant - Primerless, 2-Part Firewall Sealant - PR-1995, Class B	
A50096	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63 Type II

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441DT	No. 2 Forward Fairing, Right Strut

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(Continued)

Number	Name/Location
441ET	No. 3 Forward Fairing, Right Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut
511PB	Inboard Fixed Leading Edge Panel
511QB	Inboard Fixed Leading Edge Panel
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
521AB	Wing Anti-Ice Valve Door
611PB	Inboard Fixed Leading Edge Panel
611QB	Inboard Fixed Leading Edge Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel
621AB	Wing Anti-Ice Valve Door

G. Install the Nacelle Strut

SUBTASK 54-51-01-210-011-002

- (1) Make sure that the upper link is installed as follows:
 - (a) Make sure the aft pin is installed in the upper link.
 - (b) Make sure that the upper link is temporarily tied to the wing leading edge.

SUBTASK 54-51-01-210-012-002

(2) If the side links are installed, make sure that they are temporarily attached to the bottom of the wing with some tape.

SUBTASK 54-51-01-500-005-002

(3) Carefully, lift the strut to the wing with the strut installation sling GE engine strut sling, SPL-2022 (Figure 406).

SUBTASK 54-51-01-400-034-002

(4) To install the two aft upper spar fuse pins, do this task: Install the Aft Upper Spar Fuse Pin, TASK 54-51-02-000-806.

SUBTASK 54-51-01-400-035-002

(5) Do this task: Install the Forward Fuse Pin in the Upper Link, TASK 54-51-02-000-808.

SUBTASK 54-51-01-400-036-002

(6) To install the lower bolts in the side links, do this task: Lower Pin Installation, TASK 54-51-05-400-803.

SUBTASK 54-51-01-080-018-002

(7) Remove the strut installation sling GE engine strut sling, SPL-2022.

SUBTASK 54-51-01-480-017-002

(8) Install the diagonal brace unload diagonal brace alignment sling, SPL-2013.

SUBTASK 54-51-01-400-037-002

(9) Do this task: Install the Diagonal Brace, TASK 54-51-04-400-801.

SUBTASK 54-51-01-080-019-002

(10) Remove the diagonal brace unload diagonal brace alignment sling, SPL-2013.

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H. Connect the Strut Systems

SUBTASK 54-51-01-400-038-002

 Install the screw [65], washer [66] and nut [67] which attach the bonding jumper to the wing (SWPM 20-20-00).

SUBTASK 54-51-01-420-021-002

(2) Install new packing [14] and connect the fuel line where the flex hose attaches to the strut (TASK 28-22-15-400-802-001) (Figure 401).

SUBTASK 54-51-01-420-022-002

(3) Install the hose assy [10] or hose assy [13] in the fire extinguisher line between the strut and the wing (TASK 20-10-10-400-801) (Figure 401).

SUBTASK 54-51-01-040-047-002

(4) Make sure that electrical power was removed (TASK 24-22-00-860-806).

NOTE: The removal of electrical power is necessary to connect the electrical connectors.

SUBTASK 54-51-01-420-023-002

- (5) Connect the wire bundles in the aft fairing as follows (Figure 405):
 - (a) Remove the caps from the electrical connectors.



MAKE SURE THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU CONNECT THEM. THE CONTAMINATION OF THE ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (b) Make sure that all of the electrical connectors are clean.
 - 1) If the connectors are not clean, do this task: Cleaning of Electrical Connectors (SWPM 20-60-01).
- (c) Install these aft fairing systems connectors (SWPM 20-60-06).

<u>NOTE</u>: The wire bundle connectors for the left and right aft fairing are specified (left/right).

- Connect the DM29109/DM29209 connector to the hydraulic pump pressure transducer.
- 2) Connect the DS29105/DS29205 connector to the absolute pressure switch.
- 3) Connect the DM29110/DM29210 connector to the ACMP filter module.
- Connect the DM29106/DM29206 and DM29108/DM29208 connectors to the EDP filter module.
- 5) Connect the DS78101/DS78201, DV78102A/DV78202A, and DV78102B/DV78202B connectors to the hydraulic isolator valve assembly.
- 6) Connect the DM29104A/DM29204A connector to the hydraulic pump assembly.
- 7) Connect the DV78101/DV78201 connectors to the sync-lock control valve.
- 8) Connect the DM29102/DM29202 and DM29105/DM29205 connectors to the hydraulic reservoir assembly.
- 9) Connect the DV29102/DV29202 connector to the shutoff valve assembly.
- (d) Connect the wire (W8450/W8460) to the aft spar fuel control valve as follows:
 - 1) Find the wire ends with the applicable identification tags, and route them to the splice location as shown (Figure 405).

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- 2) To connect the wire ends together, make a moisture proof splice for shielded wire (SWPM 20-30-12).
- 3) Attach the wire to the nylon wire support rod (SWPM 20-10-11).
- (e) Connect the ground terminals at the strut aft bulkhead as follows (Figure 405):
 - 1) Install the screw [81], washer [82], two washer [83], and nut [84] which attach the ground terminals to the aft bulkhead brackets (8 locations total) (SWPM 20-20-00).
- (f) Attach the wire bundles to the aft fairing structure with clamps (SWPM 20-10-11).

SUBTASK 54-51-01-420-024-002

- (6) Connect the aft fairing hydraulic systems as follows (Figure 404):
 - (a) Connect the hydraulic lines (5 locations) at the aft end of the strut (TASK 20-10-09-400-801).
 - (b) Install the lower flex hose [62] between the shutoff valve assembly on the strut aft bulkhead and the hydraulic reservoir assembly (TASK 20-10-10-400-801).
 - (c) Install the hydraulic reservoir pressurization tube [63] or hydraulic reservoir pressurization tube [72] with the clamp [64], two screw [68], two washer [69]. two nut [70], between the strut aft bulkhead and the T-fitting (TASK 20-10-09-400-801).
 - (d) Install the upper tube [61] or upper tube [71] between the strut aft upper spar and the hydraulic filter module (TASK 20-10-09-400-801).

NOTE: Whenever PR1991 sealant, A01035 is used in this procedure, PR-1995, Class B sealant, A50027 and sealant, A50096 are acceptable alternative sealants.

- 1) Use PR1991 sealant, A01035 to make a seal around the upper tube [61] or upper tube [71] where it goes through the aft vapor barrier (TASK 51-31-01-390-804).
- 2) If it is necessary, use PR1991 sealant, A01035 to make a seal around the fasteners in the aft vapor barrier (TASK 51-31-01-390-805).

SUBTASK 54-51-01-040-048-002

(7) Make sure that electrical power was removed (TASK 24-22-00-860-806).

NOTE: The removal of electrical power is necessary to connect the electrical connectors. You can supply electrical power after all electrical connectors are connected.

SUBTASK 54-51-01-420-025-002

- (8) Connect the strut wire bundles (11 locations) at the wing forward spar disconnect panel as follows (Figure 403):
 - (a) Remove the caps from the electrical connectors.



MAKE SURE THE ELECTRICAL CONNECTORS ARE CLEAN BEFORE YOU CONNECT THEM. THE CONTAMINATION OF THE ELECTRICAL CONNECTORS CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (b) Make sure that all of the electrical connectors are clean.
 - 1) If the connectors are not clean, do this task: Cleaning of Electrical Connectors (SWPM 20-60-01).
- (c) Install the connectors in the AW0405 (left) or AW0406 (right) wing forward spar disconnect panel (Figure 403) (SWPM 20-60-06).
- (d) Install the clamp [37], screw [38], washer [39] and nut [40], which attach the wire bundles to the wing forward spar (SWPM 20-10-11).

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SUBTASK 54-51-01-020-035-002

(9) Connect the strut overheat detectors (4 locations) at the wing forward spar (TASK 26-18-02-400-804-001) (Figure 403).

SUBTASK 54-51-01-400-039-002



BE CAREFUL WITH THE POWER FEEDER CABLES. DO NOT BEND OR WIND THE CABLES INTO COILS TOO TIGHTLY. IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE CABLES.

- (10) Install the IDG power feeder cables as follows (Figure 402):
 - (a) Route the power feeder cables to the clamp blocks on the wing forward spar.
 - (b) Look for the tags on the power feeder cables to identify their positions for connection and installation.
 - (c) To splice the cables at the wing forward spar clamp blocks, do this task: Assembly of Copalum Splices (SWPM 20-30-13).
 - 1) Install the three spacer [34], two block [35] and block [36].
 - 2) Install the three screw [31], three washer [32] and channel [33].
 - (d) Attach the power feeder cables to the wing forward spar with the clamp [37], screw [38], washer [39] and nut [40] (SWPM 20-10-11).

SUBTASK 54-51-01-400-040-002

- (11) To install the wing TAI duct between the strut and the wing, do these steps (Figure 401):
 - (a) Examine the seal [6].
 - 1) Make sure the seal [6] does not have cracks, dents, or other damage.
 - 2) Replace the seal [6] if it is damaged.
 - (b) Install the wing TAI duct [7] or wing TAI duct [11], with the seal [6].
 - (c) Install the coupling [9], and coupling [5].
 - (d) Install the clamp [8].

SUBTASK 54-51-01-400-041-002

- (12) Install the ECS duct between the strut and the wing (TASK 36-12-04-400-805 or TASK 36-12-04-400-806 or TASK 36-12-04-400-807 or TASK 36-12-04-400-808).
 - (a) Examine the seal [4].
 - 1) Make sure the seal [4] does not have cracks, dents, or other damage.
 - Replace the seal [4] if it is damaged.
 - (b) Install the pneumatic duct [2] or pneumatic duct [12] with the seal [4].
 - (c) Install the coupling [1] and coupling [3].

I. Power Plant Installation

SUBTASK 54-51-01-000-053-002

(1) Do this task: Power Plant Installation, TASK 71-00-02-400-811-H00.

SUBTASK 54-51-01-040-049-002

(2) When all electrical connectors are connected, you can supply electrical power (TASK 24-22-00-860-805).

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J. Test the Operation of Strut Systems

SUBTASK 54-51-01-200-044-002

- (1) If you did not pressurize the main hydraulic system when you installed the power plant, do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
 - (a) Do this task: Hydraulic Reservoir Pressurization System System Test, TASK 29-11-00-730-803.
 - (b) Examine the hydraulic system connections in the strut and aft fairing for leaks.

SUBTASK 54-51-01-200-045-002

- (2) Do this task: Leak Check of the Strut Aft Vapor Barrier, TASK 54-55-01-200-810-001.
 - (a) Examine the seals where the hydraulic tubes go through the strut aft vapor barrier for leaks

SUBTASK 54-51-01-200-046-002

(3) Do the fuel spar valve check, as specified in this task: Engine Fire Switch Circuit and Isolation - Functional Test (TASK 26-21-00-200-801).

SUBTASK 54-51-01-200-047-002

(4) Do a test of the strut overheat detectors, as specified in this task: Strut Overheat Detector Installation (TASK 26-18-02-400-804-001).

SUBTASK 54-51-01-200-048-002

- (5) For the engine and strut which you installed, do this task: Engine Fire Extinguishing Tubing Functional Test, TASK 26-21-00-730-802.
 - (a) Examine the flexible hose between the wing and the strut for leaks.

SUBTASK 54-51-01-790-006-002

- (6) Do a leak test of the pneumatic duct:
 - (a) Do this task: Pressurize the Pneumatic System, TASK 36-00-00-860-802.
 - (b) Do a check for air leakage from the pneumatic ducts and wing TAI ducts:
 - 1) Small leakage is satisfactory.
 - Repair large air leakage.

NOTE: Large air leakage is when you feel the airflow with your hand at a distance of 12 inches or greater from a point on the duct joint.

SUBTASK 54-51-01-200-049-002

- (7) If you did not do an electronic engine control (EEC) system electrical check (Test 16) when you installed the power plant, do this task: Test No. 16 Engine Electronic Control (EEC) Test (MAT Initiated Test), TASK 71-00-00-700-815-H01.
 - (a) Make sure the EEC operates correctly.

SUBTASK 54-51-01-200-050-002

- (8) If you did not do a dry motor leak check (Test 2) when you installed the power plant, do this task: Test No. 2 Dry Motor leak Check, TASK 71-00-00-700-802-H01.
 - (a) Examine the fuel line between the wing and the strut for leaks.

SUBTASK 54-51-01-200-051-002

(9) If you installed the left strut, do the load test for the left IDG, as specified in this task: Operational Test for the Left IDG (TASK 24-11-00-700-801).

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SUBTASK 54-51-01-200-052-002

(10) If you installed the right strut, do the load test for the right IDG, as specified in this task: Operational Test for the Right IDG (TASK 24-11-00-700-802).

K. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-01-010-013-002

- (1) Do these steps to install the doors, panels, and fairings:
 - (a) Do this task:

Wing Leading Edge Panel Installation, TASK 57-41-10-400-801

<u>Number</u>	Name/Location
511PB	Inboard Fixed Leading Edge Panel
511QB	Inboard Fixed Leading Edge Panel
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
521AB	Wing Anti-Ice Valve Door
611PB	Inboard Fixed Leading Edge Panel
611QB	Inboard Fixed Leading Edge Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel
621AB	Wing Anti-Ice Valve Door

(b) Do this task:

Underwing Fairing Installation, TASK 54-52-03-400-801

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut

(c) Do this task:

Forward Fairings Installation, TASK 54-52-01-400-801-001

<u>Number</u>	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut

(d) Do this task: Aft Fairing Installation, TASK 54-52-04-400-801.

SUBTASK 54-51-01-040-050-002

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

------ END OF TASK ------

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NACELLE STRUT - INSPECTION/CHECK

1. General

- A. This procedure has these tasks:
 - (1) Visually examine the strut for worn areas or damage.
 - (2) Examine the bushings in the strut fittings for worn areas.

TASK 54-51-01-200-803-002

2. Nacelle Strut Examination

(Figure 601)

A. General

(1) This task examines the strut for worn areas or damage. Interference between the wing leading edge and the nacelle strut can cause damage to the wing and the strut. To prevent damage to the airplane structure in this area, examine the wing leading edge structure and the strut skin for interference damage.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-03-000-801	Underwing Fairing Removal (P/B 401)
54-52-03-400-801	Underwing Fairing Installation (P/B 401)
SRM 54-51-70	Structural Repair Manual

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Strut Examination

SUBTASK 54-51-01-040-061-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-01-220-002-002

- (2) Measure the clearance between the wing leading edge lower skin and the center underwing fairing panel (Figure 601).
 - (a) Make sure the clearance is in the tolerance.
 - (b) If the clearance is not in the tolerance, repair the fairings as specified in this procedure: (SRM 54-51-70).

SUBTASK 54-51-01-200-063-002

- (3) Examine the wing leading edge and strut underwing fairings for worn areas or damage.
 - (a) If it is necessary to get access to the damaged area, do this task: Underwing Fairing Removal, TASK 54-52-03-000-801.
 - (b) Look for signs of damage caused by interference between the strut and the wing during flight.

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- (c) If you find nicks, gouges, abrasion, or worn areas, repair as specified in this procedure: (SRM 54-51-70).
- (d) If you removed the underwing fairings, do this task: Underwing Fairing Installation, TASK 54-52-03-400-801.

SUBTASK	54-51-01-0	40-062-002
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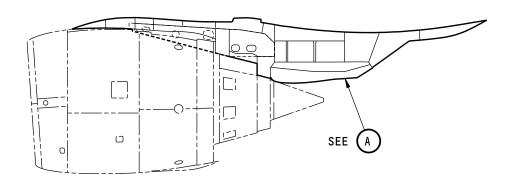
 $(4) \quad \hbox{Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002}. \\$

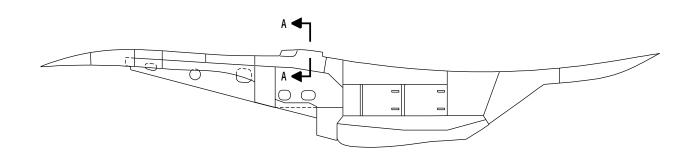
----- END OF TASK -----

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STRUT
(LEFT SIDE)

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Nacelle Strut Inspection Figure 601/54-51-01-990-841-002 (Sheet 1 of 3)

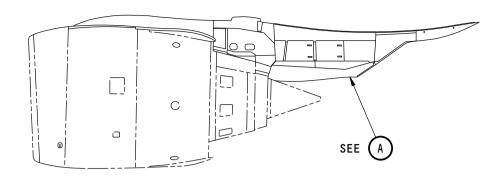
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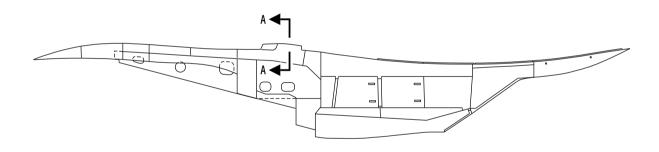
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STRUT (LEFT SIDE)

2436781 S0000565059_V1

Nacelle Strut Inspection Figure 601/54-51-01-990-841-002 (Sheet 2 of 3)

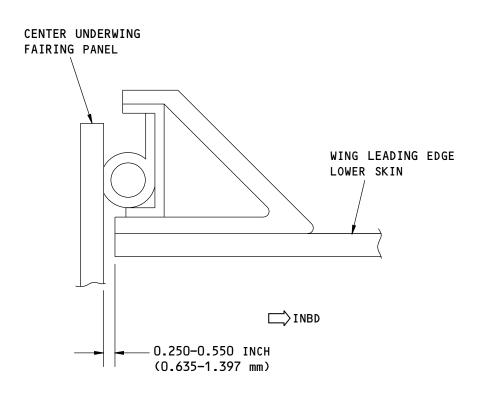
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STRUT FAIRING CLEARANCE A-A

M64079 S0006427249_V1

Nacelle Strut Inspection Figure 601/54-51-01-990-841-002 (Sheet 3 of 3)

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TASK 54-51-01-200-804-002

3. Strut Bushing Examination

(Figure 602)

General

- (1) This task examines the bushings in the strut fittings for worn areas. This task also examines the bushings in the wing forward spar and underwing attach fittings for worn areas.
- For each strut fitting location that you will examine, this task has these steps:
 - (a) Remove the attach pin.
 - (b) Measure the bushing or bearing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Replace the bushings or bearings, if it is necessary.
 - (e) Install the attach pin.
- (3) You can only examine the bushings in one strut fitting at a time, unless you remove the strut.

References

Reference	Title
54-51-02-200-801	Diagonal Brace Aft Fuse Pin Examination (P/B 601)
54-51-02-200-802	Diagonal Brace Forward Pin Examination (P/B 601)
54-51-02-200-803	Upper Link Forward Fuse Pin Examination (P/B 601)
54-51-02-200-804	Upper Link Aft Pin Examination (P/B 601)
54-51-02-200-805	Aft Upper Spar Fuse Pin Examination (P/B 601)
54-51-05-200-801	Strut Side Link Examination (P/B 601)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Strut Bushing Examination

SUBTASK 54-51-01-200-064-002

To examine the bushings in the strut upper spar fitting, do this task: Upper Link Forward Fuse Pin Examination, TASK 54-51-02-200-803.

To examine the bushings in the wing forward spar fitting, do this task: Upper Link Aft Pin Examination, TASK 54-51-02-200-804.

To examine the bushings in the strut lower spar fitting, do this task: Diagonal Brace Forward Pin Examination, TASK 54-51-02-200-802.

To examine the bushings in the aft underwing fitting, do this task: Diagonal Brace Aft Fuse Pin Examination, TASK 54-51-02-200-801.

SUBTASK 54-51-01-200-068-002

To examine the fuse pin bushings in the aft upper spar fittings and the forward underwing fittings, do this task: Aft Upper Spar Fuse Pin Examination, TASK 54-51-02-200-805.

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SUBTASK 54-51-01-200-069-002

(6) To examine the side link bearing races in the aft upper spar fittings and the center underwing fittings, do this task: Strut Side Link Examination, TASK 54-51-05-200-801.

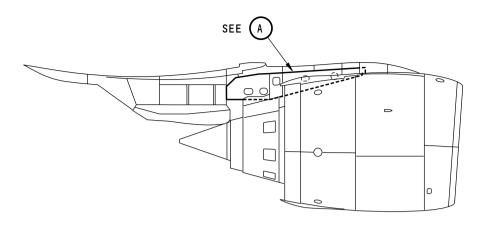
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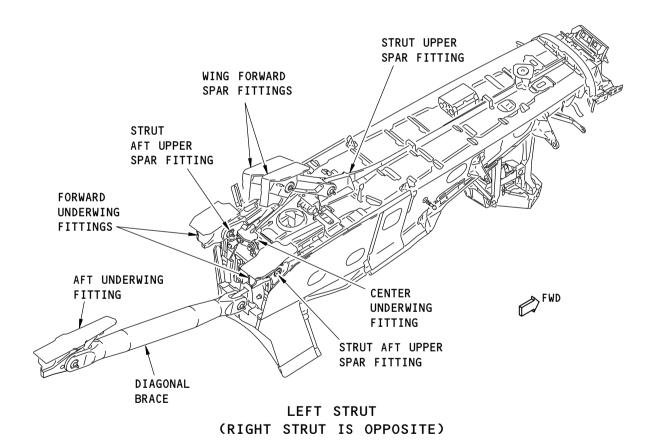
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Strut Bushing Examination Figure 602/54-51-01-990-842-002 (Sheet 1 of 2)

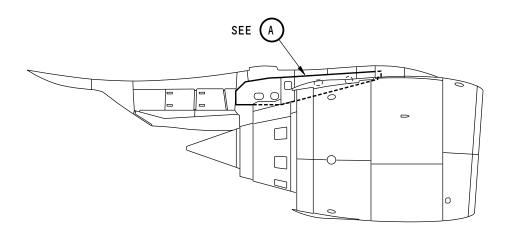
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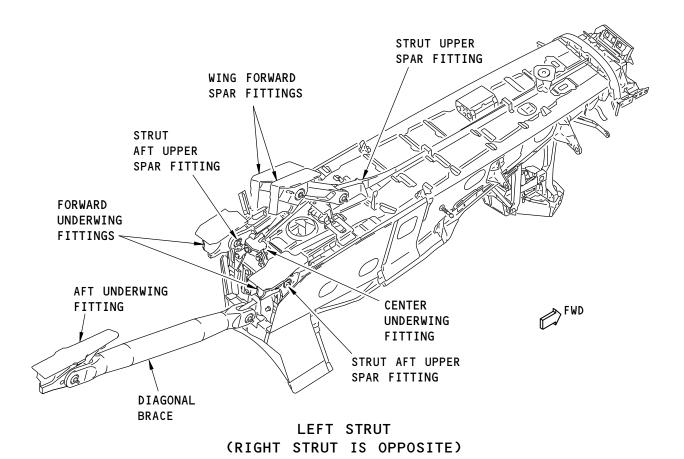
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Strut Bushing Examination Figure 602/54-51-01-990-842-002 (Sheet 2 of 2)

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STRUT ATTACH PIN - REMOVAL/INSTALLATION

1. General

- A. This procedure gives the instructions for the removal/installation of the strut attach pins.
 - (1) If you will remove an aft upper spar fuse pin, you must have the two upper link pins and the two diagonal brace pins installed (unless you will remove the strut).
 - (2) You will remove only one aft upper spar pin at a time (unless you will remove the strut).
 - (3) You can remove the two upper link pins or the two diagonal brace pins at the same time, but you can only have one link free at a time (unless you will remove the strut).
- B. This procedure has these tasks:
 - (1) A removal of the diagonal brace forward pin.
 - (2) A removal of the diagonal brace aft fuse pin.
 - (3) A removal of the upper link forward fuse pin.
 - (4) A removal of the upper link aft pin.
 - (5) A removal of the aft upper spar fuse pin.
 - (6) An installation of the aft upper spar fuse pin.
 - (7) An installation of the upper link aft pin.
 - (8) An installation of the upper link forward fuse pin.
 - (9) An installation of the diagonal brace aft fuse pin.
 - (10) An installation of the diagonal brace forward pin.

TASK 54-51-02-000-801

2. Remove the Forward Pin from the Diagonal Brace

(Figure 401)

A. General

- (1) This task removes the forward pin from the diagonal brace.
- (2) This task has these steps:
 - (a) Get access to the pin.
 - (b) Remove the load from the pin.
 - (c) Remove the nut, bolt, washers, and end caps.
 - (d) Push out the pin with a brass slug with grease.
- (3) If you will replace the pin, you can push out the old pin with a new pin with grease.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-05-000-801	Aft Fairing Access Door Removal (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

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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-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

F. Prepare for the Removal

SUBTASK 54-51-02-040-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-02-010-001

- (2) To get access to the diagonal brace forward pin, open the applicable access doors and panels as follows:
 - (a) To remove the applicable access doors, do this task:

Aft Fairing Access Door Removal, TASK 54-52-05-000-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

(b) To remove the applicable access panels, do this task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing

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(Continued)

<u>Number</u>	Name/Location
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-51-02-580-001

- (3) Support the strut as follows:
 - (a) If you will remove the pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) If you will remove the pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

G. If the Strut Will Stay Installed, Do These Steps to Remove the Pin:

SUBTASK 54-51-02-200-001



MAKE SURE ALL THE UPPER LINK PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- (1) Make sure the pin assembly turns easily.
 - (a) When the load is correctly removed, the pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-001

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [1] and washer [2].
 - (b) Remove the end cap [3] and slotted washer [5].

SUBTASK 54-51-02-000-002



MAKE SURE YOU USE A BRASS SLUG OR A NEW PIN TO PUSH OUT THE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS MAY NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

(3) Use a brass slug with grease, from the pin removal fuse pin kit, SPL-2015, to push out the pin [4].

NOTE: Make sure the clevis and the flange stay aligned.

SUBTASK 54-51-02-580-002

(4) Keep the support load on the strut until you install a pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

H. If You Will Remove the Strut, Do These Steps to Remove the Pin:

SUBTASK 54-51-02-200-002



MAKE SURE ALL THE UPPER LINK PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

(1) Make sure the pin assembly turns easily.

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(a) When the load is correctly removed, the pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-003

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [1] and washer [2].
 - (b) Remove the end cap [3] and slotted washer [5].

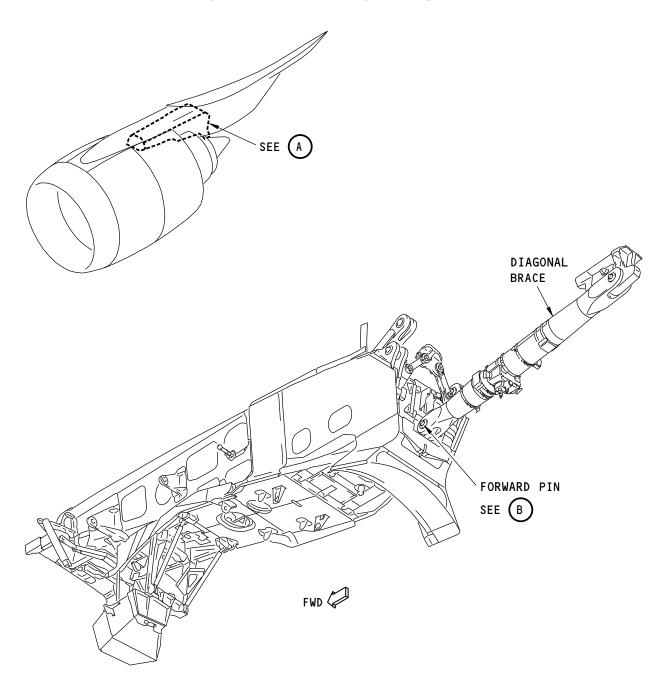
SUBTASK 54-51-02-000-004

(3) Use the pin removal fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251 to remove the pin [4].

----- END OF TASK -----

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LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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Diagonal Brace Forward Pin Installation Figure 401/54-51-02-990-806 (Sheet 1 of 2)

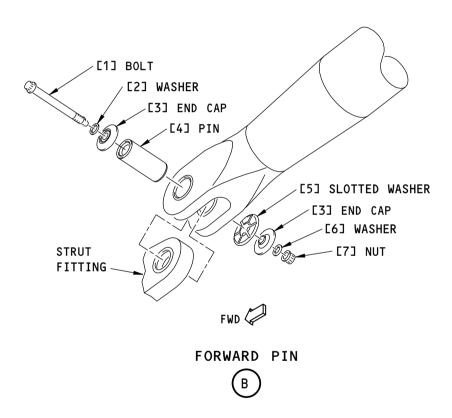
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Diagonal Brace Forward Pin Installation Figure 401/54-51-02-990-806 (Sheet 2 of 2)

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TASK 54-51-02-000-802

3. Remove the Aft Fuse Pin from the Diagonal Brace

(Figure 402)

A. General

- (1) This task removes the aft fuse pin from the diagonal brace.
- (2) This task has these steps:
 - (a) Get access to the fuse pin.
 - (b) Remove the load from the fuse pin.
 - (c) Remove the nut, bolt, washers, and end caps.
 - (d) Push out the fuse pin with a brass slug with grease.
- (3) If you will replace the fuse pin, you can push out the old fuse pin with a new fuse pin with grease.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-05-000-801	Aft Fairing Access Door Removal (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel 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.

Reference	Description
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

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(Continued)

Number	Name/Location
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

F. Prepare for the Removal

SUBTASK 54-51-02-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-02-010-002

- (2) To get access to the diagonal brace aft fuse pin, open the applicable access doors and panels as follows:
 - (a) To remove the applicable access doors, do this task:

Aft Fairing Access Door Removal, TASK 54-52-05-000-801

<u>Number</u>	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

(b) To remove the applicable access panels, do this task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-51-02-580-003

- (3) Support the strut as follows:
 - (a) If you will remove the fuse pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) If you will remove the fuse pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

G. If the Strut Will Stay Installed, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-003



MAKE SURE ALL THE UPPER LINK PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- Make sure the fuse pin assembly turns easily.
 - (a) When the load is correctly removed, the fuse pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-005

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [21] and washer [2].
 - (b) Remove the end cap [3] and slotted washer [5].

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SUBTASK 54-51-02-000-006



MAKE SURE YOU USE A BRASS SLUG TO PUSH OUT THE FUSE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS MAY NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

(3) Use a brass slug with grease, from the pin removal fuse pin kit, SPL-2015, to push out the fuse pin [22].

NOTE: Make sure the clevis and the flange stay aligned.

SUBTASK 54-51-02-580-004

(4) Keep the support load on the strut until you install a fuse pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

H. If You Will Remove the Strut, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-004



MAKE SURE ALL THE UPPER LINK PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- (1) Make sure the fuse pin assembly turns easily.
 - (a) When the load is correctly removed, the fuse pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-007

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [21] and washer [2].
 - (b) Remove the end cap [3], and slotted washer [5].

SUBTASK 54-51-02-000-008

(3) Use the pin removal fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251 to remove the fuse pin [22].

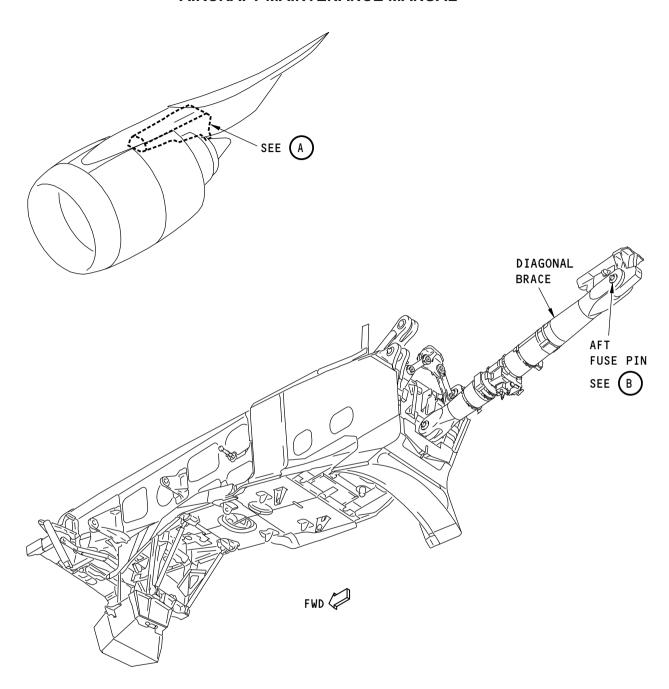
----- END OF TASK -----

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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



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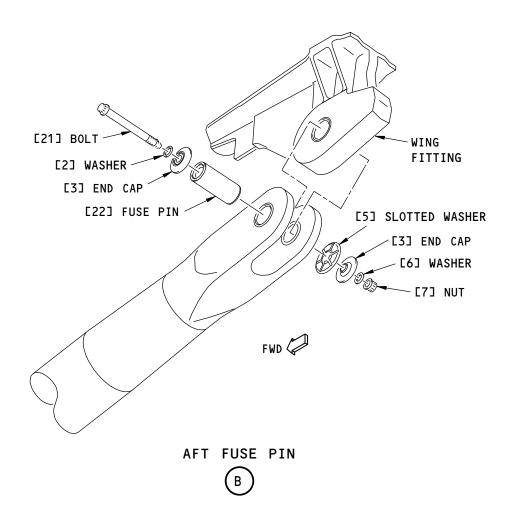
Diagonal Brace Aft Fuse Pin Installation Figure 402/54-51-02-990-807 (Sheet 1 of 2)

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Diagonal Brace Aft Fuse Pin Installation Figure 402/54-51-02-990-807 (Sheet 2 of 2)

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TASK 54-51-02-000-803

4. Remove the Forward Fuse Pin from the Upper Link

(Figure 403)

A. General

- (1) This task removes the forward fuse pin from the upper link.
- (2) This task has these steps:
 - (a) Get access to the fuse pin.
 - (b) Remove the load from the fuse pin.
 - (c) Remove the nut, bolt, washers, and end caps.
 - (d) Push out the fuse pin with a brass slug with grease.
- (3) If you will replace the fuse pin, you can push out the old fuse pin with a new fuse pin with grease.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-03-000-801	Underwing Fairing Removal (P/B 401)
57-41-10-000-801	Wing Leading Edge Panel 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.

Reference	Description
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut

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(Continued)

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Prepare for the Removal

SUBTASK 54-51-02-040-003

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-02-010-003

- To get access to the upper link forward fuse pin, open the applicable access doors and panels as follows:
 - To remove the applicable underwing fairings, do this task:

Underwing Fairing Removal, TASK 54-52-03-000-801

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut

(b) To remove the applicable wing leading edge gap covers, do this task:

Wing Leading Edge Panel Removal, TASK 57-41-10-000-801

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-51-02-580-005

- Support the strut as follows:
 - (a) If you will remove the fuse pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - If you will remove the fuse pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

G. If the Strut Will Stay Installed, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-005



MAKE SURE ALL THE DIAGONAL BRACE PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- Make sure the fuse pin assembly turns easily.
 - When the load is correctly removed, the fuse pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-009

- Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [42] and washer [2].
 - (b) Remove the end cap [3] and slotted washer [5].

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SUBTASK 54-51-02-000-010



MAKE SURE YOU USE A BRASS SLUG TO PUSH OUT THE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS MAY NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

(3) Use a brass slug with grease, from the pin removal fuse pin kit, SPL-2015, to push out the fuse pin [41].

NOTE: Make sure the clevis and the flange stay aligned.

SUBTASK 54-51-02-580-006

(4) Keep the support load on the strut until you install a pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

H. If You Will Remove the Strut, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-006



MAKE SURE ALL THE AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- Make sure the fuse pin assembly turns easily.
 - (a) When the load is correctly removed, the fuse pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-011

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [42] and washer [2].
 - (b) Remove the end cap [3] and slotted washer [5].

SUBTASK 54-51-02-000-012

(3) Use the pin removal fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251 to remove the fuse pin [41].

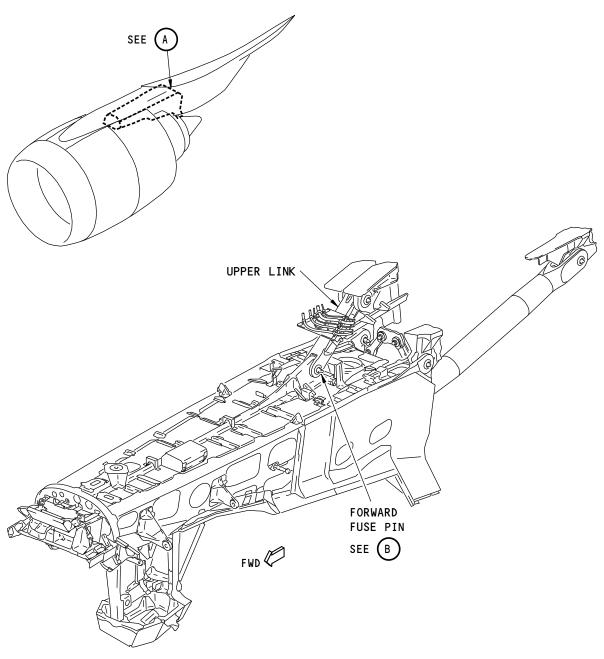
 END	OF TA	ASK —	
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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



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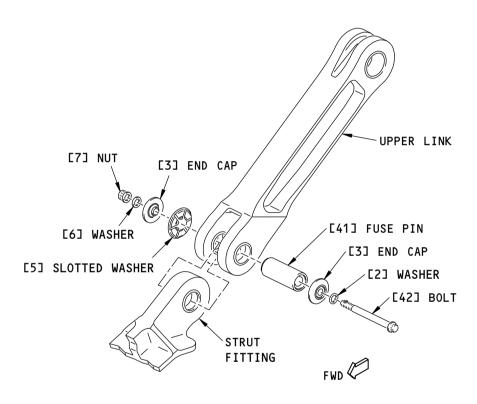
Upper Link Forward Fuse Pin Installation Figure 403/54-51-02-990-808 (Sheet 1 of 2)

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FORWARD FUSE PIN

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Upper Link Forward Fuse Pin Installation Figure 403/54-51-02-990-808 (Sheet 2 of 2)

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TASK 54-51-02-000-804

5. Remove the Aft Pin from the Upper Link

(Figure 404)

A. General

- (1) This task removes the aft pin from the upper link.
- (2) This task has these steps:
 - (a) Get access to the pin.
 - (b) Remove the load from the pin.
 - (c) Remove the nut, bolt, washers, and end caps.
 - (d) Push out the pin with a brass slug with grease.
- (3) If you will replace the pin, you can push out the old pin with a new pin with grease.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
57-41-10-000-801	Wing Leading Edge Panel 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.

Reference	Description
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Prepare for the Removal

SUBTASK 54-51-02-040-004

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-02-010-004

(2) To get access to the upper link aft pin, open the applicable access doors and panels as follows:

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(a) To remove the applicable wing leading edge gap covers, do this task:

Wing Leading Edge Panel Removal, TASK 57-41-10-000-801

Number Name/Location

513BT Upper Nacelle Strut Interface

513BT Upper Nacelle Strut Interface (Gap Cover) Panel
613BT Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-51-02-580-007

- (3) Support the strut as follows:
 - (a) If you will remove the pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) If you will remove the pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.
- G. If the Strut Will Stay Installed, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-007



MAKE SURE ALL THE DIAGONAL PINS AND AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

- (1) Make sure the pin assembly turns easily.
 - (a) When the load is correctly removed, the pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-013

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [62] and washer [2].
 - (b) Remove the end cap [64] and slotted washer [63].

SUBTASK 54-51-02-000-014



MAKE SURE YOU USE A BRASS SLUG TO PUSH OUT THE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS MAY NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

(3) Use a brass slug with grease, from the pin removal fuse pin kit, SPL-2015, to push out the pin [61].

NOTE: Make sure the clevis and the flange stay aligned.

SUBTASK 54-51-02-580-008

(4) Keep the support load on the strut until you install a pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

H. If You Will Remove the Strut, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-008



MAKE SURE ALL THE AFT UPPER SPAR FUSE PINS ARE INSTALLED. DAMAGE TO THE STRUCTURE CAN OCCUR.

(1) Make sure the pin assembly turns easily.

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(a) When the load is correctly removed, the pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-015

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [62], and washer [2].
 - (b) Remove the end cap [64], and slotted washer [63].

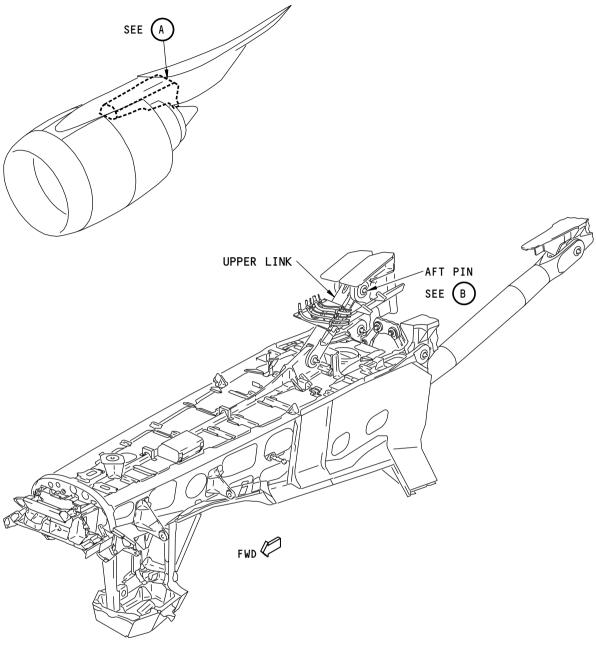
SUBTASK 54-51-02-000-016

(3) Use the pin removal fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251 to remove the pin [61].

——— END OF TASK ———

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LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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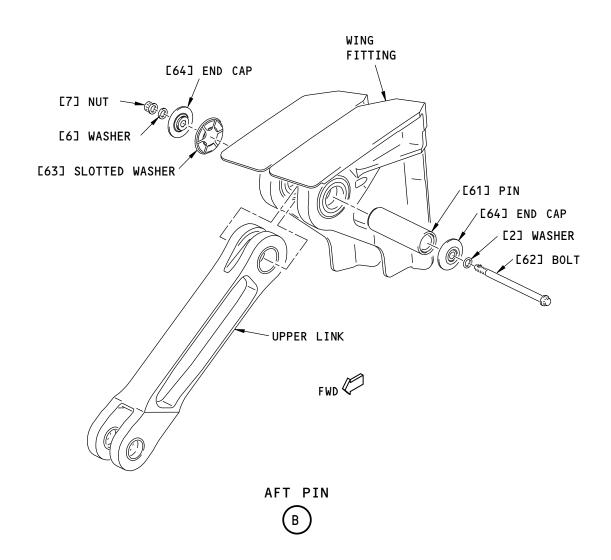
Upper Link Aft Pin Installation Figure 404/54-51-02-990-809 (Sheet 1 of 2)

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Upper Link Aft Pin Installation Figure 404/54-51-02-990-809 (Sheet 2 of 2)

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TASK 54-51-02-000-805

6. Remove the Aft Upper Spar Fuse Pin

(Figure 405)

A. General

- (1) This task removes the aft upper spar fuse pins.
- (2) This task has these steps:
 - (a) Get access to the fuse pin.
 - (b) Remove the load from the fuse pin.
 - (c) Remove the nut, bolt, washers, and end caps.
 - (d) Push out the fuse pin with a brass slug with grease.
- (3) If you will replace the fuse pin, you can push out the old fuse pin with a new fuse pin with grease.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-03-000-801	Underwing Fairing Removal (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel 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.

Reference	Description
SPL-2015 Kit - Removal/Installation, Fuse Pin	
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
431GL	Left Access Cover, Left Strut
431GR	Right Access Cover, Left Strut
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
441GL	Left Access Cover, Right Strut
441GR	Right Access Cover, Right Strut

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(Continued)

Number	Name/Location
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

F. Prepare for the Removal

SUBTASK 54-51-02-040-005

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-02-010-005

- (2) To get access to the aft upper spar fuse pin, open the applicable access doors and panels as follows:
 - (a) To remove the applicable underwing fairing access covers, do this task:

Underwing Fairing Removal, TASK 54-52-03-000-801

<u>Number</u>	Name/Location
431GL	Left Access Cover, Left Strut
431GR	Right Access Cover, Left Strut
441GL	Left Access Cover, Right Strut
441GR	Right Access Cover, Right Strut

(b) To remove the applicable access panels, do this task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-51-02-580-009

- (3) Support the strut as follows:
 - (a) If you will remove the fuse pin with the engine installed, do this task: Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) If you will remove the fuse pin with the engine removed, do this task: Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

G. If the Strut Will Stay Installed, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-009



MAKE SURE ALL THE UPPER LINK PINS AND DIAGONAL BRACE PINS ARE INSTALLED. REMOVE ONLY ONE AFT UPPER SPAR FUSE PIN AT A TIME. DAMAGE TO THE STRUCTURE CAN OCCUR.

- (1) Make sure the fuse pin assembly turns easily.
 - (a) When the load is correctly removed, the fuse pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-017

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [81] and washer [2].
 - (b) Remove the end cap [3] and slotted washer [5].

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SUBTASK 54-51-02-000-018



MAKE SURE YOU USE A BRASS SLUG TO PUSH OUT THE FUSE PIN. IF YOU DO NOT USE A BRASS SLUG, THE CLEVIS MAY NOT STAY ALIGNED WITH THE LUG. DAMAGE TO THE BUSHINGS OR STRUCTURE CAN OCCUR.

(3) Use a brass slug with grease, from the pin removal fuse pin kit, SPL-2015, to push out the fuse pin [82].

NOTE: Make sure the clevis and the flange stay aligned.

SUBTASK 54-51-02-580-010

(4) Keep the support load on the strut until you install a fuse pin at this location.

NOTE: The hydraulic system in the crane can bleed which can cause the load to change.

H. If You Will Remove the Strut, Do These Steps to Remove the Fuse Pin:

SUBTASK 54-51-02-200-010

- (1) Make sure the fuse pin assembly turns easily.
 - (a) When the load is correctly removed, the fuse pin assembly will turn with 125 pound-inches maximum torque.

SUBTASK 54-51-02-000-019

- (2) Remove these parts:
 - (a) Remove the nut [7], washer [6], bolt [81] and washer [2].
 - (b) Remove the end cap [3], and slotted washer [5].

SUBTASK 54-51-02-000-020

(3) Use the pin removal fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251 to remove the fuse pin [82].

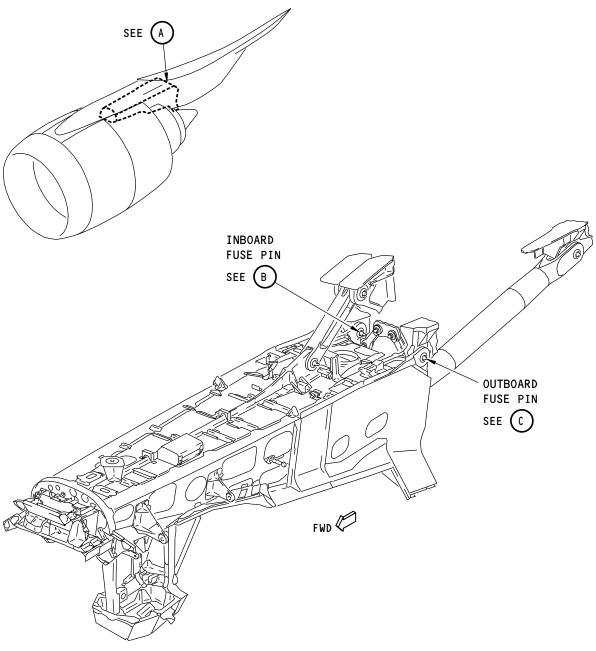
----- END OF TASK -----

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· EFFECTIVITY

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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



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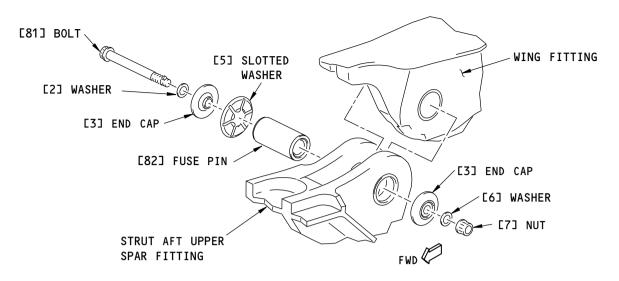
Aft Upper Spar Fuse Pin Installation Figure 405/54-51-02-990-810 (Sheet 1 of 2)

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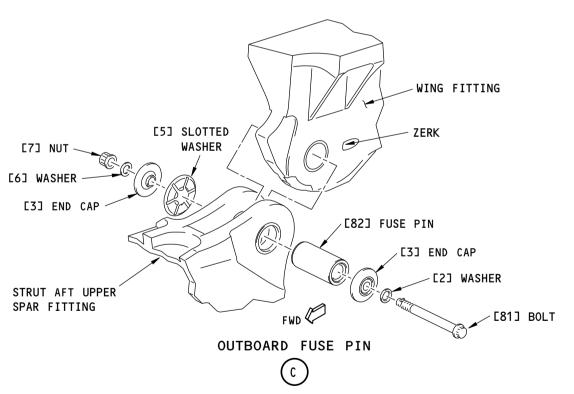
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INBOARD FUSE PIN





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Aft Upper Spar Fuse Pin Installation Figure 405/54-51-02-990-810 (Sheet 2 of 2)

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TASK 54-51-02-000-806

7. Install the Aft Upper Spar Fuse Pin

(Figure 405)

A. General

- (1) This task installs the aft upper spar fuse pin.
- (2) This task has these steps:
 - (a) Make sure there is no corrosion on the fuse pin.
 - (b) If you did not remove the strut, make sure there is no load on the brass slug.
 - (c) Install the fuse pin with grease.
 - (d) Install the end caps, washers, bolt, and nut.
 - (e) Remove the support from the strut.
 - (f) If you will do no more maintenance operations on the strut, put the airplane back to its usual condition.

B. References

Reference	Title
12-21-32 P/B 301	STRUT - SERVICING (LUBRICATION)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-806-002	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-808-002	Remove Support from the Strut with the Engine Removed (P/B 201)
54-52-03-400-801	Underwing Fairing Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel 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
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Consumable Materials

Reference	Description	Specification
D00010	Compound - Thread Antiseize, High	MIL-PRF-907
	Temperature	
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
82	Fuse pin	Not Specified		

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F. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

G. Access Panels

Number	Name/Location
431GL	Left Access Cover, Left Strut
431GR	Right Access Cover, Left Strut
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
441GL	Left Access Cover, Right Strut
441GR	Right Access Cover, Right Strut
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

H. Install the Fuse Pin

NOTE: Wear Limits for these components are in AMM 54-51-02/601, Aft Upper Spar Fuse Pin Examination.

SUBTASK 54-51-02-210-001

- (1) Do a check that the fuse pin [82], bolt [81], washer [2], end cap [3], slotted washer [5], washer [6] and nut [7] have no corrosion.
 - (a) Include the internal surface of the fuse pin.

SUBTASK 54-51-02-210-002

(2) If you removed the strut, do a check that the internal surface of the bushings at the installation fittings have no corrosion.

SUBTASK 54-51-02-300-001

- (3) Do these steps if you find corrosion:
 - (a) To remove corrosion, refer to the Corrosion Prevention Manual (CPM).
 - (b) Or replace the part with a new one.

SUBTASK 54-51-02-390-001

- (4) Make sure all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) If some of the flanged bushings are not sealed, apply a fillet seal to the flanged end of the bushings (TASK 51-31-01-390-804).

SUBTASK 54-51-02-400-001

- (5) If you did not remove the strut, install the fuse pin [82] as follows:
 - (a) Make sure that the brass slug is unloaded.
 - (b) Apply a thin layer of grease, D00014, to the fuse pin [82].
 - (c) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251, to push out the brass slug with the fuse pin [82].

SUBTASK 54-51-02-400-002

- (6) If you removed the strut, install the fuse pin [82] as follows:
 - (a) Apply a thin layer of grease, D00014, to the fuse pin [82].

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(b) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015, to install the fuse pin [82].

SUBTASK 54-51-02-400-003

- (7) Install these parts:
 - (a) Install the slotted washer [5] and end cap [3].

NOTE: Put the slotted washer on the inboard side of the aft upper spar fitting.

(b) Install the bolt [81], washer [2] and washer [6].

NOTE: Install the bolt so that the spring loaded pawl is to the center of the strut.

SUBTASK 54-51-02-400-004

- (8) Install the nut [7] as follows:
 - (a) Apply anti-sieze compound, D00010, to the threads of the nut.
 - (b) Do a check of the run-on torque of the self locking nut. If the run-on torque is not 50 in-lb (6 N·m) to 400 in-lb (45 N·m), replace the nut and do the check again.
 - (c) Tighten the nut to 2600 ±200 in-lb (294 ±23 N·m).
 - (d) Make sure the spring loaded pawl on the bolt fully extends when you tighten the nut.

SUBTASK 54-51-02-200-011

(9) Make sure that all parts are firmly seated.

SUBTASK 54-51-02-640-001

(10) Inject grease, D00014 into the aft upper spar grease fittings until joint is full of grease (STRUT - SERVICING (LUBRICATION), PAGEBLOCK 12-21-32/301).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-02-580-011

- (1) Remove the support from the strut as follows:
 - (a) If you installed the fuse pin with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-806-002.
 - (b) If you installed the fuse pin with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-808-002.

SUBTASK 54-51-02-410-001

- (2) Install the access doors and panels as follows:
 - (a) To install the underwing fairing access covers, do this task:

Underwing Fairing Installation, TASK 54-52-03-400-801

<u>Number</u>	Name/Location
431GL	Left Access Cover, Left Strut
431GR	Right Access Cover, Left Strut
441GL	Left Access Cover, Right Strut
441GR	Right Access Cover, Right Strut

(b) To install the access panels, do this task:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	<u>Name/Location</u>
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing

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(Continued)

<u>Number</u>	Name/Location
444BR	Right Access Panel Right Strut Aft Fairing

444BR Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-51-02-440-001

(3) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-51-02-000-807

8. Install the Aft Pin in the Upper Link

(Figure 404)

A. General

- (1) This task installs the aft pin in the upper link.
- (2) This task has these steps:
 - (a) Make sure there is no corrosion on the pin.
 - (b) If you did not remove the strut, make sure there is no load on the brass slug.
 - (c) Install the pin with grease.
 - (d) Install the end caps, washers, bolt, and nut.
 - (e) Remove the load from the pin.
 - (f) If you will do no more maintenance operations on the strut, put the airplane back to its usual condition.

B. References

Reference	Title
12-21-32 P/B 301	STRUT - SERVICING (LUBRICATION)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-806-002	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-808-002	Remove Support from the Strut with the Engine Removed (P/B 201)
57-41-10-400-801	Wing Leading Edge Panel 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
SPL-2015 Kit - Removal/Installation, Fuse Pin	
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

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D. Consumable Materials

Reference	Description	Specification
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

G. Install the Pin

NOTE: Wear Limits for these components are in AMM 54-51-02/601, Upper Link Aft Pin Examination.

SUBTASK 54-51-02-210-003

- (1) Do a check that the pin [61], bolt [62], washer [2], end cap [64], slotted washer [63], washer [6] and nut [7] have no corrosion.
 - (a) Include the internal surface of the pin.

SUBTASK 54-51-02-210-004

(2) If you removed the strut, do a check that the internal surface of the bushings at the installation fittings have no corrosion.

SUBTASK 54-51-02-300-002

- (3) Do these steps if you find corrosion:
 - (a) To remove corrosion, refer to the Corrosion Prevention Manual (CPM).
 - (b) Or replace the part with a new one.

SUBTASK 54-51-02-390-002

- (4) Make sure all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) If some of the flanged bushings are not sealed, apply a fillet seal to the flanged end of the bushings (TASK 51-31-01-390-804).

SUBTASK 54-51-02-400-005

- (5) If you did not remove the strut, install the pin [61] as follows:
 - (a) Make sure that the brass slug is unloaded.
 - (b) Apply a thin layer of grease, D00014, to the pin [61].
 - (c) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015, to push out the brass slug with the pin [61].

SUBTASK 54-51-02-400-006

- (6) If you removed the strut, install the pin [61] as follows:
 - (a) Apply a thin layer of grease, D00014, to the pin [61].

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(b) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251, to install the pin [61].

SUBTASK 54-51-02-400-007

- (7) Install these parts:
 - (a) Install the slotted washer [63] and end cap [64].

NOTE: Put the slotted washer on the inboard side of the upper link fitting.

(b) Install the bolt [62], washer [2] and washer [6].

NOTE: Install the bolt so the spring loaded pawl to the inboard side of the upper link fitting.

SUBTASK 54-51-02-400-008

- (8) Install the nut [7] as follows:
 - (a) Apply anti-sieze compound, D00010, to the threads of the nut and bolt.
 - (b) Do a check of the run-on torque of the self locking nut. If the run-on torque is not 50 in-lb (6 N·m) to 400 in-lb (45 N·m), replace the nut and do the check again.
 - (c) Tighten the nut to 2600 ±200 in-lb (294 ±23 N·m).
 - (d) Make sure the spring loaded pawl on the bolt is fully extended when the nut is tightened.

SUBTASK 54-51-02-200-012

(9) Make sure that all parts are firmly seated.

SUBTASK 54-51-02-640-002

(10) Inject grease, D00014 into the upper link grease fittings until the joint is full of grease (STRUT - SERVICING (LUBRICATION), PAGEBLOCK 12-21-32/301).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-02-580-012

- (1) Remove the support from the strut as follows:
 - (a) If you installed the pin with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-806-002.
 - (b) If you installed the pin with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-808-002.

SUBTASK 54-51-02-410-002

- (2) Install the access doors and panels as follows:
 - (a) To install the wing leading edge gap covers, do this task:

Wing Leading Edge Panel Installation, TASK 57-41-10-400-801

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-51-02-440-002

(3) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———							
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TASK 54-51-02-000-808

9. Install the Forward Fuse Pin in the Upper Link

(Figure 403)

A. General

- (1) This task installs the forward fuse pin in the upper link.
- (2) This task has these steps:
 - (a) Make sure there is no corrosion on the fuse pin.
 - (b) If you did not remove the strut, make sure there is no load on the brass slug.
 - (c) Install the fuse pin with grease.
 - (d) Install the end caps, washers, bolt, and nut.
 - (e) Remove the load from the fuse pin.
 - (f) If you will do no more maintenance operations on the strut, put the airplane back to its usual condition.

B. References

Reference	Title
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-806-002	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-808-002	Remove Support from the Strut with the Engine Removed (P/B 201)
54-52-03-400-801	Underwing Fairing Installation (P/B 401)
57-41-10-400-801	Wing Leading Edge Panel 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
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Consumable Materials

Reference	Description	Specification
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Location Zones

Zone	Area	
410	PowerPlant, Left	
420	PowerPlant, Right	

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Zone	Area
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

G. Install the Fuse Pin

NOTE: Wear Limits for these components are in AMM 54-51-02/601, Upper Link Forward Fuse Pin Examination.

SUBTASK 54-51-02-210-005

- Do a check that the fuse pin [41], bolt [42], washer [2], end cap [3], slotted washer [5], washer
 [6] and nut [7] have no corrosion.
 - (a) Include the internal surface of the fuse pin.

SUBTASK 54-51-02-210-006

(2) If you removed the strut, do a check that the internal surface of the bushings at the installation fittings have no corrosion.

SUBTASK 54-51-02-300-003

- (3) Do these steps if you find corrosion:
 - (a) To remove corrosion, refer to the Corrosion Prevention Manual (CPM).
 - (b) Or replace the part with a new one.

SUBTASK 54-51-02-390-003

- (4) Make sure all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) If some of the flanged bushings are not sealed, apply a fillet seal to the flanged end of the bushings (TASK 51-31-01-390-804).

SUBTASK 54-51-02-400-009

- (5) If you did not remove the strut, install the fuse pin [41] as follows:
 - (a) Make sure that the brass slug is unloaded.
 - (b) Apply a thin layer of grease, D00014, to the fuse pin [41]fuse pin to be installed.
 - (c) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015, to push out the brass slug with the fuse pin [41].

SUBTASK 54-51-02-400-010

- (6) If you removed the strut, install the fuse pin [41] as follows:
 - (a) Apply a thin layer of grease, D00014, to the fuse pin [41].
 - (b) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251, to install the fuse pin [41].

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SUBTASK 54-51-02-400-011

- (7) Install these parts:
 - (a) Install the slotted washer [5] and end cap [3].
 - NOTE: Put the slotted washer on the inboard side of the upper link fitting.
 - (b) Install the bolt [42], washer [2] and washer [6].
 - NOTE: Install the bolt so the spring loaded pawl is to the inboard side of the upper link fitting.

SUBTASK 54-51-02-400-012

- (8) Install the nut [7] as follows:
 - (a) Apply anti-sieze compound, D00010, to the threads of the nut and bolt.
 - (b) Do a check of the run-on torque of the self locking nut. If the run-on torque is not 50 in-lb (6 N·m)to 400 in-lb (45 N·m), replace the nut and do the check again.
 - (c) Tighten the nut to 2600 ±200 in-lb (294 ±23 N·m).
 - (d) Make sure the spring loaded pawl on the bolt is fully extended when the nut is tightened.

SUBTASK 54-51-02-200-013

(9) Make sure that all parts are firmly seated.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-02-580-013

- (1) Remove the support from the strut as follows:
 - (a) If you installed the fuse pin with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-806-002.
 - (b) If you installed the fuse pin with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-808-002.

SUBTASK 54-51-02-410-003

- (2) Install the access doors and panels as follows:
 - (a) To install the wing leading edge gap covers, do this task:

Wing Leading Edge Panel Installation, TASK 57-41-10-400-801

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

(b) To install the underwing fairings, do this task:

Underwing Fairing Installation, TASK 54-52-03-400-801

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut

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SUBTASK 54-51-02-440-003

(3) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-51-02-000-809

10. Install the Aft Fuse Pin in the Diagonal Brace

(Figure 402)

A. General

- (1) This task installs the aft fuse pin in the diagonal brace.
- (2) This task has these steps:
 - (a) Make sure there is no corrosion on the fuse pin.
 - (b) If you removed the strut, make sure there is no load on the brass slug.
 - (c) Install the fuse pin with grease.
 - (d) Install the end caps, washers, bolt and nut.
 - (e) Remove the load from the fuse pin.
 - (f) If you will do no more maintenance operations on the strut, put the airplane back to its usual condition.

B. References

Reference	Title
12-21-32 P/B 301	STRUT - SERVICING (LUBRICATION)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-806-002	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-808-002	Remove Support from the Strut with the Engine Removed (P/B 201)
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel 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
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205
	Opt Part #: J54007-44 Supplier: 81205
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Consumable Materials

Reference	Description	Specification
D00010	Compound - Thread Antiseize, High	MIL-PRF-907
	Temperature	

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Reference	Description	Specification
D00014	Grease - Molybdenum Disulfide, Low & High	MIL-G-21164 (NATO
	Temperature	G-353)

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

G. Install the Fuse Pin

NOTE: Wear Limits for these components are in AMM 54-51-02/601, Diagonal Brace Aft Fuse Pin Examination.

SUBTASK 54-51-02-210-007

- (1) Do a check that the fuse pin [22], bolt [21], washer [2], end cap [3], slotted washer [5], washer [6] and nut [7] have no corrosion.
 - (a) Include the internal surface of the fuse pin.

SUBTASK 54-51-02-210-008

(2) If you removed the strut, do a check that the internal surface of the bushings at the installation fittings have no corrosion.

SUBTASK 54-51-02-300-004

- (3) Do these steps if you find corrosion:
 - (a) To remove corrosion, refer to the Corrosion Prevention Manual (CPM).
 - (b) Or replace the part with a new one.

SUBTASK 54-51-02-390-004

- (4) Make sure all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) If some of the flanged bushings are not sealed, apply a fillet seal to the flanged end of the bushings, do this task: Fillet Seal Application, TASK 51-31-01-390-804.

SUBTASK 54-51-02-400-013

- (5) If you did not remove the strut, install the fuse pin [22] as follows:
 - (a) Make sure that the brass slug is unloaded.
 - (b) Apply a thin layer of grease, D00014 to the fuse pin [22].

ARO ALL



(c) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015, to push out the brass slug with the fuse pin [22].

SUBTASK 54-51-02-400-014

- (6) If you removed the strut, install the fuse pin [22] as follows:
 - (a) Apply a thin layer of grease, D00014, to the fuse pin [22].
 - (b) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251, to install the fuse pin [22].

SUBTASK 54-51-02-400-015

- (7) Install these parts:
 - (a) Install the slotted washer [5], and end cap [3].
 - NOTE: Put the slotted washer on the inboard side of the diagonal brace fitting.
 - (b) Install the bolt [21], washer [2] and washer [6].
 - NOTE: The bolt can be installed in either direction.

SUBTASK 54-51-02-400-016

- (8) Install the nut [7] as follows:
 - (a) Apply anti-sieze compound, D00010, to the threads of the nut and bolt.
 - (b) Do a check of the run-on torque of the self locking nut. If the run-on torque is not 50-400 pound-inches, replace the nut and do the check again.
 - (c) Tighten the nut to 2400-2800 pound-inches.
 - (d) Make sure the spring loaded pawl on the bolt is fully extended when the nut is tightened.

SUBTASK 54-51-02-200-014

(9) Make sure that all parts are firmly seated.

SUBTASK 54-51-02-640-004

(10) Inject grease, D00014 into the diagonal brace grease fittings until the joint is full of grease (STRUT - SERVICING (LUBRICATION), PAGEBLOCK 12-21-32/301).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-02-580-014

- (1) Remove the support from the strut as follows:
 - (a) If you installed the fuse pin with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-806-002.
 - (b) If you installed the fuse pin with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-808-002.

SUBTASK 54-51-02-410-004

- (2) Install the access doors and panels as follows:
 - (a) To install the access panels, do this task:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

ARO ALL



(b) To install the access doors, do this task:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

<u>Number</u>	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-51-02-440-004

(3) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-51-02-400-801

11. Install the Forward Pin in the Diagonal Brace

(Figure 401)

A. General

- (1) This task installs the forward pin in the diagonal brace.
- (2) This task has these steps:
 - (a) Make sure there is no corrosion on the pin.
 - (b) If you removed the strut, make sure there is no load on the brass slug.
 - (c) Install the pin with grease.
 - (d) Install the end caps, washers, bolt, and nut.
 - (e) Remove the load from the pin.
 - (f) If you will do no more maintenance operations on the strut, put the airplane back to its usual condition.

B. References

Reference	Title
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-806-002	Remove Support from the Strut with the Engine Installed (P/B 201)
54-51-01-580-808-002	Remove Support from the Strut with the Engine Removed (P/B 201)
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel 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
SPL-2015	Kit - Removal/Installation, Fuse Pin
	Part #: J54007-56 Supplier: 81205 Opt Part #: J54007-44 Supplier: 81205

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(Continued)

Reference	Description
SPL-4251	Kit- Removal/Installation, Fuse Pin (777-300 - PW,RR engines)

D. Consumable Materials

Reference	Description	Specification
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

G. Install the Pin

NOTE: Wear Limits for these components are in AMM 54-51-02/601, Diagonal Brace Forward Pin Examination.

SUBTASK 54-51-02-210-009

- (1) Do a check that the pin [4], bolt [1], washer [2], end cap [3], slotted washer [5], washer [6], and nut [7] have no corrosion.
 - (a) Include the internal surface of the pin.

SUBTASK 54-51-02-210-010

(2) If you removed the strut, do a check that the internal surface of the bushings at the installation fittings have no corrosion.

SUBTASK 54-51-02-300-005

- (3) Do these steps if you find corrosion:
 - (a) To remove corrosion, refer to the Corrosion Prevention Manual (CPM).
 - (b) Or replace the part with a new one.

SUBTASK 54-51-02-390-005

- (4) Make sure all flanged bushings at the installation fittings are sealed from corrosion.
 - (a) If some of the flanged bushings are not sealed, apply a fillet seal to the flanged end of the bushings (TASK 51-31-01-390-804).

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SUBTASK 54-51-02-400-017

- (5) If you did not remove the strut, install the pin [4] as follows:
 - (a) Make sure that the brass slug is unloaded.
 - (b) Apply a thin layer of grease, D00014, to the pin [4].
 - (c) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015, to push out the brass slug with the pin [4].

SUBTASK 54-51-02-400-018

- (6) If you removed the strut, install the pin [4] as follows:
 - (a) Apply a thin layer of grease, D00014, to the pin [4].
 - (b) Use the pin installation tool, from the pin installation fuse pin kit, SPL-2015 or fuse pin kit, SPL-4251, to install the pin [4].

SUBTASK 54-51-02-400-019

- (7) Install these parts:
 - (a) Install the slotted washer [5] and end cap [3].
 - NOTE: Put the slotted washer on the inboard side of the diagonal brace fitting.
 - (b) Install the bolt [1], washer [2] and washer [6].
 - NOTE: The bolt can be installed in either direction.

SUBTASK 54-51-02-400-020

- (8) Install the nut [7] as follows:
 - (a) Apply anti-sieze compound, D00010, to the threads of the nut and bolt.
 - (b) Do a check of the run-on torque of the self locking nut. If the run-on torque is not 50 in-lb (6 N·m)to 400 in-lb (45 N·m), replace the nut and do the check again.
 - (c) Tighten the nut to 2600 ±200 in-lb (294 ±23 N·m).
 - (d) Make sure the spring loaded pawl on the bolt is fully extended when the nut is tightened.

SUBTASK 54-51-02-200-015

(9) Make sure that all parts are firmly seated.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-02-580-015

- (1) Remove the support from the strut as follows:
 - (a) If the pin was installed with the engine installed, do this task: Remove Support from the Strut with the Engine Installed, TASK 54-51-01-580-806-002.
 - (b) If the pin was installed with the engine removed, do this task: Remove Support from the Strut with the Engine Removed, TASK 54-51-01-580-808-002.

SUBTASK 54-51-02-410-005

- (2) Install the access doors and panels as follows:
 - (a) To install the access panels, do this task:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

ARO ALL



(b) To install the access doors, do this task:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

SUBTASK 54-51-02-440-005

(3) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

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STRUT ATTACH PIN - INSPECTION/CHECK

1. General

- A. This procedure has these tasks:
 - (1) Examine the aft fuse pin in the diagonal brace.
 - (2) Examine the forward pin in the diagonal brace.
 - (3) Examine the forward fuse pin in the upper link.
 - (4) Examine the aft pin in the upper link.
 - (5) Examine the aft upper spar fuse pins.

TASK 54-51-02-200-801

2. Diagonal Brace Aft Fuse Pin Examination

(Figure 601)

A. General

- (1) This task examines the aft fuse pin in the diagonal brace for worn areas. This task also examines the bushings in the diagonal brace and the underwing fitting for worn areas.
- (2) This task has these steps:
 - (a) Remove the aft fuse pin.
 - (b) Measure the aft fuse pin and bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Repair or replace the aft fuse pin or bushings, if it is necessary.
 - (e) Install the aft fuse pin.
- (3) You can examine both diagonal brace pins at the same time, but both aft upper spar pins and both upper link pins must stay installed, unless you remove the strut.

B. References

Reference	Title
54-51-02-000-802	Remove the Aft Fuse Pin from the Diagonal Brace (P/B 401)
54-51-02-000-809	Install the Aft Fuse Pin in the Diagonal Brace (P/B 401)
CMM 54-51-07	Component Maintenance Manual
SRM 57-20-90	Structural Repair Manual

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-02-000-021

(1) Do this task: Remove the Aft Fuse Pin from the Diagonal Brace, TASK 54-51-02-000-802.

E. Fuse Pin and Bushing Examination

SUBTASK 54-51-02-220-001

(1) Measure these dimensions:

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- (a) Measure the outside diameter of the fuse pin for the diagonal brace.
- (b) Measure the inside diameter of the bushing in the underwing attach fitting.
- (c) Measure the inside diameter of the bushings in the aft end of the diagonal brace.

SUBTASK 54-51-02-350-001

(2) Make sure the dimensions are within the tolerances as specified in (Table 601).

Table 601/54-51-02-993-816 Diagonal Brace Aft Pin Wear Limits (777-300)

*****			DESIGN LIMITS		WEAR LIMITS		
* ^[3] INDEX NO.	PART NAME	DIM.	DIAMETER		ALLOWED	MAX CLEAR-	REPAIR
			MIN	MAX	WEAR DIM.	ANCE	
1	BUSHING	ID	2.6018	2.6032	2.6071	0.0078	*[1]
	PIN	OD	2.5993	2.6007	2.5954		*[1]
2	BUSHING	ID	2.6018	2.6032	2.6071	0.0078	*[2]
	PIN	OD	2.5993	2.6007	2.5954		*[1]

- *[1] REFER TO CMM 54-51-07 TO REPAIR OR REPLACE THE PART.
- *[2] REFER TO SRM 57-20-90 TO REPAIR OR REPLACE THE PART.
- *[3] SEE FIGURE 601 FOR INDEX NUMBERS.
 - (a) If the fuse pin dimensions are not in the tolerances, repair or replace the fuse pin (CMM 54-51-07).
 - (b) If the bushing dimensions in the aft underwing fitting are not in the tolerances, replace the bushing (SRM 57-20-90).
 - (c) If the bushing dimensions in the diagonal brace are not in the tolerances, replace the bushings (CMM 54-51-07).

F. Put the Airplane Back to its Usual Condition

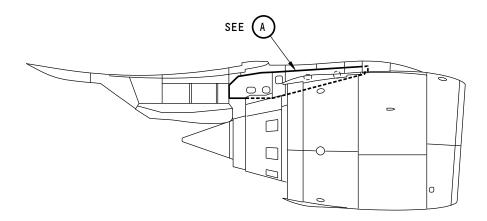
SUBTASK 54-51-02-400-021

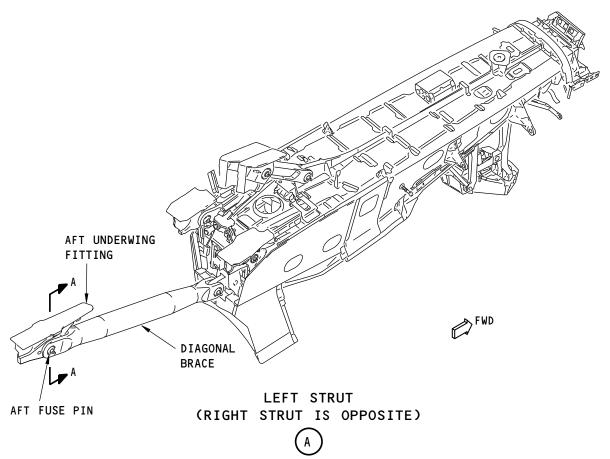
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(1) Do this task: Install the Aft Fuse Pin in the Diagonal Brace, TASK 54-51-02-000-809.

------ END OF TASK ------







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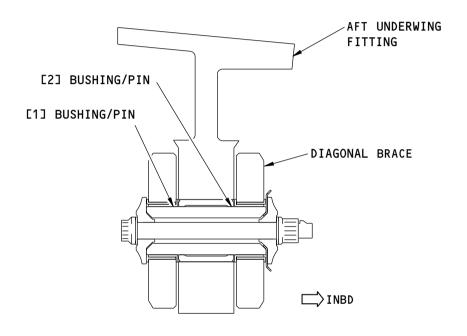
Diagonal Brace Aft Fuse Pin Examination Figure 601/54-51-02-990-801 (Sheet 1 of 2)

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DIAGONAL BRACE AFT FUSE PIN
A-A

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Diagonal Brace Aft Fuse Pin Examination Figure 601/54-51-02-990-801 (Sheet 2 of 2)

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TASK 54-51-02-200-802

3. Diagonal Brace Forward Pin Examination

(Figure 602)

A. General

- (1) This task examines the forward pin in the diagonal brace for worn areas. This task also examines the bushings in the diagonal brace and the strut attach fitting for worn areas.
- (2) This task has these steps:
 - (a) Remove the forward pin.
 - (b) Measure the forward pin and bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Repair or replace the forward pin or bushings, if it is necessary.
 - (e) Install the forward pin.
- (3) You can examine both diagonal brace pins at the same time, but both aft upper spar pins and both upper link pins must stay installed, unless you remove the strut.

B. References

Reference	Title
20-10-02-900-801	Bearing and Bushings Removal and Installation (P/B 401)
54-51-02-000-801	Remove the Forward Pin from the Diagonal Brace (P/B 401)
54-51-02-400-801	Install the Forward Pin in the Diagonal Brace (P/B 401)
CMM 54-51-07	Component Maintenance Manual

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-02-000-022

(1) Do this task: Remove the Forward Pin from the Diagonal Brace, TASK 54-51-02-000-801.

E. Pin and Bushing Examination

SUBTASK 54-51-02-220-002

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the pin for the diagonal brace.
 - (b) Measure the inside diameter of the bushings in the strut aft lower spar fitting.
 - (c) Measure the inside diameter of the bushings in the forward end of the diagonal brace.

SUBTASK 54-51-02-300-011

(2) Make sure the dimensions are within the tolerances as specified in the table (Table 602).

ARO ALL 54-51-02



Table 602/54-51-02-993-817 Diagonal Brace Forward Pin Wear Limits (777-300)

*****			DESIGN	LIMITS	WEAR I	LIMITS	
* ^[3] INDEX NO.	PART NAME	DIM.	DIAMETER		ALLOWED	MAX CLEAR-	REPAIR
			MIN	MAX	WEAR DIM.	ANCE	
3	BUSHING	ID	2.6618	2.6632	2.6671	0.0078	*[1]
	PIN	OD	2.6593	2.6607	2.6554		*[1]
4	BUSHING	ID	2.6618	2.6632	2.6671	0.0078	*[2]
	PIN	OD	2.6593	2.6607	2.6554		*[1]

^{*[1]} REFER TO CMM 54-51-07 TO REPAIR OR REPLACE THE PART.

- *[3] SEE FIGURE 602 FOR INDEX NUMBERS.
 - (a) If the pin dimensions are not in the tolerances, repair or replace the pin (CMM 54-51-07).
 - (b) If the bushing dimensions in the strut aft lower spar fitting are not in the tolerances, replace the bushings (TASK 20-10-02-900-801).
 - (c) If the bushing dimensions in the diagonal brace are not in the tolerances, replace the bushings (CMM 54-51-07).

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-02-400-022

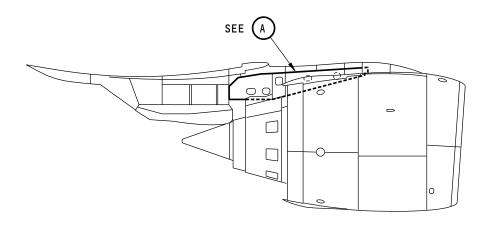
(1) Do this task: Install the Forward Pin in the Diagonal Brace, TASK 54-51-02-400-801.

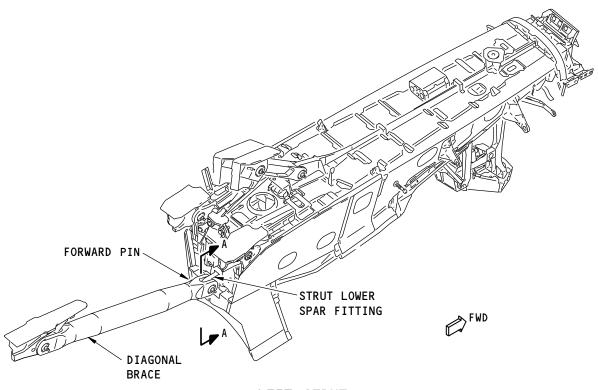
——— END OF TASK ———

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^{*[2]} REFER TO Bearing and Bushings Removal and Installation, TASK 20-10-02-900-801 TO REPAIR OR REPLACE THE PART.







LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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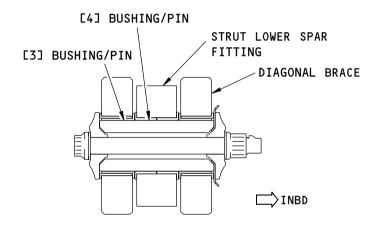
Diagonal Brace Forward Pin Examination Figure 602/54-51-02-990-802 (Sheet 1 of 2)

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DIAGONAL BRACE FORWARD PIN
A-A

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Diagonal Brace Forward Pin Examination Figure 602/54-51-02-990-802 (Sheet 2 of 2)

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TASK 54-51-02-200-803

4. Upper Link Forward Fuse Pin Examination

(Figure 603)

A. General

- (1) This task examines the forward fuse pin in the upper link for worn areas. This task also examines the bushings in the upper link and the strut attach fitting for worn areas.
- (2) This task has these steps:
 - (a) Remove the forward fuse pin.
 - (b) Measure the forward fuse pin and bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Repair or replace the forward fuse pin or bushings, if it is necessary.
 - (e) Install the forward fuse pin.
- (3) You can examine both upper link pins at the same time, but both aft upper spar pins and both diagonal brace pins must stay installed, unless you remove the strut.

B. References

Reference	Title
54-51-02-000-803	Remove the Forward Fuse Pin from the Upper Link (P/B 401)
54-51-02-000-808	Install the Forward Fuse Pin in the Upper Link (P/B 401)
CMM 54-51-07	Component Maintenance Manual

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-02-000-023

(1) Do this task: Remove the Forward Fuse Pin from the Upper Link, TASK 54-51-02-000-803.

E. Fuse Pin and Bushing Examination

SUBTASK 54-51-02-220-003

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the fuse pin for the upper link.
 - (b) Measure the inside diameter of the bushings in the strut forward upper spar fitting.
 - (c) Measure the inside diameter of the bushings in the forward end of the upper link.

SUBTASK 54-51-02-300-012

(2) Make sure the dimensions are within the tolerances as specified in (Table 603).

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Table 603/54-51-02-993-818 Upper Link Forward Fuse Pin Wear Limits (777-300)

troj			DESIGN LIMITS DIAMETER		WEAR LIMITS		
*[2]INDEX NO.	PART NAME	DIM.			ALLOWED	MAX CLEAR-	REPAIR
			MIN	MAX	WEAR DIM.	ANCE	
5	BUSHING	ID	2.6018	2.6032	2.6071	0.0078	*[1]
	PIN	OD	2.5993	2.6007	2.5954		*[1]
6	BUSHING	ID	2.6018	2.6032	2.6071	0.0078	
	PIN	OD	2.5993	2.6007	2.5954		*[1]

^{*[1]} REFER TO CMM 54-51-07 TO REPAIR OR REPLACE THE PART.

- (a) If the fuse pin dimensions are not in the tolerances, repair or replace the fuse pin (CMM 54-51-07).
- (b) If the bushing dimensions in the strut forward upper spar fitting are not in the tolerances, replace the bushings.
- (c) If the bushing dimensions in the upper link are not in the tolerances, replace the bushings (CMM 54-51-07).

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-51-02-400-023

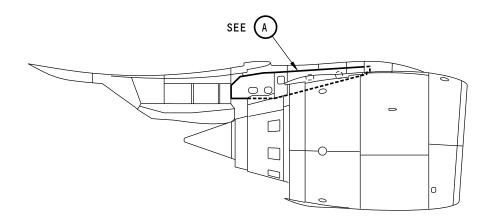
(1) Do this task: Install the Forward Fuse Pin in the Upper Link, TASK 54-51-02-000-808.

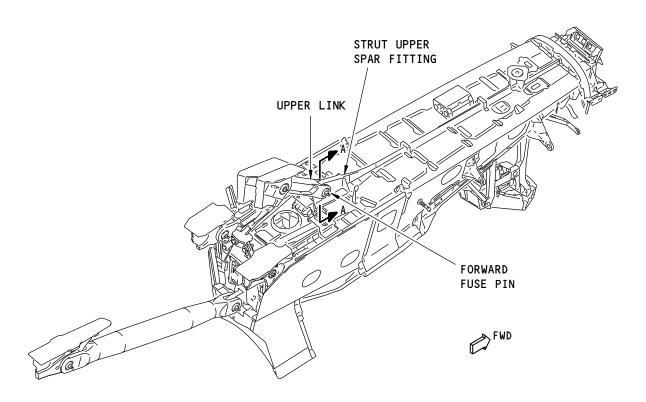
----- END OF TASK -----

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^{*[2]} SEE FIGURE 603 FOR INDEX NUMBERS.







LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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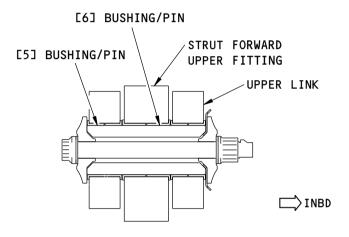
Upper Link Forward Fuse Pin Examination Figure 603/54-51-02-990-803 (Sheet 1 of 2)

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UPPER LINK FORWARD FUSE PIN
A-A

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Upper Link Forward Fuse Pin Examination Figure 603/54-51-02-990-803 (Sheet 2 of 2)

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TASK 54-51-02-200-804

5. Upper Link Aft Pin Examination

(Figure 604)

A. General

- (1) This task examines the aft pin in the upper link for worn areas. This task also examines the bushings in the upper link and the wing forward spar fittings for worn areas.
- (2) This task has these steps:
 - (a) Remove the aft pin.
 - (b) Measure the aft pin and bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Repair or replace the aft pin or bushings, if it is necessary.
 - (e) Install the aft pin.
- (3) You can examine both upper link pins at the same time, but both aft upper spar pins and both diagonal brace pins must stay installed, unless you remove the strut.

B. References

Reference	Title
54-51-02-000-804	Remove the Aft Pin from the Upper Link (P/B 401)
54-51-02-000-807	Install the Aft Pin in the Upper Link (P/B 401)
CMM 54-51-07	Component Maintenance Manual
SRM 57-20-90	Structural Repair Manual

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-02-000-024

(1) Do this task: Remove the Aft Pin from the Upper Link, TASK 54-51-02-000-804.

E. Pin and Bushing Examination

SUBTASK 54-51-02-220-004

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the pin for the upper link.
 - (b) Measure the inside diameter of the bushings in the wing forward spar fittings.
 - (c) Measure the inside diameter of the bushings in the forward end of the upper link.

SUBTASK 54-51-02-300-013

(2) Make sure the dimensions are within the tolerances as specified in (Table 604).

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Table 604/54-51-02-993-819 Upper Link Aft Pin Wear Limits (777-300)

+101		ME DIM.	DESIGN LIMITS		WEAR LIMITS		
*[3]INDEX NO.	PART NAME		DIAMETER		ALLOWED	MAX CLEAR-	REPAIR
			MIN	MAX	WEAR DIM.	ANCE	
7	BUSHING	ID	3.1018	3.1032	3.1071	0.0078	*[2]
	PIN	OD	3.0993	3.1007	3.0954		*[1]
8	BUSHING	ID	3.1018	3.1032	3.1071	0.0078	*[1]
	PIN	OD	3.0993	3.1007	3.0954		*[1]

- *[1] REFER TO CMM 54-51-07 TO REPAIR OR REPLACE THE PART.
- *[2] REFER TO SRM 57-20-90 TO REPAIR OR REPLACE THE PART.
- *[3] SEE FIGURE 604 FOR INDEX NUMBERS.
 - (a) If the pin dimensions are not in the tolerances, repair or replace the pin (CMM 54-51-07).
 - (b) If the bushing dimensions in the wing forward spar fittings are not in the tolerances, replace the bushings (SRM 57-20-90).
 - (c) If the bushing dimensions in the upper link are not in the tolerances, replace the bushings (CMM 54-51-07).

F. Put the Airplane Back to its Usual Condition

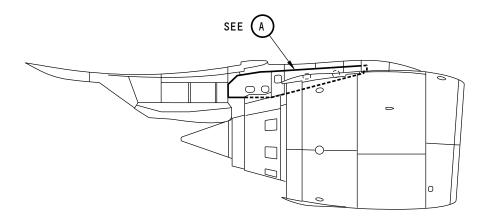
SUBTASK 54-51-02-400-024

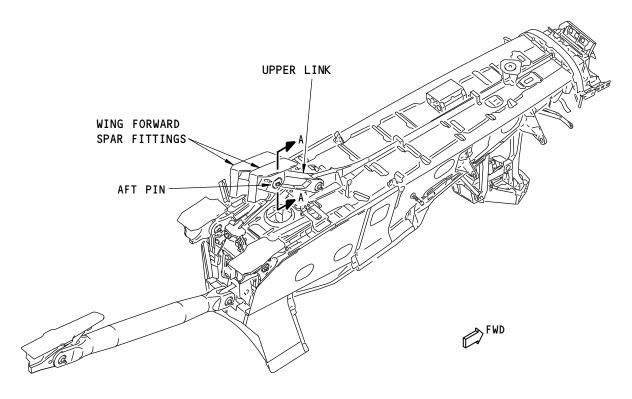
(1) Do this task: Install the Aft Pin in the Upper Link, TASK 54-51-02-000-807.

------ END OF TASK ------

FFFECTIVITY S4-51-02







LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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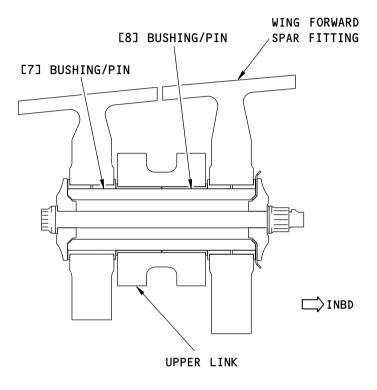
Upper Link Aft Pin Examination Figure 604/54-51-02-990-804 (Sheet 1 of 2)

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UPPER LINK AFT PIN
A-A

E87164 S0006427423_V1

Upper Link Aft Pin Examination Figure 604/54-51-02-990-804 (Sheet 2 of 2)

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TASK 54-51-02-200-805

6. Aft Upper Spar Fuse Pin Examination

(Figure 605)

A. General

- (1) This task examines the aft upper spar pin for worn areas. This task also examines the bushings in the strut aft upper spar attach fittings for worn areas.
- (2) This task has these steps:
 - (a) Remove the aft upper spar fuse pin.
 - (b) Measure the aft upper spar fuse pin and bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Repair or replace the aft upper spar fuse pin or bushings, if it is necessary.
 - (e) Install the aft upper spar fuse pin.
- (3) You can examine only one aft upper spar fuse pin at a time. Both diagonal brace pins, and both upper link pins, and one aft upper spar pin must stay installed, unless you remove the strut.

B. References

Reference	Title	
54-51-02-000-805	Remove the Aft Upper Spar Fuse Pin (P/B 401)	
54-51-02-000-806	Install the Aft Upper Spar Fuse Pin (P/B 401)	
CMM 54-51-07	Component Maintenance Manual	
SRM 54-52-90	Structural Repair Manual	
SRM 57-20-90	Structural Repair Manual	

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-02-000-025

(1) Do this task: Remove the Aft Upper Spar Fuse Pin, TASK 54-51-02-000-805.

E. Fuse Pin and Bushing Examination

SUBTASK 54-51-02-220-005

- (1) Measure these dimensions:
 - (a) Measure the outside diameter of the aft upper spar fuse pin.
 - (b) Measure the inside diameter of the bushings in the forward underwing fitting.
 - (c) Measure the inside diameter of the bushings in the strut aft upper spar fitting.

SUBTASK 54-51-02-300-014

(2) Make sure the dimensions are within the tolerances as specified in (Table 605).

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Table 605/54-51-02-993-820 Aft Upper Spar Fuse Pin Wear Limits (777-300)

			DESIGN LIMITS		WEAR LIMITS		
*[4]INDEX NO.	PART NAME	DIM.	DIAME	ETER	ALLOWED	MAX CLEAR-	REPAIR
			MIN	MAX	WEAR DIM.	ANCE	
9	BUSHING	ID	2.6018	2.6032	2.6071	0.0078	*[2]
	PIN	OD	2.5993	2.6007	2.5954		*[1]
10	BUSHING	ID	2.6018	2.6032	2.6071	0.0078	*[3]
	PIN	OD	2.5993	2.6007	2.5954		*[1]

- *[1] REFER TO CMM 54-51-07 TO REPAIR OR REPLACE THE PART.
- *[2] REFER TO SRM 54-52-90 TO REPAIR OR REPLACE THE PART.
- *[3] REFER TO SRM 57-20-90 TO REPAIR OR REPLACE THE PART.
- *[4] SEE FIGURE 605 FOR INDEX NUMBERS.
 - (a) If the fuse pin dimensions are not in the tolerances, repair or replace the fuse pin (CMM 54-51-07).
 - (b) If the bushing dimensions in the forward underwing fitting are not in the tolerances, replace the bushings (SRM 57-20-90).
 - (c) If the bushing dimensions in the strut aft upper spar fitting are not in the tolerances, replace the bushings (SRM 54-52-90).

F. Put the Airplane Back to its Usual Condition

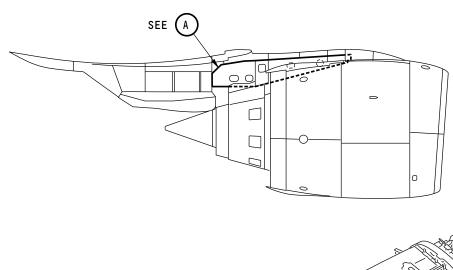
SUBTASK 54-51-02-400-025

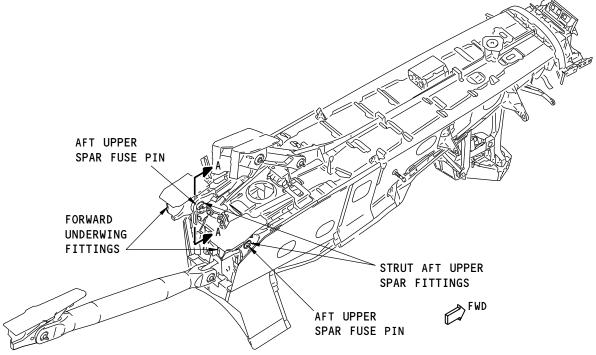
(1) Do this task: Install the Aft Upper Spar Fuse Pin, TASK 54-51-02-000-806.

----- END OF TASK -----

FFFECTIVITY S4-51-02







LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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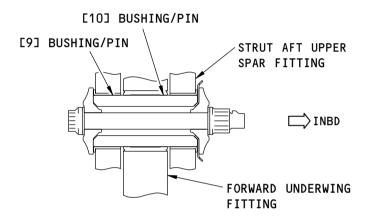
Aft Upper Spar Fuse Pin Examination Figure 605/54-51-02-990-805 (Sheet 1 of 2)

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AFT UPPER SPAR FUSE PIN A-A

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Aft Upper Spar Fuse Pin Examination Figure 605/54-51-02-990-805 (Sheet 2 of 2)

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UPPER LINK - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the upper link
 - (2) An installation of the upper link.

TASK 54-51-03-000-801

2. Upper Link Removal

(Figure 401)

A. General

- (1) This task removes the upper link.
- (2) This task has these steps:
 - (a) Prepare the Strut for Maintenance Operations.
 - (b) Remove the access panels.
 - (c) Remove the wing forward spar systems from the upper link.
 - (d) Remove the nacelle strut.
 - (e) Remove the forward fuse pin from the upper link.
 - (f) Remove the aft pin from the upper link.
 - (g) Lower the upper link from the wing.

B. References

Reference	Title
54-51-01-000-805-002	Nacelle Strut Removal (P/B 401)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-51-02-000-803	Remove the Forward Fuse Pin from the Upper Link (P/B 401)
54-51-02-000-804	Remove the Aft Pin from the Upper Link (P/B 401)
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

E. Prepare for the Removal

SUBTASK 54-51-03-440-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

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SUBTASK 54-51-03-410-004

(2) To remove the applicable wing leading edge gap covers, do this task:

Wing Leading Edge Panel Removal, TASK 57-41-10-000-801

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-51-03-820-002

- (3) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

SUBTASK 54-51-03-010-002

- (4) Remove the wing forward spar systems from the upper link [1] as follows:
 - (a) Remove the two screws [2], two washers [3], and two spacers [4].
 - (b) Remove the four screws [5], and four washers [3] that attach the systems bracket assembly to the upper link.
 - (c) Carefully move the systems bracket assembly and the wire bundles up above the upper attach fitting, and secure them.

SUBTASK 54-51-03-010-001

(5) Do this task: Nacelle Strut Removal, TASK 54-51-01-000-805-002.

F. Remove the Upper Link

SUBTASK 54-51-03-500-001



BE CAREFUL WHEN YOU MOVE THE UPPER LINK. BECAUSE THE UPPER LINK WEIGHS 50 POUNDS, INJURIES TO PERSONS CAN OCCUR.

(1) Support the upper link [1] before you remove the pins.

SUBTASK 54-51-03-020-003

(2) Do this task: Remove the Forward Fuse Pin from the Upper Link, TASK 54-51-02-000-803.

SUBTASK 54-51-03-020-001

(3) Do this task: Remove the Aft Pin from the Upper Link, TASK 54-51-02-000-804.

SUBTASK 54-51-03-020-002

(4) Carefully lower the upper link [1] from the wing.

----- END OF TASK -----

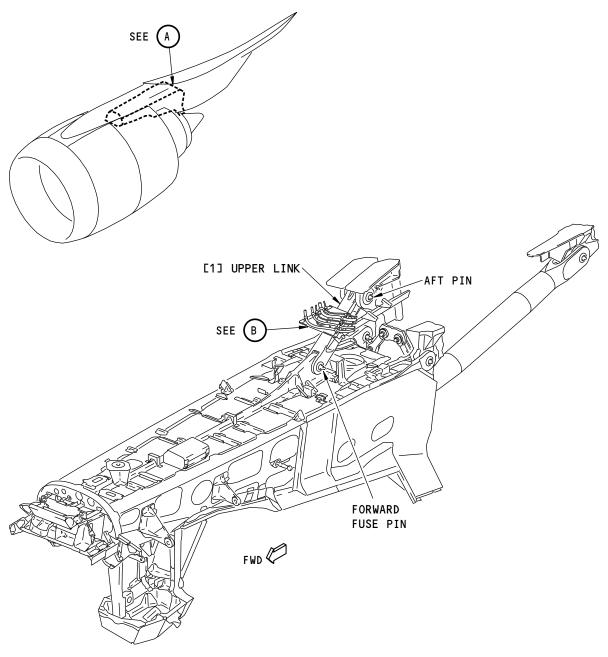
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LEFT STRUT
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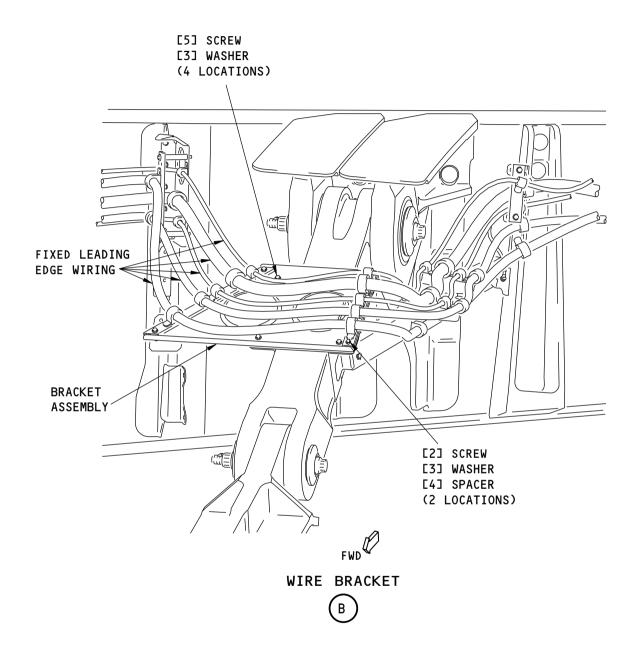
Upper Link Installation Figure 401/54-51-03-990-801 (Sheet 1 of 2)

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Upper Link Installation Figure 401/54-51-03-990-801 (Sheet 2 of 2)

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TASK 54-51-03-400-801

3. Upper Link Installation

(Figure 401)

A. General

- (1) This task installs the upper link.
- (2) This task has these steps:
 - (a) Lift the upper link to the wing forward spar.
 - (b) Install the aft pin in the upper link.
 - (c) Install the forward pin in the upper link.
 - (d) Install the nacelle strut.
 - (e) Install the wing forward spar systems onto the upper link.
 - (f) Install the access panels.
 - (g) Put the Strut back to its usual condition.

B. References

Reference	Title
54-51-01-400-805-002	Install Nacelle Strut (P/B 401)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-51-02-000-807	Install the Aft Pin in the Upper Link (P/B 401)
54-51-02-000-808	Install the Forward Fuse Pin in the Upper Link (P/B 401)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Upper link	54-51-03-01-055	ARO ALL	

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Upper Link Installation

NOTE: Wear limits for these components are in AMM 54-51-02/601, Upper Link Forward Fuse Pin Examination and Upper Link Aft Pin Examination.

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SUBTASK 54-51-03-420-001



BE CAREFUL WHEN YOU MOVE THE UPPER LINK. BECAUSE THE UPPER LINK WEIGHS 50 POUNDS, INJURIES TO PERSONS CAN OCCUR.

Carefully lift the upper link [1] to the wing forward spar.

SUBTASK 54-51-03-820-001

- (2) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

SUBTASK 54-51-03-020-004

(3) Do this task: Install the Forward Fuse Pin in the Upper Link, TASK 54-51-02-000-808.

SUBTASK 54-51-03-420-002

(4) Do this task: Install the Aft Pin in the Upper Link, TASK 54-51-02-000-807.

SUBTASK 54-51-03-500-002

(5) Carefully tie the upper link [1] to the wing leading edge.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-03-410-001

(1) Do this task: Install Nacelle Strut, TASK 54-51-01-400-805-002.

SUBTASK 54-51-03-410-002

- (2) Install the wing forward spar systems onto the upper link [1] as follows:
 - (a) Carefully move the wire bundles and systems bracket assembly down onto the upper link.
 - (b) Install the four screws [5], and four washers [3] that attach the systems bracket assembly to the upper link.
 - (c) Install the two screws [2], two washers [3], and two spacers [4].

SUBTASK 54-51-03-410-003

(3) To install the wing leading edge gap covers, do this task:

Wing Leading Edge Panel Installation, TASK 57-41-10-400-801

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-51-03-440-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

END	OF TASK	
-----	---------	--

54-51-03

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UPPER LINK - INSPECTION/CHECK

1. General

- A. This procedure has these tasks:
 - (1) Examine the bushings in the upper link for worn areas.

TASK 54-51-03-200-801

2. Upper Link Bushings Examination

(Figure 601)

A. General

- (1) This task examines the bushings in the upper link for worn areas.
- (2) This task has these steps:
 - (a) Remove the attach pins.
 - (b) Measure the bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Replace the bushings, if it is necessary.
 - (e) Install the attach pins.
- (3) You can examine the bushings in both ends of the upper link at the same time, but both aft upper spar pins and both diagonal brace pins must stay installed, unless you remove the strut.

B. References

Reference	Title
54-51-02-200-803	Upper Link Forward Fuse Pin Examination (P/B 601)
54-51-02-200-804	Upper Link Aft Pin Examination (P/B 601)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Upper Link Bushing Examination

SUBTASK 54-51-03-200-001

(1) To examine the bushings in the forward end of the upper link, do this task: Upper Link Forward Fuse Pin Examination, TASK 54-51-02-200-803.

SUBTASK 54-51-03-200-002

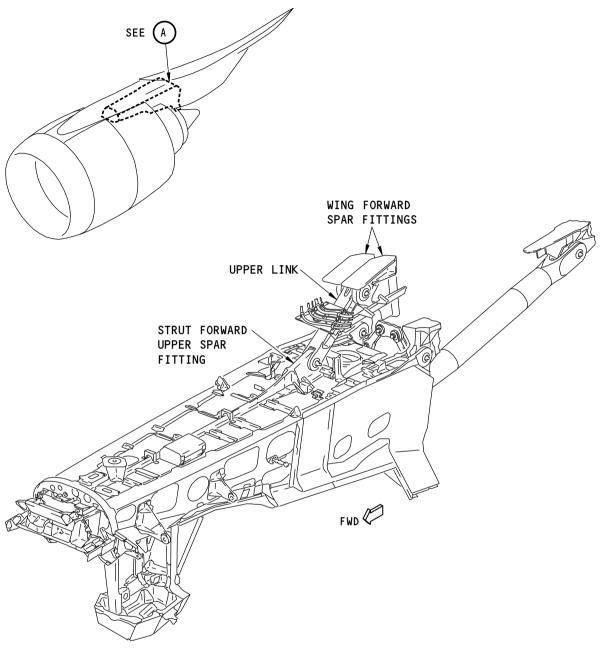
(2) To examine the bushings in the aft end of the upper link, do this task: Upper Link Aft Pin Examination, TASK 54-51-02-200-804.

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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



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Upper Link Examination Figure 601/54-51-03-990-802

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DIAGONAL BRACE - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the diagonal brace.
 - (2) An installation of the diagonal brace.
 - (3) A procedure to make a custom fitted diagonal brace.

TASK 54-51-04-000-801

2. Remove the Diagonal Brace

(Figure 401)

A. General

- (1) This task removes the diagonal brace.
- (2) This task has these steps:
 - (a) Prepare the strut for maintenance operations.
 - (b) Remove the aft fairing.
 - (c) Look for marks that show if the diagonal brace is a custom fitted diagonal brace.
 - (d) Remove the systems attached to the diagonal brace.
 - (e) Remove the forward pin from the diagonal brace.
 - (f) Remove the aft fuse pin from the diagonal brace.
 - (g) Carefully lower the diagonal brace.

B. References

Reference	Title
20-10-09-000-801	Flareless Tubing Assembly Removal (P/B 401)
20-10-10-000-801	Flexible Hose Removal (P/B 401)
29-11-00-860-807	Main Hydraulic System and the Reservoir Depressurization (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-51-02-000-801	Remove the Forward Pin from the Diagonal Brace (P/B 401)
54-51-02-000-802	Remove the Aft Fuse Pin from the Diagonal Brace (P/B 401)
54-52-04-000-801	Aft Fairing 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.

Reference	Description
SPL-1584	Adapter Assembly - Telescoping Hydraulic
	Part #: J20009-68 Supplier: 81205

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(Continued)

Reference	Description	
SPL-3856	Adapter - Hoist, Diagonal Brace Removal/Installation	
	Part #: J54005-51 Supplier: 81205	
	Opt Part #: J54005-1 Supplier: 81205	
	Opt Part #: J54005-32 Supplier: 81205	

D. Location Zones

Zone	Area	
410	PowerPlant, Left	
420	PowerPlant, Right	
430	Subzone 430 - Left Nacelle Strut	
440	Subzone 440 - Right Nacelle Strut	

E. Prepare for the Removal

SUBTASK 54-51-04-040-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-04-000-001

(2) Do this task: Aft Fairing Removal, TASK 54-52-04-000-801.

SUBTASK 54-51-04-040-003

- (3) Do this task: Main Hydraulic System and the Reservoir Depressurization, TASK 29-11-00-860-807.
 - (a) Make sure the hydraulic pressure was bled to zero.

SUBTASK 54-51-04-020-001

- (4) Remove the aft fairing systems from the diagonal brace [1] as follows:
 - (a) Disconnect the flex hose [23] from the hydraulic tube [3] or hydraulic tube [4] (TASK 20-10-10-000-801).
 - (b) Disconnect the flex hose [22] from the hydraulic tube [5] or hydraulic tube [6] (TASK 20-10-10-000-801).
 - 1) Put a cap in the ends of the tubes and the hoses.
 - (c) Remove the clamp [14] and the clamp [15] with the hose guide [24].
 - (d) Remove the hydraulic tube [3] and hydraulic tube [5], or hydraulic tube [4] and hydraulic tube [6] (TASK 20-10-09-000-801).
 - 1) Put a cap in the ends of the tubes and the drain filter assembly.
 - (e) Remove the clamp [7] and the two clamp [2] with the bracket [8].
 - (f) Remove the air pressure tube [16] and air pressure tube [18], or air pressure tube [17] and air pressure tube [19] (TASK 20-10-09-000-801).
 - 1) Put a cap in the ends of the tubes and the pressurization module.
 - (g) Remove the four clamp [2] with the bracket [21] and the pressurization module [20].
 - (h) If you will remove the strut, remove the clamp [10], clamp [9], and two clamp [2] with the bracket [11], bracket [12], and bracket [13].
 - (i) If you will remove the diagonal brace only, release the clamp [10], clamp [9], and two clamp [2] from the diagonal brace.
 - (j) Carefully move the systems clear of the diagonal brace, and secure them.

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SUBTASK 54-51-04-420-007

(5) Attach the diagonal brace removal/installation hoist adapter, SPL-3856 and place the telescoping hydraulic adapter assembly, SPL-1584 or equivalent in position to support the diagonal brace after the fuse pins are removed.

SUBTASK 54-51-04-820-001

- (6) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

F. Remove the Diagonal Brace

SUBTASK 54-51-04-280-001

(1) Look for marks on the diagonal brace that identify the airplane, strut position, and center-to-center distance.

NOTE: If the diagonal brace is identified with this data, it is a custom fitted diagonal brace.

(a) If you remove a custom fitted diagonal brace, you must install this same brace (or a new brace with the same center-to-center distance) on the same strut location and airplane where it was removed.

SUBTASK 54-51-04-580-001



BE CAREFUL WHEN YOU MOVE THE DIAGONAL BRACE. BECAUSE THE DIAGONAL BRACE WEIGHS 126 POUNDS, INJURIES TO PERSONS CAN OCCUR.

(2) Hold the diagonal brace [1] before you remove the forward pin.

SUBTASK 54-51-04-040-002

(3) Do this task: Remove the Forward Pin from the Diagonal Brace, TASK 54-51-02-000-801. NOTE: This task includes a task to support the strut.

SUBTASK 54-51-04-020-002

(4) Do this task: Remove the Aft Fuse Pin from the Diagonal Brace, TASK 54-51-02-000-802.
NOTE: This task includes a task to support the strut.

SUBTASK 54-51-04-580-002

(5) Carefully lower the diagonal brace [1].

SUBTASK 54-51-04-930-001

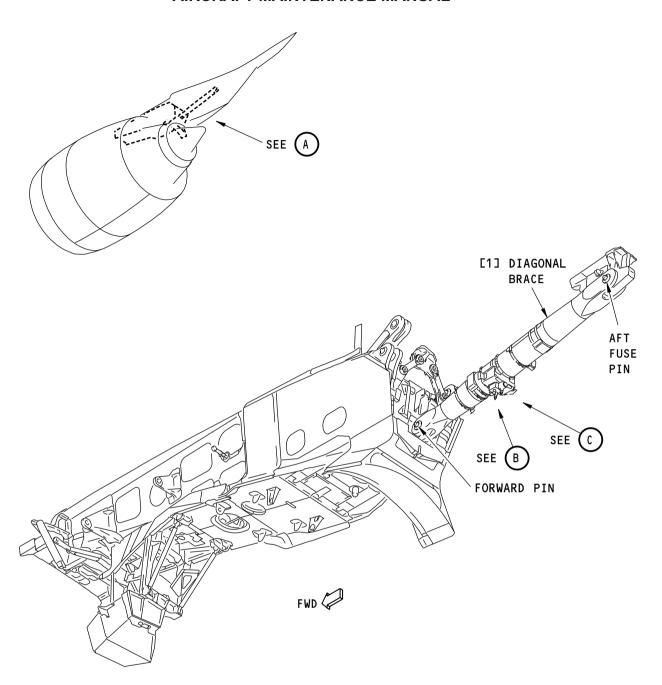
- (6) If the diagonal brace that you removed is a custom fitted diagonal brace, do these steps:
 - (a) Put a tag on the diagonal brace with the airplane number, strut location, and center-to-center distance, or make sure this data is identified on the diagonal brace.
 - (b) Put a tag on the aft attach fitting with the airplane number, strut location, and center-to-center distance.

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LEFT STRUT (RIGHT STRUT IS OPPOSITE)



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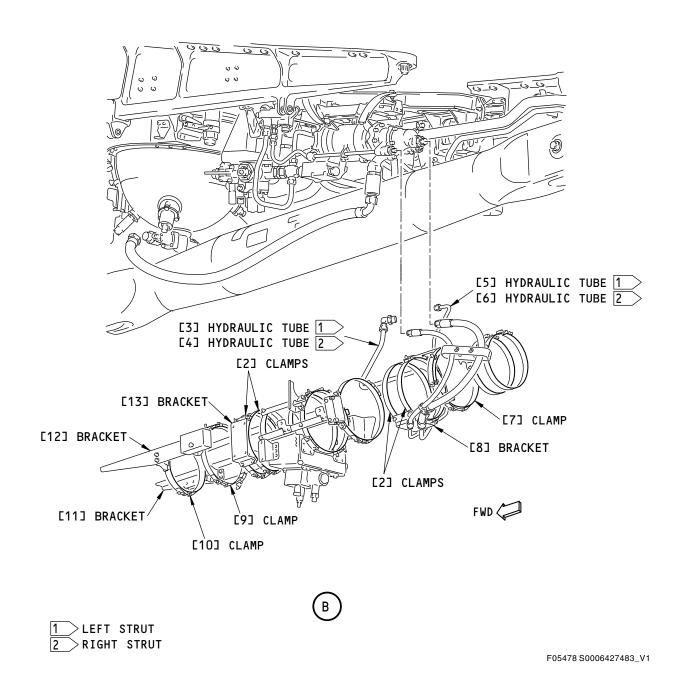
Diagonal Brace Installation Figure 401/54-51-04-990-801 (Sheet 1 of 3)

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Diagonal Brace Installation Figure 401/54-51-04-990-801 (Sheet 2 of 3)

EFFECTIVITY

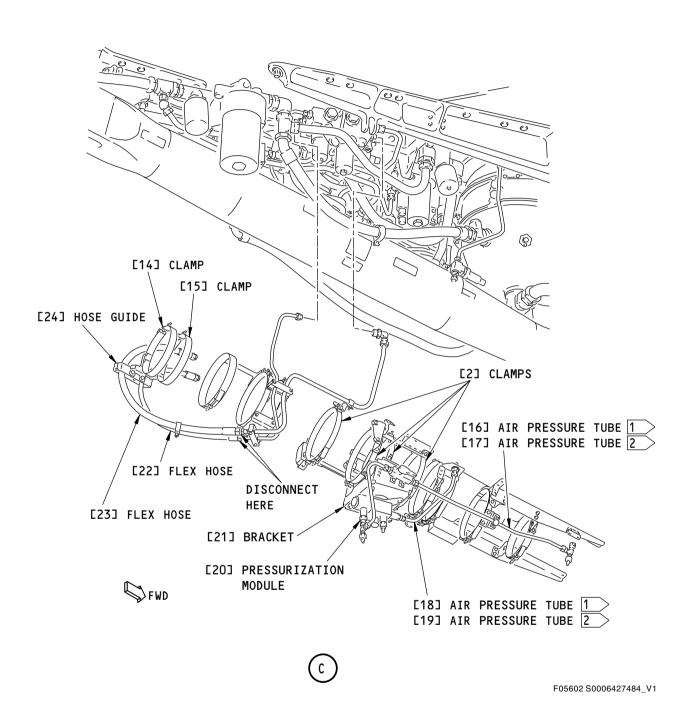
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Diagonal Brace Installation Figure 401/54-51-04-990-801 (Sheet 3 of 3)

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TASK 54-51-04-400-801

3. Install the Diagonal Brace

(Figure 401)

A. General

- (1) This task installs the diagonal brace.
- (2) This task has these steps:
 - (a) Look for marks that show if the diagonal brace is a custom fitted diagonal brace.
 - (b) Carefully raise the diagonal brace under the wing.
 - (c) Install the aft fuse pin in the diagonal brace.
 - (d) Install the forward pin in the diagonal brace.
 - (e) Attach the aft fairing systems to the diagonal brace.
 - (f) Install the aft fairing.
 - (g) Put the strut back to its usual condition.

B. References

Reference	Title
20-10-09-400-801	Flareless Tubing Assembly Installation (P/B 401)
20-10-10-400-801	Flexible Hose Installation (P/B 401)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-51-02-000-809	Install the Aft Fuse Pin in the Diagonal Brace (P/B 401)
54-51-02-400-801	Install the Forward Pin in the Diagonal Brace (P/B 401)
54-52-04-400-801	Aft Fairing Installation (P/B 401)
SWPM 20-10-11	WIRING ASSEMBLY AND INSTALLATION CONFIGURATION

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Diagonal brace	54-51-04-01-047	ARO ALL
		54-51-04-01-115	ARO ALL

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Install the Diagonal Brace

NOTE: Wear Limits for these components are in AMM 54-51-02/601, Diagonal Brace Forward Pin Examination and Diagonal Brace Aft Fuse Pin Examination.

SUBTASK 54-51-04-820-002

- (1) Support the Strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.

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- (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

SUBTASK 54-51-04-280-002

- (2) Look for marks that show if the diagonal brace is a custom fitted diagonal brace.
 - (a) Look for a tag or identification on the diagonal brace with the airplane number, strut location, and center-to-center distance.
 - NOTE: If the diagonal brace is identified with this data, it is a custom fitted diagonal brace.
 - (b) Look for a tag on the aft attach fitting with the airplane number, strut location, and center-to-center distance.
 - NOTE: If the aft attach fitting is identified with this data, it is necessary to install a custom fitted diagonal brace at that strut location.
 - (c) If you install a custom fitted diagonal brace, you must do one of these steps:
 - Install the same brace on the same strut location and airplane where you removed it.
 - 2) Replace the brace with a new custom fitted diagonal brace (with the same center-to-center distance) as specified in this task: (TASK 54-51-04-320-801).

SUBTASK 54-51-04-580-003



BE CAREFUL WHEN YOU MOVE THE DIAGONAL BRACE. BECAUSE THE DIAGONAL BRACE WEIGHS 126 POUNDS, INJURIES TO PERSONS CAN OCCUR.

(3) Carefully raise the diagonal brace [1] under the wing.

SURTASK 54-51-04-420-001

(4) Do this task: Install the Aft Fuse Pin in the Diagonal Brace, TASK 54-51-02-000-809.

SUBTASK 54-51-04-420-002

(5) Do this task: Install the Forward Pin in the Diagonal Brace, TASK 54-51-02-400-801.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-04-020-003

- (1) Install the aft fairing systems from the diagonal brace [1] as follows:
 - (a) Install the clamp [10], clamp [9], and two clamp [2] loosely with the bracket [11], bracket [12], and bracket [13].
 - (b) Install the four clamp [2] loosely with the bracket [21] and the pressurization module [20].
 - (c) Install the air pressure tube [16] and air pressure tube [18], or air pressure tube [17] and air pressure tube [19] (TASK 20-10-09-400-801).
 - (d) Install the clamp[7] and the two clamp [2] loosely with the bracket [8].
 - (e) Install the hydraulic tube [3] and hydraulic tube [5], or hydraulic tube [4] and hydraulic tube [6] (TASK 20-10-09-400-801).
 - (f) Install the clamp [14] and the clamp [15] loosely with the hose guide [24].
 - (g) Connect the flex hose [22] to the hydraulic tube [5] or hydraulic tube [6] (TASK 20-10-400-801).
 - (h) Connect the flex hose [23] to the hydraulic tube [3] or hydraulic tube [4] (TASK 20-10-10-400-801).

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- (i) Attach the aft fairing wire bundles to the systems brackets (SWPM 20-10-11).
- (j) Tighten the clamps (13 locations).

SUBTASK 54-51-04-040-004

(2) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.

SUBTASK 54-51-04-410-002

(3) Do this task: Aft Fairing Installation, TASK 54-52-04-400-801.

SUBTASK 54-51-04-440-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-51-04-320-801

4. Install a Custom Fitted Diagonal Brace

(Figure 401)

A. General

- (1) Use this task to install a custom fitted diagonal brace.
- (2) The engine and the diagonal brace must be removed to measure the center-to-center distance of the diagonal brace.
- (3) This task has these steps:
 - (a) Apply an upload to the forward jack point of the strut.
 - (b) Measure the distance between the fuse pin hole in the aft underwing fitting and the pin hole in the strut lower spar fitting.
 - (c) Install the bushings in the custom fitted diagonal brace at the correct center-to-center distance.
 - (d) Install the custom fitted diagonal brace.

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
SPL-2013	Sling - Strut Unload, Diagonal Brace Alignment, GE90 (Engine Removed)
	Part #: J54001-92 Supplier: 81205
STD-1143	Crane - Lift, 7500 lb (3402kg) Capacity
STD-1144	Load Cell - 0-7500 pound capacity, +/- 2% Accuracy, 30 foot display cable length

C. Consumable Materials

Reference	Description	Specification
C00923	Coating - Interior Decorative Urethane	BMS10-83 Type III
	Enamel, Low Gloss	

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right

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(Continued)

Zone	Area
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Install the Custom Fitted Diagonal Brace

SUBTASK 54-51-04-480-001

(1) Install the strut support diagonal brace alignment sling, SPL-2013, with a 7500 lb capacity lift crane, STD-1143 and a Load Cell, STD-1144 at the strut forward jack point.

SUBTASK 54-51-04-580-004



DO NOT EXCEED THE UPLOAD OR DOWNLOAD NECESSARY TO MAKE THE CENTER-TO-CENTER DISTANCE IN THE TOLERANCE. DO NOT LIFT THE STRUT OR PULL DOWN ON THE STRUT WITH MORE THAN 3,000 POUNDS OF FORCE. APPLY THE LOAD VERTICALLY. IF YOU LIFT UP OR PULL DOWN ON THE STRUT WITH TOO MUCH FORCE, OR AT AN INCORRECT ANGLE, DAMAGE TO THE AIRPLANE CAN OCCUR.

(2) Apply a 1250 ±100 lbf (5560 ±445 N) upload at the strut forward jack point.

SUBTASK 54-51-04-220-001

- (3) Use the center-to-center distance measuring tool to measure the distance between the fuse pin hole in the aft underwing fitting and the pin hole in the strut lower spar fitting.
 - (a) The tolerance for the custom fitted diagonal brace center-to-center distance is 82.304 ± 0.065 in. $(2090.522 \pm 1.651 \text{ mm})$.
 - (b) If the measured center-to-center distance is less than 82.239 in. (2088.871 mm), increase the load on the strut the minimum quantity necessary to make the distance in the tolerance.
 - 1) Do not pull up on the strut with more than 3000 lbf (13,345 N) of force.
 - (c) If the measured center-to-center distance is more than 82.369 in. (2092.173 mm), decrease the load on the strut the minimum quantity necessary to make the distance in the tolerance.
 - 1) Do not pull down on the strut with more than 3000 lbf (13,345 N) of force.

SUBTASK 54-51-04-320-001

(4) Install the bushings in the custom fitted diagonal brace at the measured center-to-center distance.

SUBTASK 54-51-04-930-002

- (5) Make a mark to identify the custom fitted diagonal brace with the center-to-center distance, basic airplane number, and strut location.
 - (a) Apply a coat of clear coating, C00923 over the identification data.

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DIAGONAL BRACE - INSPECTION/CHECK

1. General

- A. This procedure has this task:
 - (1) Examine the bushings in the diagonal brace for worn areas.

TASK 54-51-04-200-801

2. Diagonal Brace Bushing Examination

(Figure 601)

A. General

- (1) This task examines the bushings in the diagonal brace for worn areas.
- (2) This task has these steps:
 - (a) Remove the attach pins.
 - (b) Measure the bushing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Replace the bushings, if it is necessary.
 - (e) Install the attach pins.
- (3) You can examine the bushings in both ends of the diagonal brace at the same time. Both aft upper spar pins and both upper link pins must stay installed, unless you remove the strut.

B. References

Reference	Title
54-51-02-200-801	Diagonal Brace Aft Fuse Pin Examination (P/B 601)
54-51-02-200-802	Diagonal Brace Forward Pin Examination (P/B 601)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Diagonal Brace Bushing Examination

SUBTASK 54-51-04-200-001

(1) To examine the bushings in the forward end of the diagonal brace, do this task: Diagonal Brace Forward Pin Examination, TASK 54-51-02-200-802.

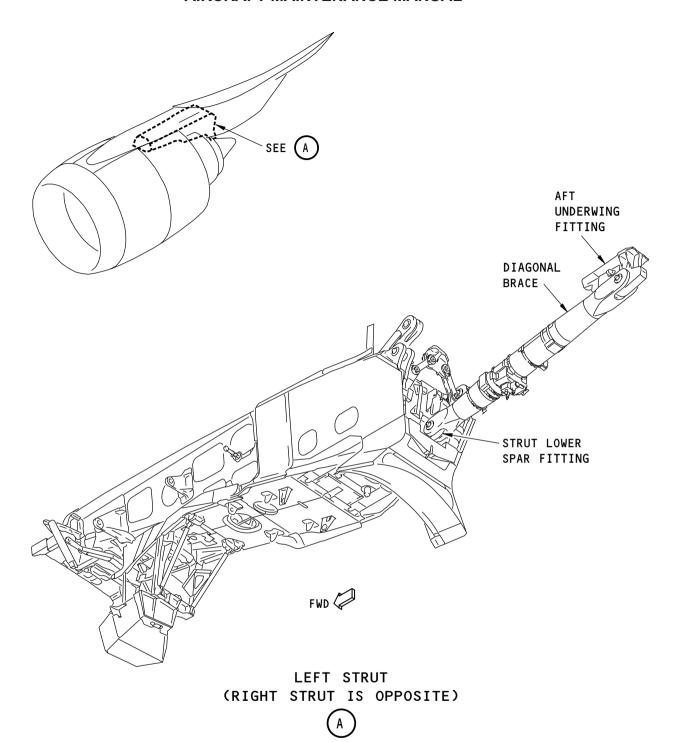
SUBTASK 54-51-04-200-002

(2) To examine the bushings in the aft end of the diagonal brace, do this task: Diagonal Brace Aft Fuse Pin Examination, TASK 54-51-02-200-801.

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Diagonal Brace Examination Figure 601/54-51-04-990-802

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SIDE LINK - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the side links.
 - (2) An installation of the original side links.
 - (3) An installation of new side links.
 - (4) A removal of the lower pin from the side links.
 - (5) An installation of the lower pin in the side links.

TASK 54-51-05-000-801

2. Side Link Removal

(Figure 401 or Figure 402)

A. General

- (1) This task removes the side links.
- (2) This task has these steps:
 - (a) Prepare the strut for maintenance operations.
 - (b) Get access to the side links.
 - (c) Make a mark of the orientation of the eccentric bushings in the side links.
 - (d) Make a mark of the airplane and strut location on each pair of side links that you will remove.
 - (e) Remove the side links.
- (3) Use care when you remove the side links from the wing fitting. The eccentric bushings can fall out when you remove the links from the fitting. Make sure the bushings stay in place.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-05-000-801	Aft Fairing Access Door Removal (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing

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(Continued)

Number	Name/Location
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

E. Prepare for the Removal

SUBTASK 54-51-05-040-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-05-010-001

- (2) To get access to the side links [8], open the applicable access doors and panels as follows:
 - (a) To remove the applicable access doors, do this task:

Aft Fairing Access Door Removal, TASK 54-52-05-000-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

(b) To remove the applicable access panels, do this task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-51-05-820-007

- (3) Support the Strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

F. Procedure

SUBTASK 54-51-05-930-001

(1) On each pair of side links [8] that you will remove, make a mark of the orientation of the eccentric bushings [2] on the retainer keys [7].

NOTE: The eccentric bushings can fall out when you remove the links from the wing fitting. If you make a mark of the orientation of the eccentric bushing, it will be easier to install the bushing if it falls out.

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SUBTASK 54-51-05-930-002

(2) Make a mark or put a tag on each pair of side links [8] that you will remove, which identifies the airplane and strut location where it was removed.

NOTE: If you will not install the side links on the same side of the same strut where you remove them, you must do the task to install a new pair of side links (TASK 54-51-05-400-802).

SUBTASK 54-51-05-020-001

(3) Remove both of the cotter pins [4].

SUBTASK 54-51-05-020-002

(4) Remove the pin [3], washer [9], washer [10], and nut [11] from the strut fitting.

SUBTASK 54-51-05-020-003

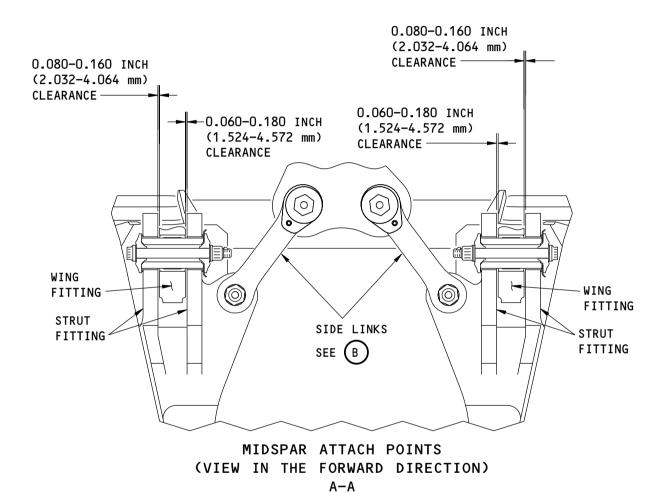
(5) Remove the pin [3], washer [5], washer [1], nut [11], and side links [8] from the wing fitting.

NOTE: The eccentric bushings [2] can fall out when you remove the links from the wing fitting. Make sure the bushings stay in place.

----- END OF TASK -----

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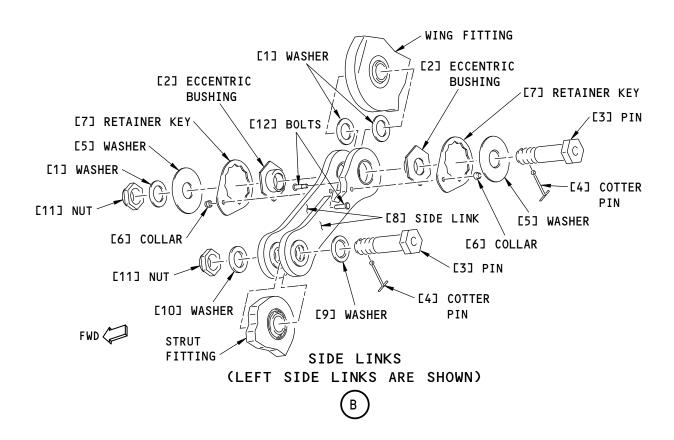
Side Links Installation Figure 401/54-51-05-990-808 (Sheet 1 of 2)

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Side Links Installation Figure 401/54-51-05-990-808 (Sheet 2 of 2)

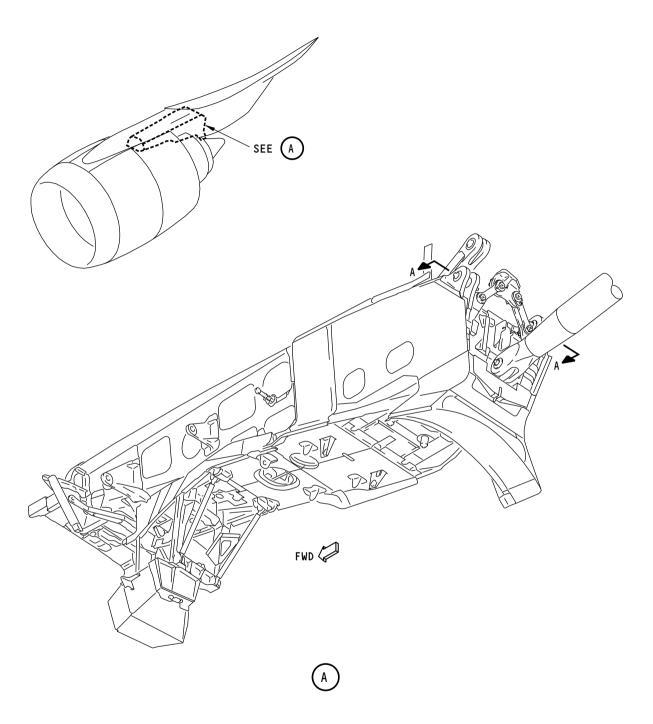
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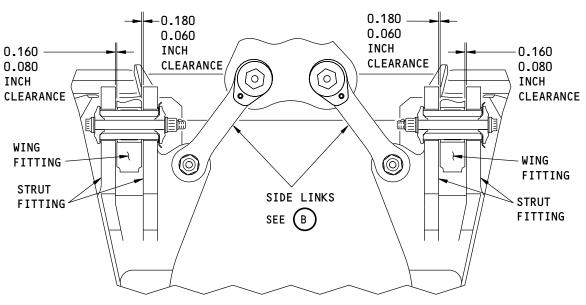
Side Links Installation Figure 402/54-51-05-990-803 (Sheet 1 of 2)

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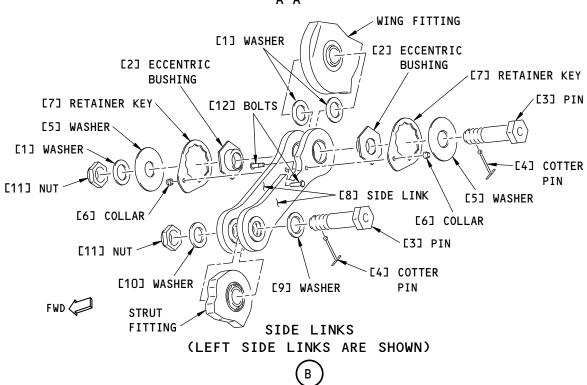
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MIDSPAR ATTACH POINTS (VIEW IN THE FORWARD DIRECTION) A-A



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Side Links Installation Figure 402/54-51-05-990-803 (Sheet 2 of 2)

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TASK 54-51-05-400-801

3. Original Side Link Installation

(Figure 401 or Figure 402)

A. General

- (1) This task installs the original side links which you removed in the removal task.
- (2) This task has these steps:
 - (a) Install the side links.
 - (b) Make sure the distance between the wing fitting and the strut aft upper spar fitting is within tolerance.
 - (c) Close the access doors and panels.
 - (d) Put the strut back to its usual condition.
- (3) Make sure you install each pair of side links in the same location on the same airplane where you removed them.
 - (a) If you will not install the side links on the same side of the same strut where you remove them, you must do the task to install a new pair of side links (TASK 54-51-05-400-802).

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	
D00014	Grease - Molybdenum Disulfide, Low & High	MIL-G-21164 (NATO
	Temperature	G-353)
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Eccentric bushing	54-51-05-02-042	ARO ALL
3	Pin	54-51-05-02-012	ARO ALL
8	Side link	54-51-05-02-065	ARO ALL

E. Location Zones

Zone	Area	
410	PowerPlant, Left	
420	PowerPlant, Right	
430	Subzone 430 - Left Nacelle Strut	
440	Subzone 440 - Right Nacelle Strut	

F. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing

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(Continued)

Number	Name/Location
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

G. Original Side Link Installation

NOTE: Wear limits for these components are in AMM 54-51-05/601, Side Link Examination.

SUBTASK 54-51-05-820-008

- (1) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

SUBTASK 54-51-05-210-001

(2) Look at the orientation marks on the eccentric bushings [2] and the retainer keys [7] to make sure the eccentric bushings have not turned.

SUBTASK 54-51-05-210-002

(3) Make sure that you install each pair of side links [8] on the same side of the same strut where you removed them.

SUBTASK 54-51-05-420-001

- (4) Do these steps to install the side links [8] on the wing fitting and the strut fitting:
 - (a) Apply a thin film of grease, D00633 or grease, D00014 to a pin [3].
 - (b) Install the two side links [8] on the wing fitting with the pin [3], washer [5], washer [1], and nut [11].
 - NOTE: The upper side link pin may be installed with the head in either direction.
 - (c) Apply a thin film of grease, D00633 or grease, D00014 to a pin [3].
 - (d) Install the side links [8] on the strut fitting with the pin [3], washer [9], washer [10], and nut [11].
 - NOTE: The upper side link pin may be installed with the head in either direction.
 - (e) Tighten the nut [11] to 1500-2000 pound-inches to attach the side link to the strut fitting.
 - (f) Make sure that all parts are seated firmly.
 - (g) Install a new cotter pin [4] on each pin [3].
 - (h) Apply 0.10 inch minimum of sealant, A00247 to both ends of both of the cotter pins to prevent cotter pin movement.

SUBTASK 54-51-05-420-002

(5) If the other pair of side links [8] are removed, do the steps above to install them.

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SUBTASK 54-51-05-220-001

(6) Make sure the distance between the wing fitting and the strut aft upper spar fitting is in the tolerance (Figure 401 or Figure 402).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-05-410-001

- (1) Install the access doors and panels as follows:
 - (a) These are the access panels:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

(b) These are the access doors:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

SUBTASK 54-51-05-440-001

(2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-51-05-400-802

4. New Side Link Installation

(Figure 401 or Figure 402)

A. General

- (1) This task installs new side links.
- (2) This task has these steps:
 - (a) Set the length of the side link locating jig between the wing fitting and the strut fitting.
 - (b) Set the length of the side links on the side link locating jig.
 - 1) You must set both side links on the same side of the same strut to the same length.
 - (c) Install the side links.
 - (d) Make sure the distance between the wing fitting and the strut aft upper spar fitting is in the tolerance (Figure 401 or Figure 402).
 - (e) Close the access doors and panels.
 - (f) Put the strut back to its usual condition.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)

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(Continued)

Reference	Title
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel 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
SPL-8346	Jig - Locating, Side Link Hole Center

D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	
D00014	Grease - Molybdenum Disulfide, Low & High	MIL-G-21164 (NATO
	Temperature	G-353)
D00633	Grease - Aircraft General Purpose	BMS3-33

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Eccentric bushing	54-51-05-02-042	ARO ALL
3	Pin	54-51-05-02-012	ARO ALL
4	Cotter pin	54-51-05-02-007	ARO ALL
6	Collar	54-51-05-02-052	ARO ALL
7	Retainer key	54-51-05-02-057	ARO ALL
8	Side link	54-51-05-02-065	ARO ALL

F. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

G. Access Panels

Number	r Name/Location	
434BL	Left Access Panel, Left Strut Aft Fairing	
434BR	Right Access Panel, Left Strut Aft Fairing	
434CL	Left Forward Access Door, Left Strut Aft Fairing	
434CR	Right Forward Access Door, Left Strut Aft Fairing	
444BL	Left Access Panel, Right Strut Aft Fairing	
444BR	Right Access Panel, Right Strut Aft Fairing	
444CL	Left Forward Access Door, Right Strut Aft Fairing	
444CR	Right Forward Access Door, Right Strut Aft Fairing	

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H. New Side Link Installation

NOTE: Wear limits for these components are in AMM 54-51-05/601, Side Link Examination.

SUBTASK 54-51-05-820-010

- (1) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

SUBTASK 54-51-05-820-001

(2) Install a temporary shim to set the distance between the wing fitting and the aft upper spar strut fitting (Figure 401 or Figure 402).

SUBTASK 54-51-05-820-002

- (3) Do these steps to set the length of the side links [8]:
 - (a) Install the locating jig, SPL-8346 between the wing fitting and strut fitting in the location of one pair of side links [8].
 - 1) Lock the position of the side link locating jig for one side of one strut.
 - 2) Remove the side link locating jig.
 - (b) Do these steps for both side links [8] on the same side of the same strut to set the length:
 - 1) Put one side link [8] in the side link locating jig.
 - a) Install an eccentric bushing [2].
 - b) Turn the eccentric bushing [2] until you get the correct length.
 - Put the retainer key [7] over the eccentric bushing [2].
 - a) Make a mark of the hole location on the retainer key [7] through the side link [8].
 - b) Make sure that the drilled hole in the retainer key [7] will have a minimum edge margin of 0.50 in. (12.70 mm).
 - You can turn over the retainer key [7] if it is necessary.
 - 3) Drill a 0.250 in. (6.350 mm) to 0.254 in. (6.452 mm) diameter hole through the retainer key [7].
 - a) Remove burrs or sharp edges.
 - b) Make sure that the drilled hole in the retainer key [7] has a minimum edge margin of 0.50 in. (12.70 mm).
 - 4) Install the bolt [12] through the side link [8] and retainer key [7], and install the collar [6].
 - NOTE: Install the collar on the side with the retainer key.
 - 5) Make a mark of the orientation of the eccentric bushing [2] on the retainer key [7].
 - NOTE: The eccentric bushing can fall out when you remove the side link from the side link locating jig. If you make a mark of the orientation of the eccentric bushing, it will be easier to install the bushing if it falls out.
 - 6) Carefully remove the side link [8] from the side link locating jig.
 - 7) Do these steps again for the other side link [8] on the same side of the same strut.

ARO ALL 54-51-05



SUBTASK 54-51-05-420-003

- (4) Do these steps to install the side links [8] on the wing fitting and the strut fitting.
 - (a) Apply a thin film of grease, D00633 or grease, D00014 to a pin [3].
 - (b) Install the two side links [8] on the wing fitting with the pin [3], washer [5], washer [1], and nut [11].
 - NOTE: The upper side link pin may be installed with the head in either direction.
 - (c) Apply a thin film of grease, D00633 or grease, D00014 to a pin [3].
 - (d) Install the side links [8] on the strut fitting with the pin [3], washer [9], washer [10], and nut [11].
 - NOTE: The upper side link pin may be installed with the head in either direction.
 - (e) Tighten both of the nut [11] to 1500 in-lb (169 N·m) to 2000 in-lb (226 N·m).
 - (f) Make sure that all parts are seated firmly.

SUBTASK 54-51-05-420-004

- (5) Install a new cotter pin [4] on each pin [3].
 - (a) Apply 0.10 inch minimum of sealant, A00247 to both ends of both of the cotter pins to prevent cotter pin movement.

SUBTASK 54-51-05-420-005

(6) If the other pair of side links [8] are removed, do the steps above to install them.

SUBTASK 54-51-05-220-002

(7) Remove the temporary shims and make sure the distance between the wing fitting and the strut aft upper spar fitting is in the tolerance, (Figure 401 or Figure 402).

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-05-410-002

- (1) Install the access doors and panels as follows:
 - (a) These are the access panels:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

(b) These are the access doors:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

Number	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

SUBTASK 54-51-05-440-002

(2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

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TASK 54-51-05-000-802

5. Lower Pin Removal

(Figure 401 or Figure 402)

A. General

- (1) This task removes the lower pin from the side links.
- (2) This task has these steps:
 - (a) Prepare the strut for maintenance operations.
 - (b) Get access to the side links.
 - (c) Remove the lower pin from the side links.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)
54-52-05-000-801	Aft Fairing Access Door Removal (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

E. Prepare for the Removal

SUBTASK 54-51-05-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-51-05-010-002

- (2) To get access to the side links [8], open the applicable access doors and panels as follows:
 - (a) This is the task:

Aft Fairing Access Door Removal, TASK 54-52-05-000-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing

ARO ALL



(Continued)

<u>Number</u>	Name/Location
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

(b) This is the task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-51-05-820-009

- (3) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

F. Procedure

SUBTASK 54-51-05-020-004

- (1) Remove the cotter pin [4] from the pin [3] on the lower end of the side link only.
- SUBTASK 54-51-05-020-005
- (2) Remove the lower pin [3], washer [9], washer [10], and nut [11] from the strut fitting.



TASK 54-51-05-400-803

6. Lower Pin Installation

(Figure 401 or Figure 402)

A. General

- (1) This task installs the lower pin in the side links.
- (2) This task has these steps:
 - (a) Install the lower pin in the side links.
 - (b) Make sure the distance between the wing fitting and the strut aft upper spar fitting is within tolerance.
 - (c) Close the access doors and panels.
 - (d) Put the strut back to its usual condition.
- (3) If you will install a strut which is not the same strut that you removed, you must do the task to install new side links: (TASK 54-51-05-400-802).

B. References

Reference	Title	
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)	
54-51-01-580-805-002	Support the Strut with the Engine Installed (P/B 201)	
54-51-01-580-807-002	Support the Strut with the Engine Removed (P/B 201)	

ARO ALL



(Continued)

Reference	Title	
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)	
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)	

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
D00014	Grease - Molybdenum Disulfide, Low & High Temperature	MIL-G-21164 (NATO G-353)

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Pin	54-51-05-02-012	ARO ALL
8	Side link	54-51-05-02-065	ARO ALL

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

G. Lower Pin Installation

NOTE: Wear limits for these components are in AMM 54-51-05/601, Side Link Examination. SUBTASK 54-51-05-820-011

- (1) Support the strut.
 - (a) To support the strut with the engine installed, do the task that follows:
 - 1) Support the Strut with the Engine Installed, TASK 54-51-01-580-805-002.
 - (b) To support the strut with the engine removed, do the task that follows:
 - 1) Support the Strut with the Engine Removed, TASK 54-51-01-580-807-002.

SUBTASK 54-51-05-420-006

- (2) Do these steps to install the lower pin [3] in the strut fitting.
 - (a) Apply a thin film of grease, D00014 to the lower pin [3].

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· EFFECTIVITY



- (b) Install the side links [8] on the strut fitting with the pin [3], washer [9], washer [10], and nut [11].
 - NOTE: The upper side link pin may be installed with the head in either direction.
- (c) Tighten the nut [11] to 1500-2000 pound-inches.
- (d) Make sure that all parts are seated firmly.
- (e) Install a new cotter pin [4] on the pin [3].
- (f) Apply 0.10 inch minimum of sealant, A00247 to both ends of the cotter pin to prevent cotter pin movement.

SUBTASK 54-51-05-220-003

(3) Make sure the distance between the wing fitting and the strut aft upper spar fitting is in the tolerance (Figure 401 or Figure 402).

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-51-05-410-003

- (1) Install the access doors and panels as follows:
 - (a) These are the access panels:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

(b) These are the access doors:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

SUBTASK 54-51-05-440-003

(2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



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STRUT SIDE LINK - INSPECTION/CHECK

1. General

- A. This procedure has this task:
 - (1) Examine the strut side links for worn areas.

TASK 54-51-05-200-801

2. Strut Side Link Examination

(Figure 601)

A. General

- (1) This task examines the strut side links for worn areas. This task also examines the bearings in the underwing and strut aft upper spar fittings for worn areas.
 - (a) Each strut has two side link assemblies.
 - (b) Each side link assembly includes two side links, two pins, and two eccentric bushings.
- (2) This task has these steps:
 - (a) Remove the side link.
 - (b) Measure the pin, bushing, and bearing dimensions.
 - (c) Make sure the dimensions are in the tolerances.
 - (d) Replace the pins, bushings, or bearings, if it is necessary.
 - (e) Install the side link.
- (3) You can examine both side link assemblies at the same time, but do not change parts from one side link to a different side link.
- (4) The diagonal brace pins, the aft upper spar pins, and the upper link pins must stay installed, unless you will remove the strut.

B. References

Reference	Title
54-51-05-000-801	Side Link Removal (P/B 401)
54-51-05-400-801	Original Side Link Installation (P/B 401)
54-51-05-400-802	New Side Link Installation (P/B 401)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Examination

SUBTASK 54-51-05-000-001

(1) To remove the applicable side link, do this task: Side Link Removal, TASK 54-51-05-000-801.

SUBTASK 54-51-05-930-003

(2) Make a mark or put a tag on each part of each side link assembly, which identifies the strut location where you removed it.

NOTE: If you do not install each side link assembly in the same location where you remove it, you must do the task to install a new pair of side links (TASK 54-51-05-400-802).

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E. Side Link Examination

SUBTASK 54-51-05-220-004

- (1) For each side link assembly that you will examine, measure these dimensions:
 - (a) Measure the outside diameter of the upper and lower side link pins.
 - (b) Measure the inside diameter of the bushings and bushings in both side links.
 - (c) Measure the inside diameter and the outside diameter of the eccentric bushings.
 - (d) Measure the inside diameter and the outside diameter of the upper and lower bearing balls.
 - (e) Measure the inside diameter of the upper and lower bearing races.

SUBTASK 54-51-05-300-002

(2) Make sure the dimensions are in the tolerances as specified (Table 601).

Table 601/54-51-05-993-807 Side Link Wear Limits for the 777-300

		DIM.	Design imits		Wear Limits	
*[1] Index NO.	PART NAME		Diameter		Allowed Wear	MAY OL-
			MIN	MAX	DIM.	MAX Clearance
1	BUSHING	ID	1.4995	1.5005	1.5062	0.0060
	ECCENTRIC BUSHING	OD	1.5002	1.5008	1.4945	
2	ECCENTRIC BUSHING	ID	1.1245	1.1250	1.1275	0.0050
	PIN	OD	1.1225	1.1240	1.1200	
3	BEARING BALL	ID	1.1245	1.1250	1.1275	0.0050
	PIN	OD	1.1225	1.1240	1.1200	
4	BUSHING	ID	1.1245	1.1250	1.1275	0.0050
	PIN	OD	1.1225	1.1240	1.1200	
5	BEARING RACE	ID	1.9160	1.9165	1.9190	0.0050
	BEARING BALL	OD	1.9140	1.9145	1.9115	
6	BEARING RACE	ID	1.9160	1.9165	1.9190	0.0050
6	BEARING BALL	OD	1.9140	1.9145	1.9115	0.0050

^{*[1]} SEE FIGURE 601 FOR INDEX NUMBERS.

- (a) If the side link pin dimensions are not in the tolerances, replace the pin.
- (b) If the bushing dimensions in the side links are not in the tolerances, replace the bushings.
- (c) If the eccentric bushing dimensions are not in the tolerances, replace the eccentric bushing.
- (d) If the bearing ball dimensions are not in the tolerances, replace the bearing ball.
- (e) If the bearing race dimensions in the strut aft upper spar fittings are not in the tolerances, replace the bearing race.
- (f) If the bearing race dimensions in the underwing fittings are not in the tolerances, replace the bearing race.

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F. Put the Airplane Back to its Usual Condition

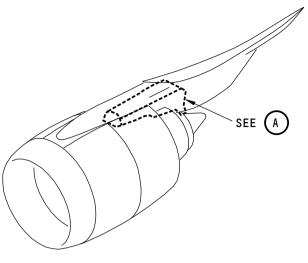
SUBTASK 54-51-05-400-001

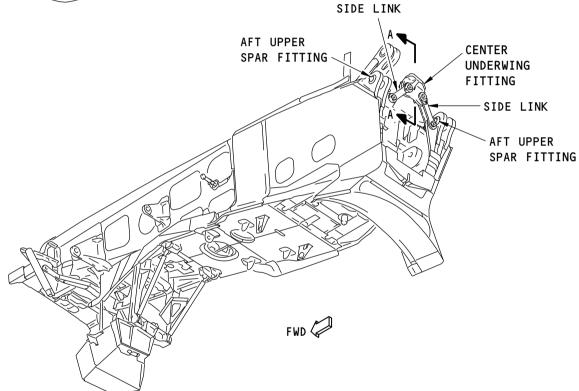
(1) Do this task: Original Side Link Installation, TASK 54-51-05-400-801.

----- END OF TASK -----

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LEFT STRUT
(RIGHT STRUT IS OPPOSITE)



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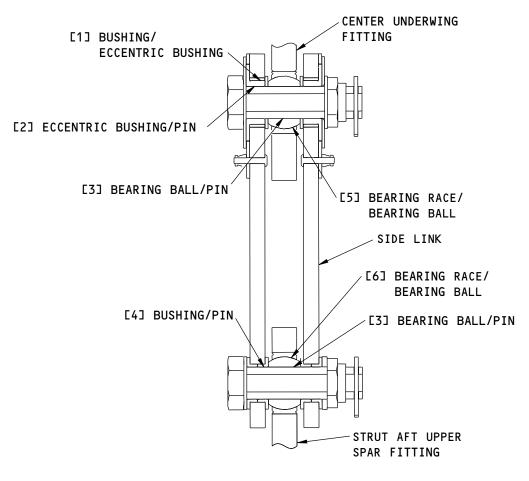
Side Link Examination Figure 601/54-51-05-990-802 (Sheet 1 of 2)

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SIDE LINK A-A

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Side Link Examination Figure 601/54-51-05-990-802 (Sheet 2 of 2)

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STRUT TO WING FAIRINGS - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
 - (1) Aerodynamic smoothness requirements for the strut doors, panels, and fairings.
 - (2) A procedure to use the fall arrest lifeline.

TASK 54-52-00-910-807-001

2. Aerodynamic Smoothness Requirements

(Figure 201) (Table 201)

A. General

- (1) This task gives the aerodynamic smoothness requirements for the strut access doors, panels, and fairings to permit smooth air flow. These doors, panels and fairings are located in areas where aerodynamic smoothness is very important.
- (2) This task gives the aerodynamic smoothness requirements for these components:
 - (a) The strut forward fairings.
 - (b) The strut underwing fairings.
 - (c) The strut access doors.
 - (d) The strut aft doors, panels, and fairings.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
SRM 54-51-70	Structural Repair Manual

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Aerodynamic Smoothness Requirements

SUBTASK 54-52-00-040-007-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-00-200-007-001

- (2) Do these steps to examine the clearance between the adjacent surfaces:
 - (a) Look for an unusually large clearance or a change in contour between adjacent surfaces.
 - (b) The clearance between these surfaces must agree with the permitted tolerances.
 - (c) If it is necessary, repair the fairings to make the surfaces smooth, as specified in this procedure: (SRM 54-51-70).

SUBTASK 54-52-00-440-007-001

(3) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

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SUBTASK 54-52-00-200-010-001

(4) Use this table to see the aerodynamic smoothness limits for the strut.

Table 201/54-52-00-993-810-001 Aerodynamic Smoothness Limits - Strut Fairing (Key to Fig. 201)

AIRPLANE EFFECTIVITY	ITEM	VIEW	LIMITS	AVERAGE MAXIMUM
ALL	Α	В-В	+0.090 -0.090	0.040
ALL	В	В-В	0.480 0.260	0.390
ALL	С	C-C	+0.060 -0.060	
ALL	D	C-C	0.520 0.400	
ALL	E	В	+0.060 -0.060	0.030
ALL	F	В	0.240 0.080	0.190
ALL	G	E-E	+0.060 -0.060	0.030
ALL	Н	E-E	0.360 0.240	
ALL	1	F-F	+0.100 -0.100	0.050
ALL	J	F-F	0.055 0.255	0.205
ALL	K	G-G	0.400 0.210	
ALL	L	G-G	+0.140 -0.140	
ALL	М	D	0.167 0.037	
ALL	N	D	0.488 0.308	
ALL	0	D	0.442 0.262	
ALL	Р	D	0.820 0.580	
ALL	Q	1-1	+0.100 -0.100	
ALL	R	J-J	+0.090 -0.090	
ALL	S	K-K	+0.090 -0.090	
ALL	Т	L-L	+0.090 -0.090	
ALL	U	M-M	+0.060 -0.060	0.030
ALL	V	M-M	0.140 0.020	
ALL	W	N-N	0.015 0.105	
ALL	X	N-N	+0.060 -0.060	
ALL	Υ	0-0	+0.060 -0.060	
ALL	Z	0-0	0.015 0.105	
ALL	AA	P-P	0.015 0.105	
ALL	AB	P-P	+0.060 -0.060	
ALL	AC	Q-Q	+0.060 -0.060	
ALL	AD	Q-Q	0.015 0.105	
ALL	AE	Q-Q	0.060 0.135	
ALL	AF	Q-Q	+0.060 -0.060	

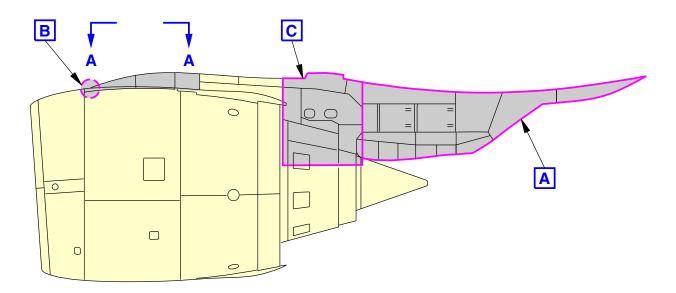
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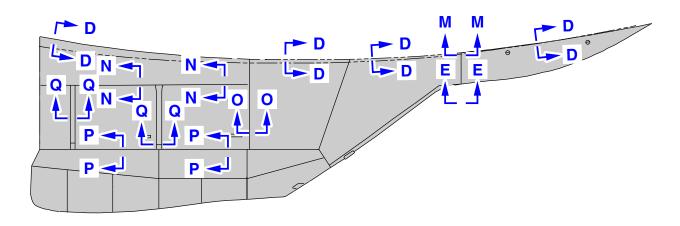
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2 KEY VERIFICATION AND DATA COLLECTION INTERFACE.

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Aerodynamic Smoothness Limits - Strut Fairing Figure 201/54-52-00-990-804-001 (Sheet 1 of 8)

EFFECTIVITY

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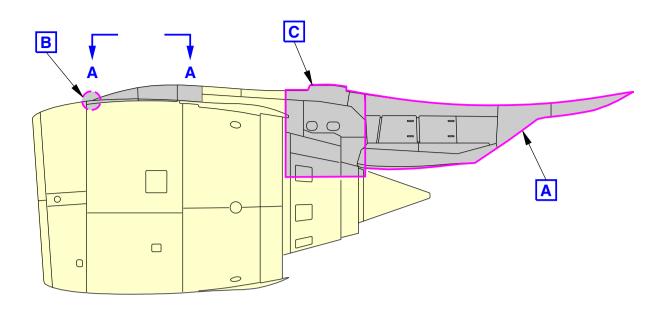
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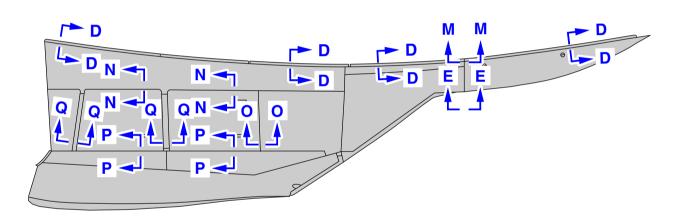
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2 KEY VERIFICATION AND DATA COLLECTION INTERFACE.

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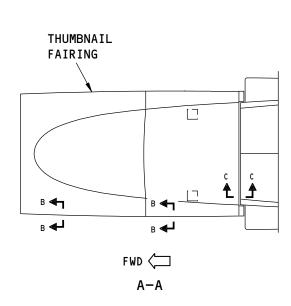
Aerodynamic Smoothness Limits - Strut Fairing Figure 201/54-52-00-990-804-001 (Sheet 2 of 8)

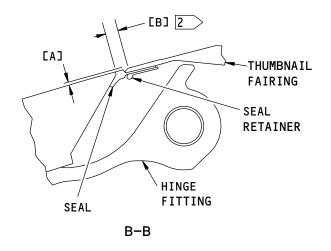
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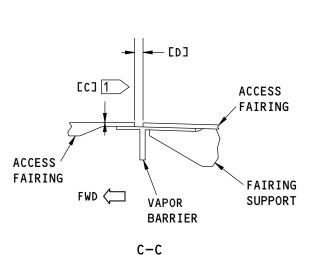
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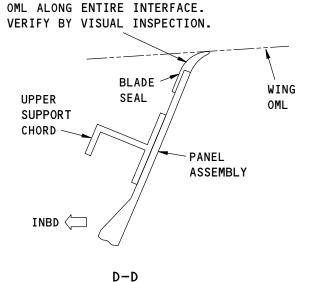
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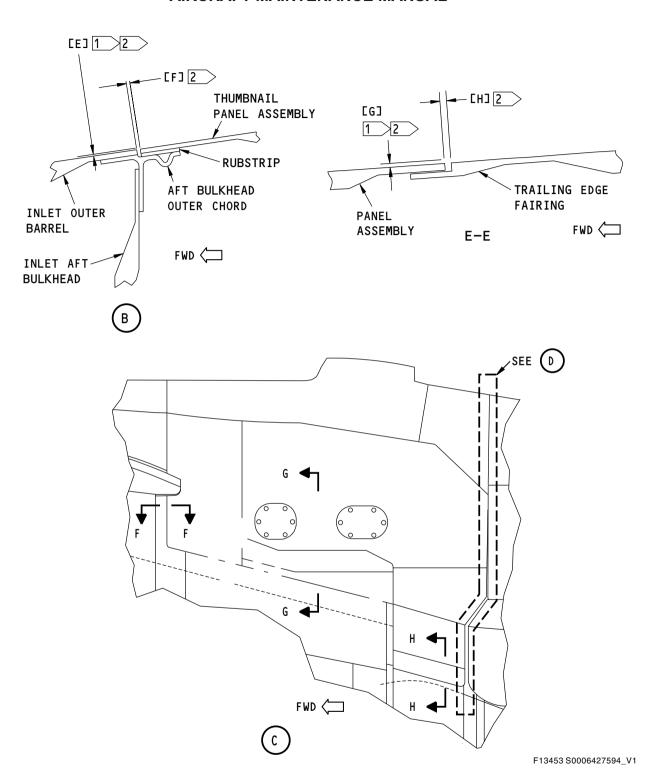
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Aerodynamic Smoothness Limits - Strut Fairing Figure 201/54-52-00-990-804-001 (Sheet 4 of 8)

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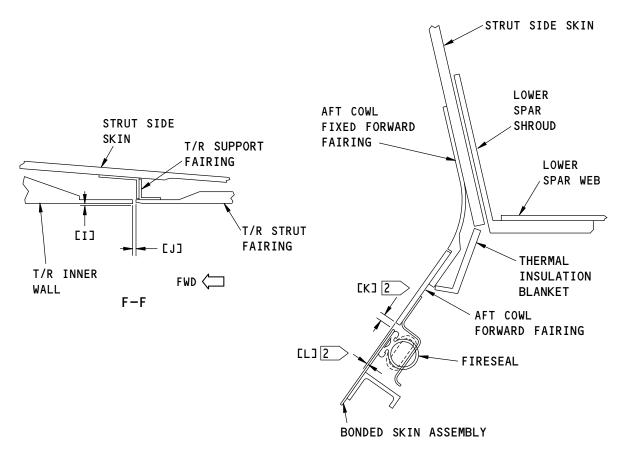
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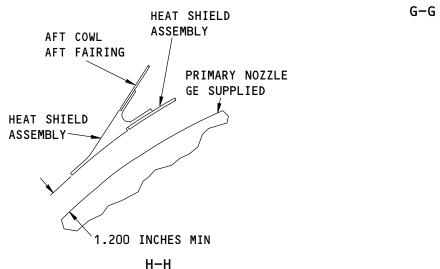
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Aerodynamic Smoothness Limits - Strut Fairing Figure 201/54-52-00-990-804-001 (Sheet 5 of 8)

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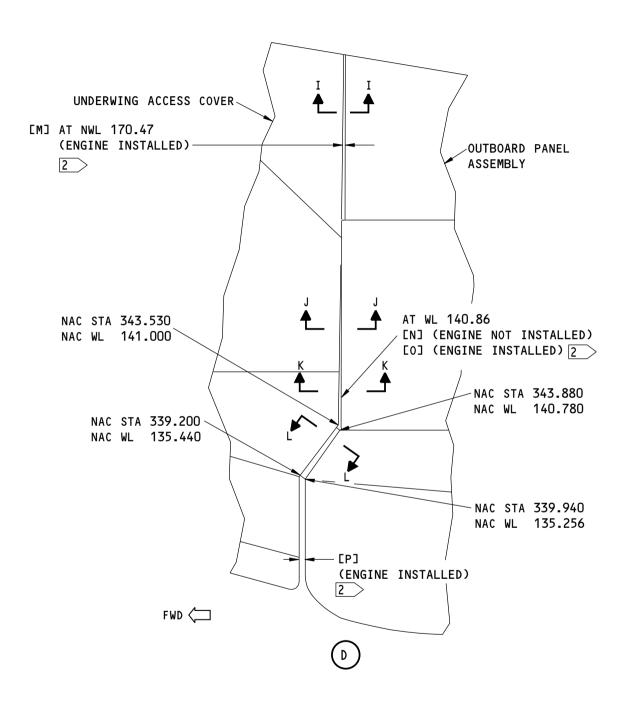
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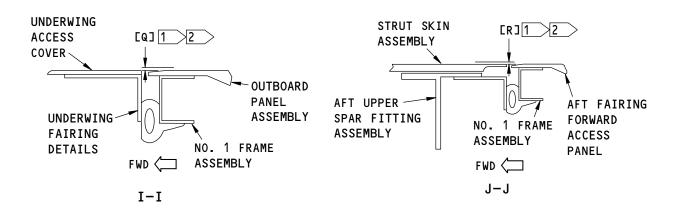
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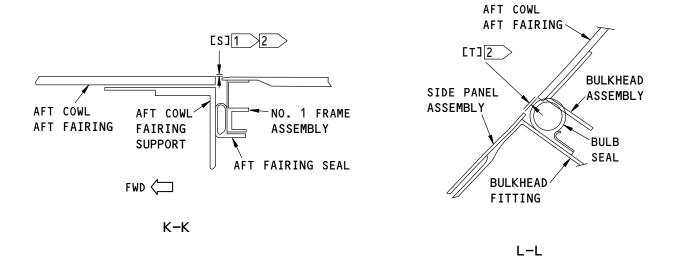


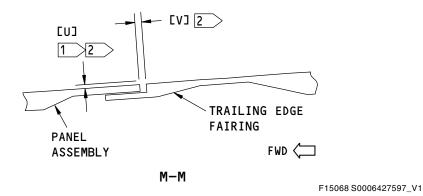
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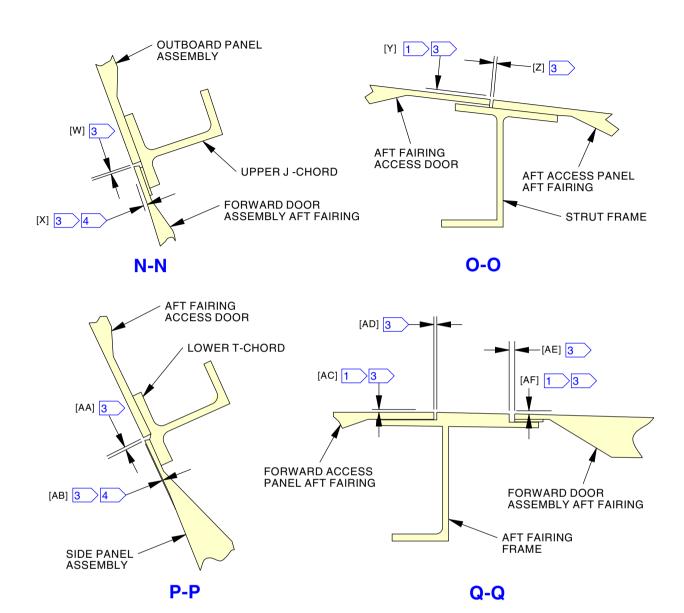




Aerodynamic Smoothness Limits - Strut Fairing Figure 201/54-52-00-990-804-001 (Sheet 7 of 8)







- AERODYNAMIC CONTROL DIMENSION INTERFACE ENVELOPE REQUIREMENT. THESE DIMENSIONAL LIMITS MUST BE INCORPORATED INTO, AND CONTROLLED BY, THE DETAIL AND ASSEMBLY DRAWING LIMITS AND TOLERANCES. SEPARATE AERODYNAMIC MEASUREMENTS ARE NOT REQUIRED, PROVIDED DETAIL AND ASSEMBLY LIMITS ARE MET.
- WITH STREAMWISE INTERFACES THE ORIENTATION FOR + OR STEPS IS NOT AERODYNAMICALLY SIGNIFICANT. HOWEVER, FOR PURPOSES OF EVALUATING HARDWARE VARIABILITY AND PROCESS PERFORMANCE. A CONSISTENT MEASUREMENT CONVENTION MAKES THE DATA MORE MEANINGFUL. WHEN MEASURING STREAMWISE FAIR(S) ON THIS INTERFACE, USE THE FOLLOWING ORIENTATION CONVENTION:

UPPER SURFACE HIGH TO LOWER SURFACE = + STEP

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Aerodynamic Smoothness Limits - Strut Fairing Figure 201/54-52-00-990-804-001 (Sheet 8 of 8)

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TASK 54-52-00-910-804-001

3. Fall Arrest Lifeline Procedure

(Figure 202)

A. General

(1) This task specifies the correct use of the fall arrest lifeline.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-805-001	Forward Fairings Examination (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-8818	Equipment - Personnel, Engine Strut Shock Absorbing Lanyard
	Part #: J20006-24 Supplier: 81205
STD-1177	Harness - Body

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Fall Arrest Lifeline Procedure

SUBTASK 54-52-00-040-004-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-00-480-007-001

- (2) Install the engine strut shock absorbing lanyard personnel equipment, SPL-8818, as follows:
 - (a) Put the interlock in the pad.



USE A SAFETY HARNESS, CONNECTED TO THE WING LEADING EDGE, BEFORE YOU GO ONTO THE STRUT. IF YOU FALL FROM THE STRUT, INJURIES CAN OCCUR.

- (b) Put the interlock and the pad assembly into the fall arrest fitting on top of the strut NSTA 213 or fall arrest fitting on top of the wing at WSTA 481.
- (c) Attach the end of the extension cable to the interlock.

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SUBTASK 54-52-00-480-008-001



DO NOT INSTALL MORE THAN ONE BODY HARNESS ON THE LIFELINE AT THE SAME TIME. THE LIFELINE IS DESIGNED TO SUPPORT ONLY ONE 250 POUND PERSON AT A TIME. IF MORE THAN ONE PERSON USES THE LIFELINE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Install a body harness, STD-1177 on the end of the extension cable.

SUBTASK 54-52-00-200-004-001

(4) If the fall arrest lifeline is used when a person falls from the strut, do this task: Forward Fairings Examination, TASK 54-52-01-000-805-001.

SUBTASK 54-52-00-480-009-001

- (5) When you complete the maintenance operations on the strut, remove the engine strut shock absorbing lanyard personnel equipment, SPL-8818, as follows:
 - (a) Remove the body harness, STD-1177 from the end of the extension cable.
 - (b) Remove the engine strut shock absorbing lanyard personnel equipment, SPL-8818 from the interlock at the top of the strut at NSTA 213 or from the wing at WSTA 481.
 - (c) Remove the interlock and pad from the top of the strut at NSTA 213 or from the wing at WSTA 481.

SUBTASK 54-52-00-440-004-001

(6) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

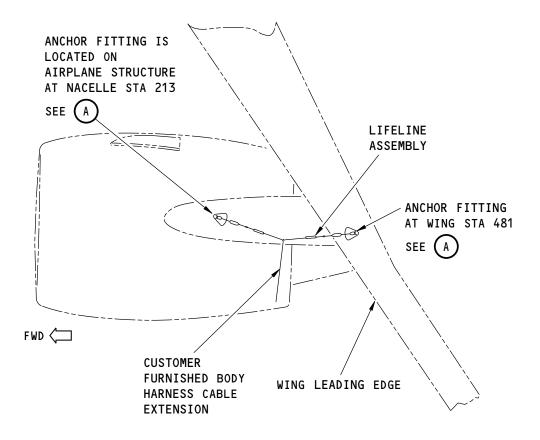
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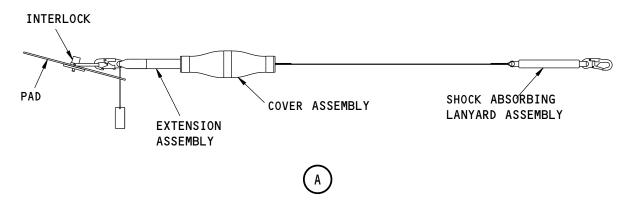
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Fall Arrest Lifeline Procedure Figure 202/54-52-00-990-806-001

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FORWARD FAIRINGS - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the forward fairings.
 - (2) An installation of the forward fairings.
 - (3) A removal of the fan cowl support beam fairings.
 - (4) An installation of the fan cowl support beam fairings.

TASK 54-52-01-000-801-001

2. Forward Fairings Removal

(Figure 401)

A. General

(1) This task gives the instructions on how to remove the forward fairings.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-52-01-040-001-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

E. Forward Fairings Removal

SUBTASK 54-52-01-000-001-001

- (1) Do this step to remove the left forward access fairing [6] or right forward access fairing [8]:
 - (a) Remove the 28 bolts [2], and remove the applicable left forward access fairing [6] or right forward access fairing [8].

SUBTASK 54-52-01-000-002-001

- (2) Do this step to remove the left forward side fairing [5] or right forward side fairing [7]:
 - (a) Remove the 12 bolts [2], and remove the applicable left forward side fairing [5] or right forward side fairing [7].

SUBTASK 54-52-01-000-003-001

- (3) Do this step to remove the left aft side fairing [3] or right aft side fairing [9]:
 - (a) Remove the 42 bolts [2], and remove the applicable left aft side fairing [3] or right aft side fairing [9].

SUBTASK 54-52-01-000-004-001

- (4) Do this step to remove the No. 2 fairing [4]:
 - (a) Remove the 57 bolts [2], and remove the No. 2 fairing [4].

SUBTASK 54-52-01-000-005-001

(5) Do this step to remove the No. 3 fairing [1]:

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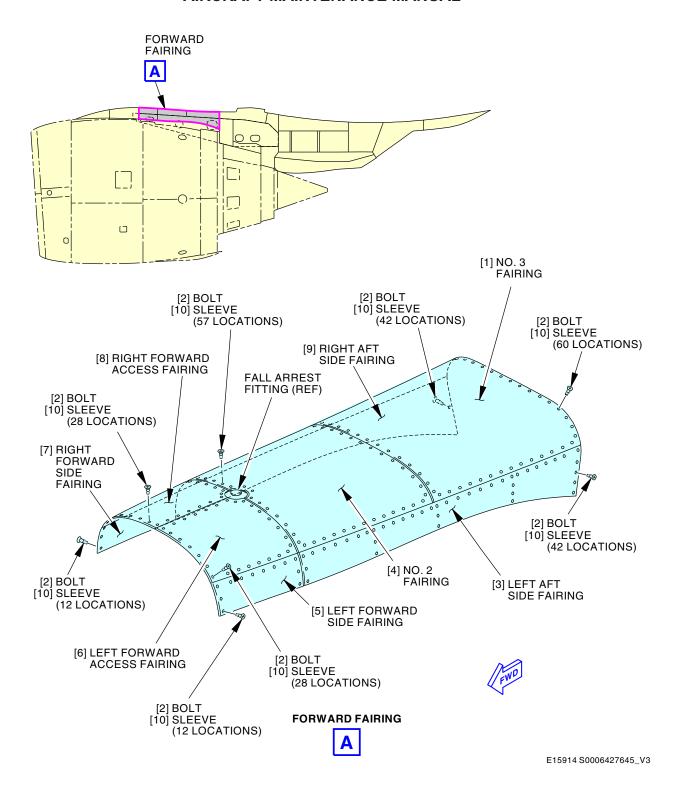
(a)	Remove the 60 bolts [2], and remove the No. 3 fairing [1].
	END OF TASK

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Forward Fairing Installation Figure 401/54-52-01-990-801-001

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TASK 54-52-01-400-801-001

3. Forward Fairings Installation

(Figure 401)

A. General

(1) This task gives the instructions on how to install the forward fairings.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)

C. Consumable Materials

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS3-33)
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut

E. Forward Fairings Installation

SUBTASK 54-52-01-400-001-001

- (1) Install the No. 3 fairing [1]:
 - (a) Make sure a sleeve [10] is installed in each hole in the No. 3 fairing [1].
 - (b) Put the No. 3 fairing [1] in its position.
 - (c) Install the 60 bolts [2] with grease, D00633 (preferred) or grease, D00015 (alternate).

SUBTASK 54-52-01-400-002-001

- (2) Install the No. 2 fairing [4]:
 - (a) Make sure a sleeve [10] is installed in each hole in the No. 2 fairing [4].
 - (b) Put the No. 2 fairing [4] in its positon.
 - (c) Install the 57 bolts [2] with grease, D00633 (preferred) or grease, D00015 (alternate).

SUBTASK 54-52-01-400-003-001

- (3) Install the left aft side fairing [3] or right aft side fairing [9]:
 - (a) Make sure a sleeve [10] is installed in each hole in the left aft side fairing [3] or right aft side fairing [9].
 - (b) Put the left aft side fairing [3] or right aft side fairing [9] in its position.
 - (c) Install the 42 bolts [2] withgrease, D00633 (preferred) or grease, D00015 (alternate).

SUBTASK 54-52-01-400-004-001

- (4) Install the left forward side fairing [5] or right forward side fairing [7]:
 - (a) Make sure a sleeve [10] is installed in each hole in the left forward side fairing [5] or right forward side fairing [7].
 - (b) Put the left forward side fairing [5] or right forward side fairing [7] in its position.
 - (c) Install the 12 bolts [2] with grease, D00633 (preferred) or grease, D00015 (alternate).

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SUBTASK 54-52-01-400-005-001

- (5) Install the left forward access fairing [6] or right forward access fairing [8]:
 - (a) Make sure a sleeve [10] is installed in each hole in the left forward access fairing [6] or right forward access fairing [8].
 - (b) Put the left forward access fairing [6] or right forward access fairing [8] in its position.
 - (c) Install the 12 bolts [2] with grease, D00633 (preferred) or grease, D00015 (alternate).

F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-01-440-004-001

(1) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-910-807-001.

SUBTASK 54-52-01-440-001-001

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-52-01-000-802-001

4. Fan Cowl Support Beam Fairings Removal

(Figure 402)

A. General

(1) This task gives the instructions on how to remove the fan cowl support beam fairings.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-52-01-040-002-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

E. Fan Cowl Support Beam Fairings Removal

SUBTASK 54-52-01-010-019-001

- (1) Do the steps to remove the thumbnail fairing [33]:
 - (a) Remove the 15 bolts [31].
 - (b) Remove the 16 bolts [32].
 - (c) Remove the 2 bolts [32].
 - (d) Remove the 9 bolts [31].
 - (e) Remove the 4 bolts [32].
 - (f) Remove the 9 bolts [31].
 - (g) Remove the 2 bolts [32].
 - (h) Remove the thumbnail fairing [33].

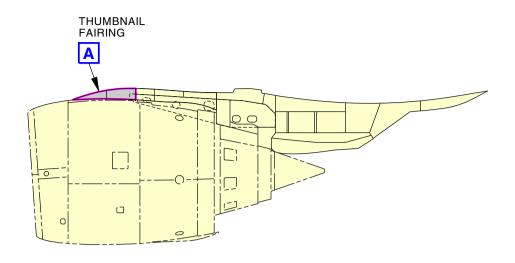
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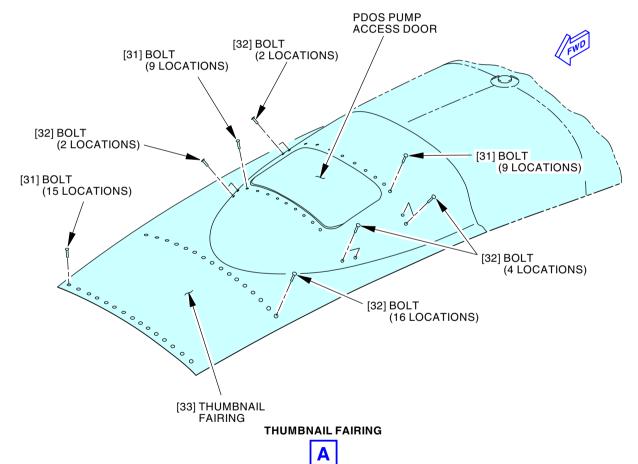
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Fan Cowl Support Beam Fairing Installation Figure 402/54-52-01-990-802-001

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TASK 54-52-01-400-802-001

5. Fan Cowl Support Beam Fairings Installation

(Figure 402)

A. General

(1) This task gives the instructions on how to install the fan cowl support beam fairings.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)

C. Consumable Materials

Reference	Description	Specification
A00436	Sealant - Fuel Tank	BMS5-45 (Supersedes
		BMS5-26)

D. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut

E. Fan Cowl Support Beam Fairings Installation

SUBTASK 54-52-01-410-003-001

(1) Do these steps to install the thumbnail fairing [33]:

NOTE: Old BMS 5-45 on the mating beam surface may interfere with the fairing installation if installing a new fairing. Remove the old BMS 5-45 fay surface sealant from the mating beam surfaces. Apply a parting agent and reapply the BMS 5-45 fay surface sealant to the mating beam frame surfaces.

- (a) Put the thumbnail fairing [33] in its position.
- (b) Install the 2 bolts [32] with sealant, A00436.
- (c) Install the 9 bolts [31] with sealant, A00436.
- (d) Install the 4 bolts [32] with sealant, A00436.
- (e) Install the 9 bolts [31] with sealant, A00436.
- (f) Install the 2 bolts [32] with sealant, A00436.
- (g) Install the 16 bolts [32] with sealant, A00436.
- (h) Install the 15 bolts [31] with sealant, A00436.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-01-440-005-001

(1) Do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-910-807-001.

SUBTASK 54-52-01-440-002-001

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

------ END OF TASK ------

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FORWARD FAIRINGS - INSPECTION/CHECK

1. General

A. This procedure examines the forward fairings for damage. If the fall arrest fitting stops a person who falls, you must do this procedure.

TASK 54-52-01-000-805-001

2. Forward Fairings Examination

(Figure 601)

A. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-000-802-001	Fan Cowl Support Beam Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-52-01-400-802-001	Fan Cowl Support Beam Fairings Installation (P/B 401)
SRM 54-51-70	Structural Repair Manual

B. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut

C. Access Panels

Number	Name/Location
431AT	Thumbnail Fairing, Left Strut
431BT	PDOS Pump Access Door
431CL	Forward Access Fairing, Left Strut
431CR	Forward Access Fairing, Left Strut
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
441AT	Thumbnail Fairing, Right Strut
441BT	PDOS Pump Access Door
441CL	Forward Access Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut

D. Forward Fairing Examination

SUBTASK 54-52-01-040-006-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

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SUBTASK 54-52-01-010-003-001

(2) To remove the applicable forward fairing panels, do this task:

Forward Fairings Removal, TASK 54-52-01-000-801-001

<u>Number</u>	Name/Location
431CL	Forward Access Fairing, Left Strut
431CR	Forward Access Fairing, Left Strut
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
441CL	Forward Access Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut

SUBTASK 54-52-01-010-004-001

(3) To remove the applicable fan cowl support beam fairing panels, do this task:

Fan Cowl Support Beam Fairings Removal, TASK 54-52-01-000-802-001

<u>Number</u>	Name/Location
431AT	Thumbnail Fairing, Left Strut
431BT	PDOS Pump Access Door
441AT	Thumbnail Fairing, Right Strut
441BT	PDOS Pump Access Door

SUBTASK 54-52-01-020-002-001

- (4) Examine the forward fairings for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.
 - (a) If you find damage to the forward fairings, repair the fairing as specified in this procedure: (SRM 54-51-70).

SUBTASK 54-52-01-010-005-001

(5) To install the forward fairing panels, do this task:

Forward Fairings Installation, TASK 54-52-01-400-801-001

<u>Number</u>	Name/Location
431CL	Forward Access Fairing, Left Strut
431CR	Forward Access Fairing, Left Strut
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
441CL	Forward Access Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut

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SUBTASK 54-52-01-010-006-001

(6) To install the fan cowl support beam fairing panels, do this task:

Fan Cowl Support Beam Fairings Installation, TASK 54-52-01-400-802-001

<u>Number</u>	Name/Location
431AT	Thumbnail Fairing, Left Strut
431BT	PDOS Pump Access Door
441AT	Thumbnail Fairing, Right Strut
441BT	PDOS Pump Access Door

SUBTASK 54-52-01-040-007-001

1	(7)	Do this task: Put the	Strut Back to its Usua	I Condition	TASK 54-51-01	-440-802-002
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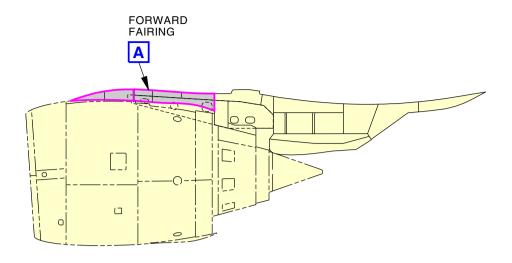
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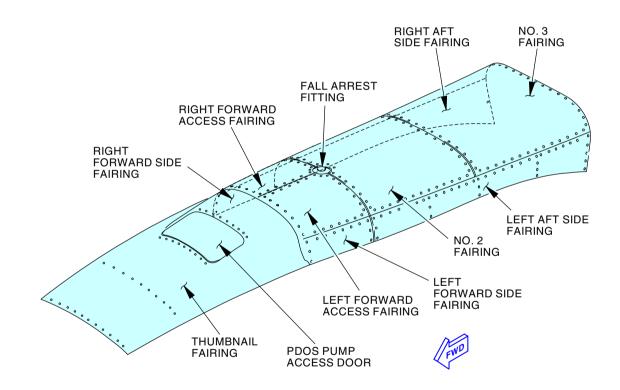
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FORWARD FAIRING



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Forward Fairing Examination Figure 601/54-52-01-990-805-001

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UNDERWING FAIRING - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
 - (1) The removal of the underwing fairing.
 - (2) The installation of the underwing fairing.

TASK 54-52-03-000-801

2. Underwing Fairing Removal

(Figure 401)

A. General

- (1) This procedure contains the removal of the three underwing fairings and two access covers.
- (2) These five assemblies make the underwing fairing:
 - (a) An outboard fairing that has three bonding jumpers.
 - (b) A center panel that has four bonding jumpers.
 - (c) An inboard fairing that has five bonding jumpers.
 - (d) Two access covers (for access to the aft upper spar fuse pins) with no bonding jumpers.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)

C. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
432	Forward Torque Box - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut
442	Forward Torque Box - Right Nacelle Strut

D. Access Panels

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

E. Prepare for the Removal

SUBTASK 54-52-03-040-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-03-010-001

(2) If you will remove the center fairing, inboard fairing, or outboard fairing, it will be easier if you remove the applicable wing leading edge panels:

(TASK 57-41-10-000-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

ARO ALL



F. Underwing Fairing Removal

SUBTASK 54-52-03-020-005

- (1) Do these steps to remove the applicable outboard fairing:
 - (a) Remove the bolt [16] that attach the outboard fairing [5] or outboard fairing [10] to the strut, and remove the applicable fairing.
 - (b) Remove the three self-locking nut [12] and three washer [13] that attach the bonding jumpers to the ground studs on the wing leading edge.

SUBTASK 54-52-03-020-002

- (2) Do these steps to remove the applicable inboard fairing:
 - (a) Remove the bolt [16] that attach the inboard fairing [6] or inboard fairing [9] to the strut, and remove the applicable fairing.
 - (b) Remove the five self-locking nut [12] and five washer [13] that attach the bonding jumpers to the ground studs on the wing leading edge.

SUBTASK 54-52-03-020-011

- (3) Do these steps to remove the applicable center fairing:
 - (a) Remove the bolt [16] that attach the center fairing [1] or center fairing [2] to the strut, and remove the applicable fairing.
 - (b) Remove the four self-locking nut [12] and four washer [13] that attach the bonding jumpers to the ground studs on the wing leading edge.

SUBTASK 54-52-03-020-003

- (4) Do these steps to remove the applicable outboard access cover:
 - (a) Remove the twelve bolt [16] and one bolt [19].
 - (b) Remove the applicable access cover [3] or access cover [8].

SUBTASK 54-52-03-020-004

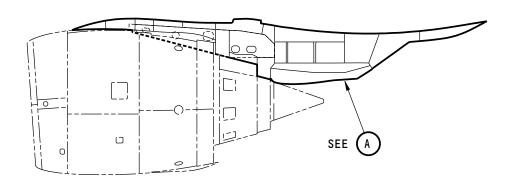
- (5) Do these steps to remove the applicable inboard access cover:
 - (a) Remove the six bolt [16] and one bolt [19].
 - (b) Remove the applicable access cover [4] or access cover [7].

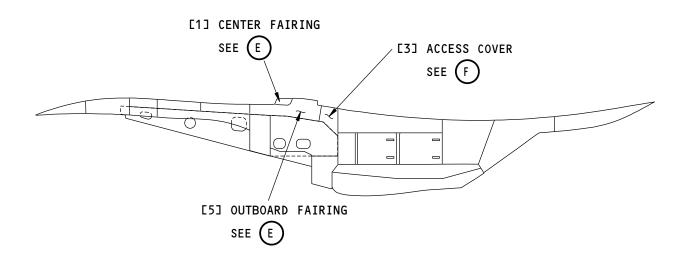
——— END OF TASK ———

54-52-03

EFFECTIVITY







LEFT STRUT (LEFT SIDE)

E15702 S0006427714_V1

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 1 of 10)

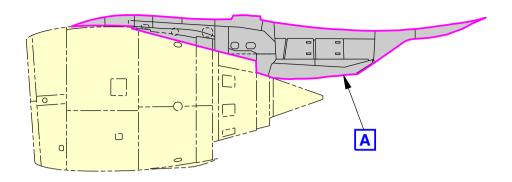
ARO 001-013

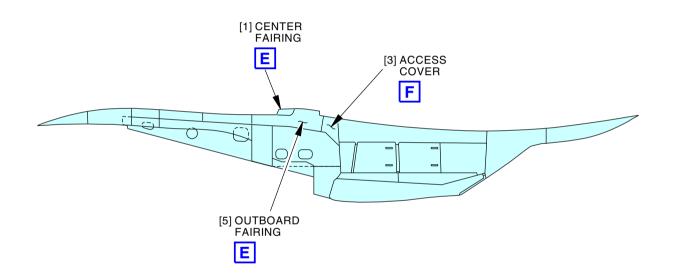
D633W101-ARO

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LEFT STRUT (LEFT SIDE)

2438067 S0000565633_V2

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 2 of 10)

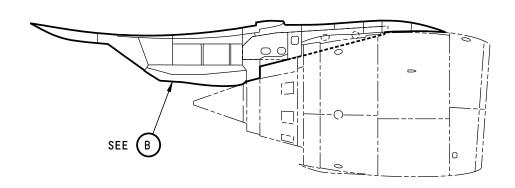
ARO 014-999

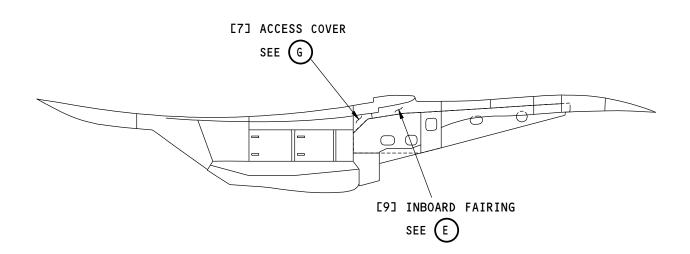
D633W101-ARO

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LEFT STRUT (RIGHT SIDE)

E15715 S0006427716_V1

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 3 of 10)

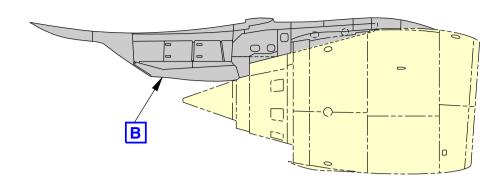
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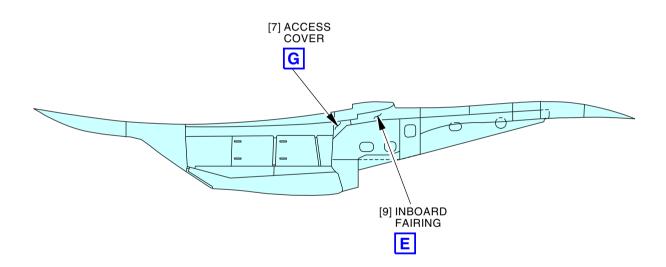
D633W101-ARO

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LEFT STRUT (RIGHT SIDE)



2438066 S0000565634_V2

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 4 of 10)

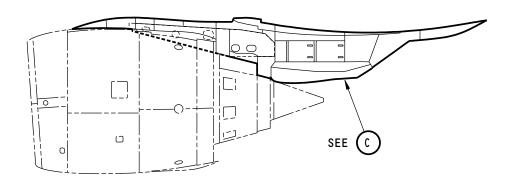
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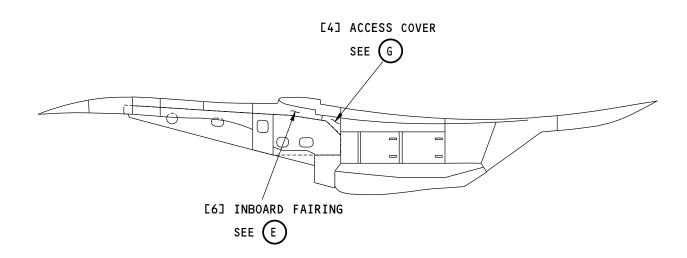
D633W101-ARO

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RIGHT STRUT (RIGHT SIDE)

E85038 S0006427718_V1

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 5 of 10)

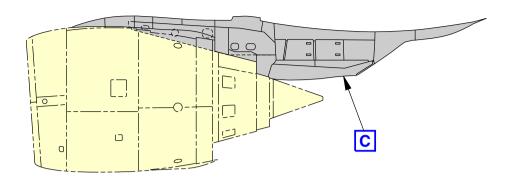
ARO 001-013

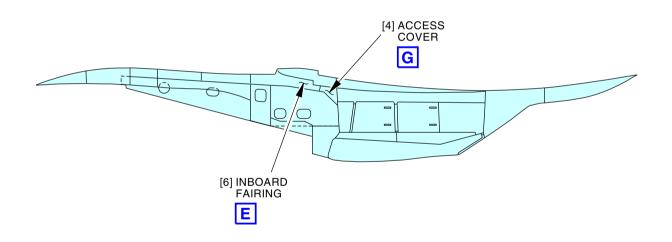
D633W101-ARO

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RIGHT STRUT (LEFT SIDE)

2438084 S0000565635_V2

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 6 of 10)

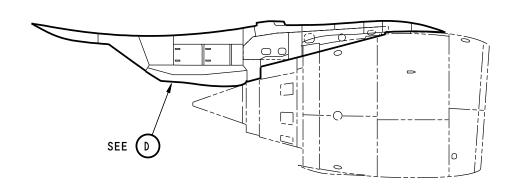
ARO 014-999

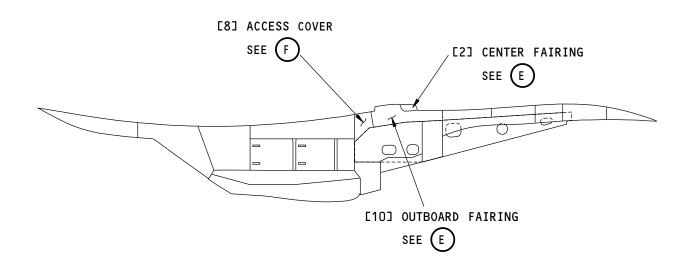
D633W101-ARO

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RIGHT STRUT (RIGHT SIDE)

E85018 S0006427720_V1

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 7 of 10)

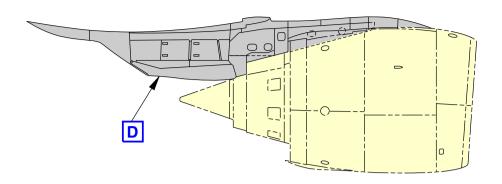
ARO 001-013

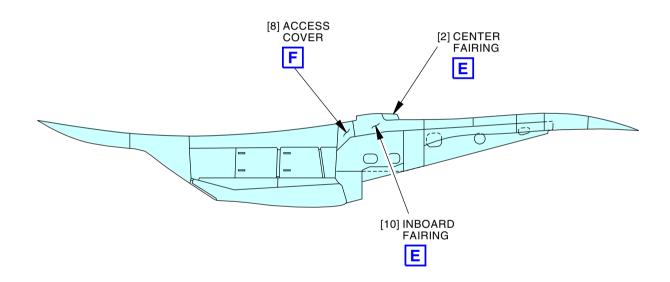
D633W101-ARO

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RIGHT STRUT (RIGHT SIDE)

2438244 S0000565637_V2

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 8 of 10)

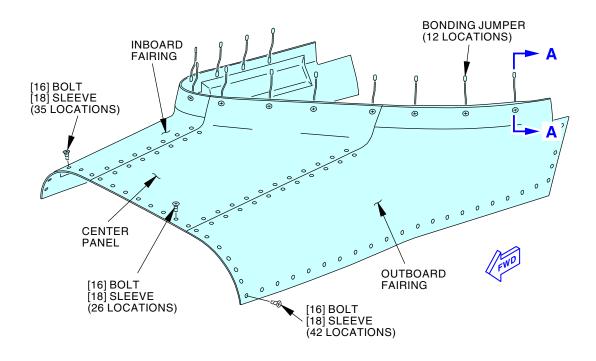
ARO 014-999

D633W101-ARO

54-52-03

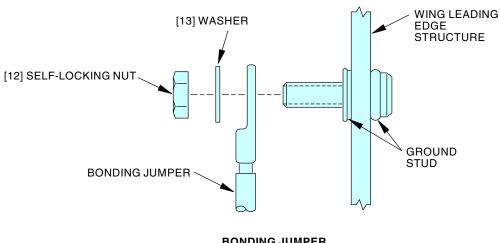
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UNDERWING FAIRINGS (LEFT STRUT IS SHOWN, RIGHT STRUT IS OPPOSITE)





BONDING JUMPER (EXAMPLE)

E15732 S0006427722_V2

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 9 of 10)

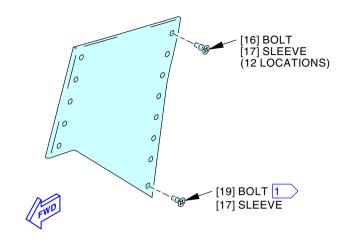
ARO ALL

D633W101-ARO

54-52-03

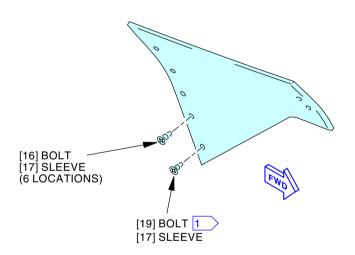
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ACCESS COVER
(OUTBOARD SIDE)
(LEFT STRUT IS SHOWN, RIGHT STRUT IS OPPOSITE)





ACCESS COVER (INBOARD SIDE) (LEFT STRUT IS SHOWN, RIGHT STRUT IS OPPOSITE)



NOTE:

1 SHORT BOLT IS INSTALLED IN THIS LOCATION

E15742 S0006427723_V2

Underwing Fairing Installation Figure 401/54-52-03-990-801 (Sheet 10 of 10)

- EFFECTIVITY **ARO ALL**

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D633W101-ARO



TASK 54-52-03-400-801

3. Underwing Fairing Installation

(Figure 401)

A. General

- (1) This procedure contains the installation of the three underwing fairings and two access covers.
- (2) These five assemblies make the underwing fairing:
 - (a) An outboard fairing that has three bonding jumpers.
 - (b) A center panel that has four bonding jumpers.
 - (c) An inboard fairing that has five bonding jumpers.
 - (d) Two access covers (for access to the aft upper spar fuse pins) with no bonding jumpers.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)
SWPM 20-20-00	Standard Wiring Practices Manual

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Center fairing	54-52-03-05-125	ARO ALL	
2	Center fairing	54-52-03-05-130	ARO ALL	
3	Access cover	54-52-03-05-280	ARO ALL	
4	Access cover	54-52-03-05-345	ARO ALL	
6	Inboard fairing	54-52-03-05-175	ARO ALL	
7	Access cover	54-52-03-05-340	ARO ALL	
8	Access cover	54-52-03-05-285	ARO ALL	
9	Inboard fairing	54-52-03-05-170	ARO ALL	

D. Location Zones

Zone	Area
431	Forward Strut Fairing - Left Nacelle Strut
432	Forward Torque Box - Left Nacelle Strut
441	Forward Strut Fairing - Right Nacelle Strut
442	Forward Torque Box - Right Nacelle Strut

E. Access Panels

Number	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Underwing Fairing Installation

SUBTASK 54-52-03-420-002

- (1) Do these steps to install the center fairing:
 - (a) Make sure sleeves [18] are installed in each hole in the center fairing [1] or center fairing [2].
 - (b) Put the center fairing [1] or center fairing [2] in its position on the strut.

ARO ALL



- (c) Install the four self-locking nut [12] and four washer [13] that attach the bonding jumpers to the ground studs on the wing leading edge (SWPM 20-20-00).
- (d) Install the bolt [16].

SUBTASK 54-52-03-420-003

- (2) Do these steps to install the inboard fairing:
 - (a) Make sure sleeves [18] are installed in each hole in the inboard fairing [6] or inboard fairing [9].
 - (b) Put the inboard fairing [6] or inboard fairing [9] in its position on the strut.
 - (c) Install the five self-locking nut [12] and five washer [13] that attach the bonding jumpers to the ground studs on the wing leading edge (SWPM 20-20-00).
 - (d) Install the bolt [16].

SUBTASK 54-52-03-420-011

- (3) Do these steps to install the outboard fairing:
 - (a) Make sure sleeves [18] are installed in each hole in the outboard fairing [5] or outboard fairing [10].
 - (b) Put the outboard fairing [5] or outboard fairing [10] in its position on the strut.
 - (c) Install the three self-locking [12] and three washer [13] that attach the bonding jumpers to the ground studs on the wing leading edge (SWPM 20-20-00).
 - (d) Install the bolt [16].

SUBTASK 54-52-03-420-004

- (4) Do this step to install the outboard access cover:
 - (a) Make sure a sleeves [17] is installed in each hole in the access cover [3] or access cover [8].
 - (b) Put the access cover [3] or access cover [8] in its position on the strut.
 - (c) Install the twelve bolt [16], and one bolt [19].
 - NOTE: Make sure you install the short bolt in the correct location as shown on the illustration.

SUBTASK 54-52-03-420-005

- (5) Do this step to install the inboard access cover:
 - (a) Make sure a sleeves [17] is installed in each hole in the access cover [4] or access cover [7].
 - (b) Put the access cover [4] or access cover [7] in its position on the strut.
 - (c) Install the six bolt [16], and one bolt [19].
 - NOTE: Make sure you install the short bolt in the correct location as shown on the illustration.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-03-410-001

(1) If you removed it, install the wing leading edge panels:

(TASK 57-41-10-400-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

ARO ALL



SUBTASK 54-52-03-440-001

(2)	Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002
	——— END OF TASK ———

ARO ALL



UNDERWING FAIRING - INSPECTION/CHECK

1. General

A. This procedure examines the underwing fairings.

TASK 54-52-03-000-802

2. Underwing Fairing Examination

A. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)
54-52-03-000-801	Underwing Fairing Removal (P/B 401)
54-52-03-400-801	Underwing Fairing Installation (P/B 401)
SRM 54-51-70	Structural Repair Manual
SRM 54-51-71	Structural Repair Manual
SWPM 20-20-00	Standard Wiring Practices Manual

B. Location Zones

Zone	Area
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

C. Access Panels

Number	er Name/Location	
431FL Outboard Underwing Fairing, Left Strut		
431FR	Inboard Underwing Fairing, Left Strut	
431FT	Center Underwing Fairing, Left Strut	
431GL	Left Access Cover, Left Strut	
431GR	Right Access Cover, Left Strut	
441FL	Inboard Underwing Fairing, Right Strut	
441FR	Outboard Underwing Fairing, Right Strut	
441FT	Center Underwing Fairing, Right Strut	
441GL	Left Access Cover, Right Strut	
441GR	Right Access Cover, Right Strut	

D. Prepare for the Examination

SUBTASK 54-52-03-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-03-010-002

(2) To remove the applicable underwing fairing panels, do this task:

Underwing Fairing Removal, TASK 54-52-03-000-801

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
431GI	Left Access Cover Left Strut

ARO ALL



(Continued)

<u>Number</u>	Name/Location
431GR	Right Access Cover, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut
441GL	Left Access Cover, Right Strut
441GR	Right Access Cover, Right Strut

E. Underwing Fairing Examination

SUBTASK 54-52-03-210-001

- (1) Do these steps to examine the underwing fairings:
 - (a) Examine the underwing fairings for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.
 - (b) Examine the grounding jumpers for damage.
 - 1) If you find damage to the underwing fairings, repair the fairings as specified in this procedure: (SRM 54-51-70).
 - (c) Examine the support structure of the underwing fairings for cracks or damage.
 - 1) If you find damage to the underwing fairing support structure, repair the support structure as specified in this procedure: (SRM 54-51-71).

SUBTASK 54-52-03-410-002

(2) To install the underwing fairing panels, do this task:

Underwing Fairing Installation, TASK 54-52-03-400-801

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
431FR	Inboard Underwing Fairing, Left Strut
431FT	Center Underwing Fairing, Left Strut
431GL	Left Access Cover, Left Strut
431GR	Right Access Cover, Left Strut
441FL	Inboard Underwing Fairing, Right Strut
441FR	Outboard Underwing Fairing, Right Strut
441FT	Center Underwing Fairing, Right Strut
441GL	Left Access Cover, Right Strut
441GR	Right Access Cover, Right Strut

SUBTASK 54-52-03-210-002

(3) Do a check of the resistance of the grounding jumpers as specified in this procedure: Electrical Bonding and Grounding (SWPM 20-20-00).

SUBTASK 54-52-03-210-003

(4) Make sure the underwing fairings are in the aerodynamic smoothness limits (TASK 54-52-00-910-807-001).

F. Put the Airplane Back to its Usual Condition

SUBTASK 54-52-03-440-002

(1) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

ARO ALL



AFT FAIRING - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the aft fairing
 - (2) An installation of the aft fairing.

TASK 54-52-04-000-801

2. Aft Fairing Removal

(Figure 401, Figure 402, Figure 403)

A. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-05-000-801	Aft Fairing Access Door Removal (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
78-11-02-000-801-H01	Aft Centerbody Removal (P/B 401)
78-11-02-000-802-H01	Forward Centerbody Removal (P/B 401)
78-11-03-000-801-H01	Center Vent Tube Extension Removal (P/B 401)

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
SPL-1561	Jack - Hydraulic
	Part #: 930002 Supplier: 65834 Part #: J20009-110 Supplier: 81205 Opt Part #: J20009-108 Supplier: 81205 Opt Part #: J20009-109 Supplier: 81205
SPL-1584	Adapter Assembly - Telescoping Hydraulic
	Part #: J20009-68 Supplier: 81205
SPL-14753	Equipment - Removal/Installation, Aft Strut Fairing
	Part #: J54004-131 Supplier: 81205
SPL-14755	Equipment - Removal/Installation, Aft Strut Fairing (Applicable to 777 Line Number 1346 and on)
	Part #: J54004-132 Supplier: 81205

C. Location Zones

Zone	Area
433	Aft Torque Box - Left Nacelle Strut
443	Aft Torque Box - Right Nacelle Strut

D. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing

ARO ALL



(Continued)

Number	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

E. Prepare for the Removal

SUBTASK 54-52-04-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-04-040-001



DO THE DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE FLAPERONS. THE ACCIDENTAL OPERATION OF THE FLAPERONS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (2) Do this step for the deactivation of the flaperons:
 - (a) Put the 3 FLT CONTROL HYD VALVE POWER switches for the wing in the SHUT OFF position.

SUBTASK 54-52-04-010-001

(3) To remove the applicable doors on the aft fairing, do this task:

Aft Fairing Access Door Removal, TASK 54-52-05-000-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-52-04-010-002

(4) To remove the applicable aft fairing access panels, do this task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing

ARO ALL



(Continued)

<u>Number</u>	Name/Location		
434ER	Right Access Panel, Left Strut Aft Fairing		
444BL	Left Access Panel, Right Strut Aft Fairing		
444BR	Right Access Panel, Right Strut Aft Fairing		
444EL	Left Access Panel, Right Strut Aft Fairing		
444ER	Right Access Panel, Right Strut Aft Fairing		

SUBTASK 54-52-04-010-008

- (5) On the applicable engine, do these steps:
 - (a) Do this task: Aft Centerbody Removal, TASK 78-11-02-000-801-H01.
 - (b) Do this task: Forward Centerbody Removal, TASK 78-11-02-000-802-H01.
 - (c) Do this task: Center Vent Tube Extension Removal, TASK 78-11-03-000-801-H01.

SUBTASK 54-52-04-480-001

- (6) Do these steps to install the aft strut fairing equipment, SPL-14753 or aft strut fairing equipment, SPL-14755 (Figure 401):
 - (a) Use the instructions on the tool placard to install the applicable attach assemblies onto the aft fairing.
 - (b) Install the cradle of the aft strut fairing equipment, SPL-14753 or aft strut fairing equipment, SPL-14755, onto the hydraulic jack, SPL-1561 with the telescoping hydraulic adapter assembly, SPL-1584.
 - (c) Carefully raise the aft strut fairing equipment, SPL-14753 or aft strut fairing equipment, SPL-14755, and pin the attach assemblies as shown on the tool placards.
 - (d) Make sure the weight of the aft fairing is held by the tool.

F. Aft Fairing Removal

SUBTASK 54-52-04-020-001

- (1) Do these steps to disconnect the strut drains from the aft fairing: (Figure 402)
 - (a) Disconnect the strut drain hose from the coupling at the strut aft bulkhead, and put caps on the openings.
 - (b) Remove the clamp [2] and the coupling [3] from the hydraulic reservoir drain tube. Put caps on the tube ends.
 - (c) Remove the nut [4], washer [5], screw [6], and clamp [1] that attach the drain tube to the diagonal brace.
 - (d) Remove the nut [9], washer [10], screw [11], clamp [7], and clamp [8].

SUBTASK 54-52-04-000-001

- (2) Do these steps to remove the aft fairing from the bottom of the wing (Figure 403):
 - (a) Remove the nut[32], washer [33], washer [36], and bolt [34] from the fittings on each side of the aft fairing, at frame 2.
 - NOTE: The bushing [35] can fall out and be lost.
 - (b) Remove the nut [32], washer [33], washer [36], and bolt [38] from the fittings on each side of the aft fairing, at frame 3.
 - NOTE: The bushing [37] can fall out and be lost.

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(c) Remove the nut [32], washer [33], washer [36], and bolt [40] from the rod ends at the wing fitting, at frame 4.

NOTE: The bushing [39] can fall out and be lost.

(d) Remove the nut [41], washer [42], washer [44], and bolt [45] from the fittings on each side of the aft fairing, at frame 5.

NOTE: The bushing [43] can fall out and be lost.

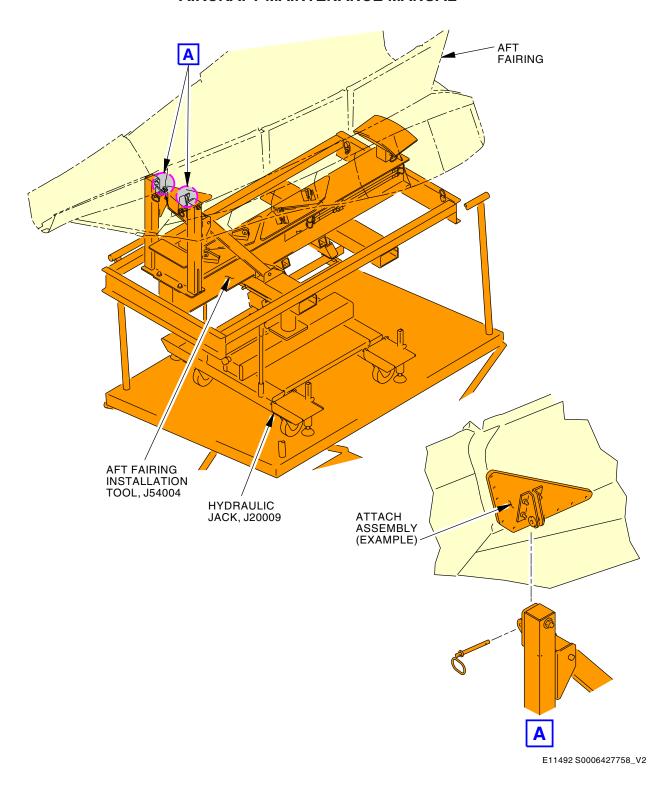
SUBTASK 54-52-04-580-001

(3) Carefully remove the aft fairing [51] or aft fairing [52], and lower the fairing with the tool.

——— END OF TASK ———

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Aft Fairing Installation Tool Figure 401/54-52-04-990-801

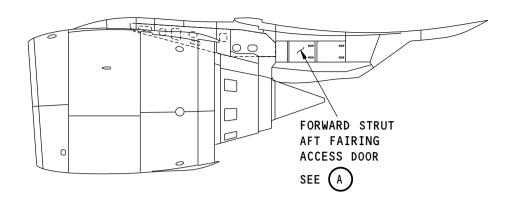
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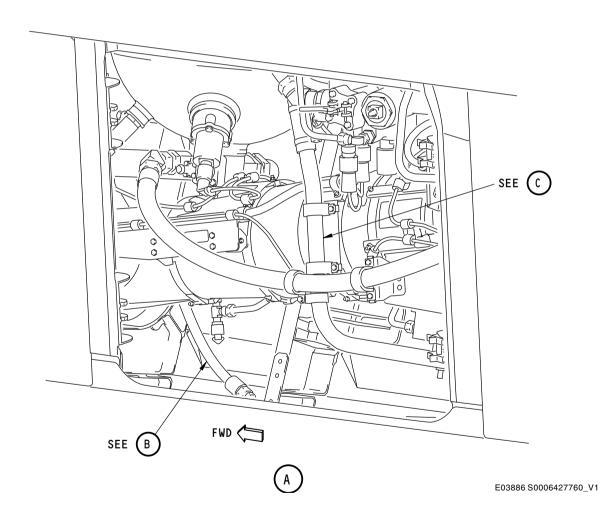
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Aft Fairing Drain Disconnect Figure 402/54-52-04-990-802 (Sheet 1 of 3)

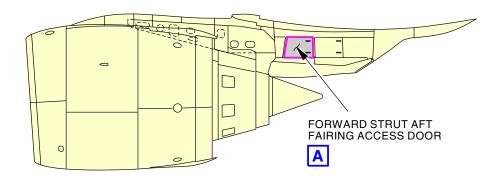
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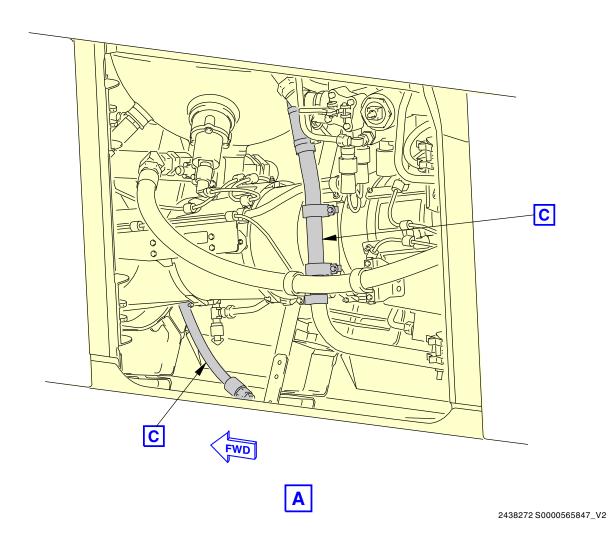
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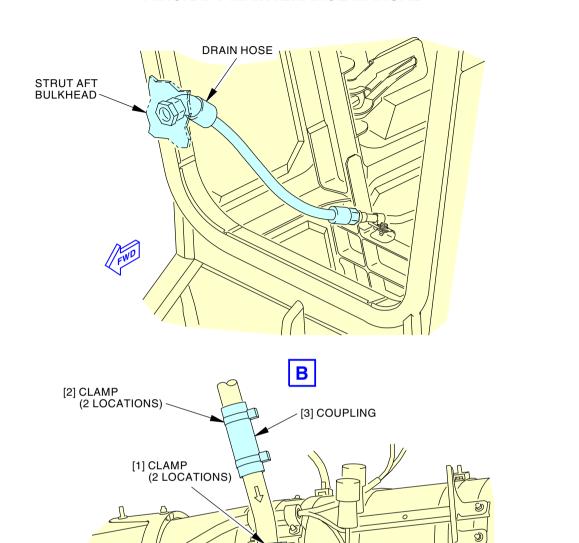


Aft Fairing Drain Disconnect Figure 402/54-52-04-990-802 (Sheet 2 of 3)

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[7] CLAMP
[8] CLAMP
[9] NUT
[10] WASHER
[11] SCREW

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Aft Fairing Drain Disconnect Figure 402/54-52-04-990-802 (Sheet 3 of 3)

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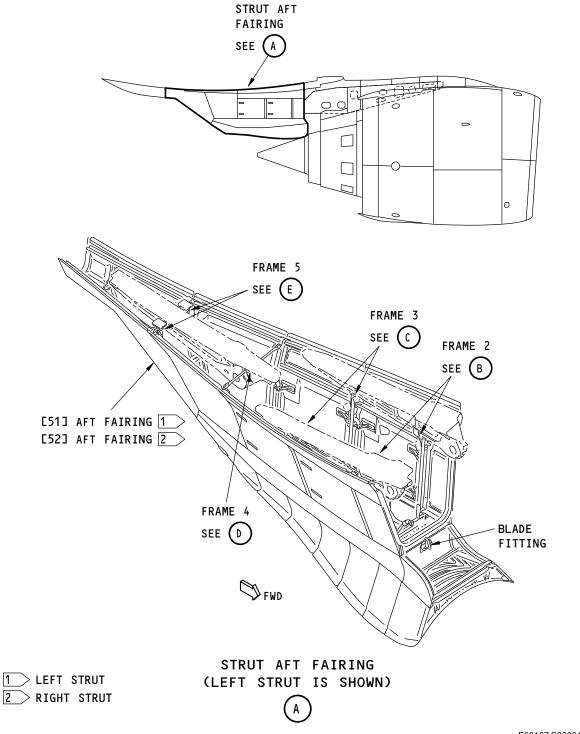
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[4] NUT [5] WASHER [6] SCREW (4 LOCATIONS)

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Strut Aft Fairing Installation Figure 403/54-52-04-990-803 (Sheet 1 of 4)

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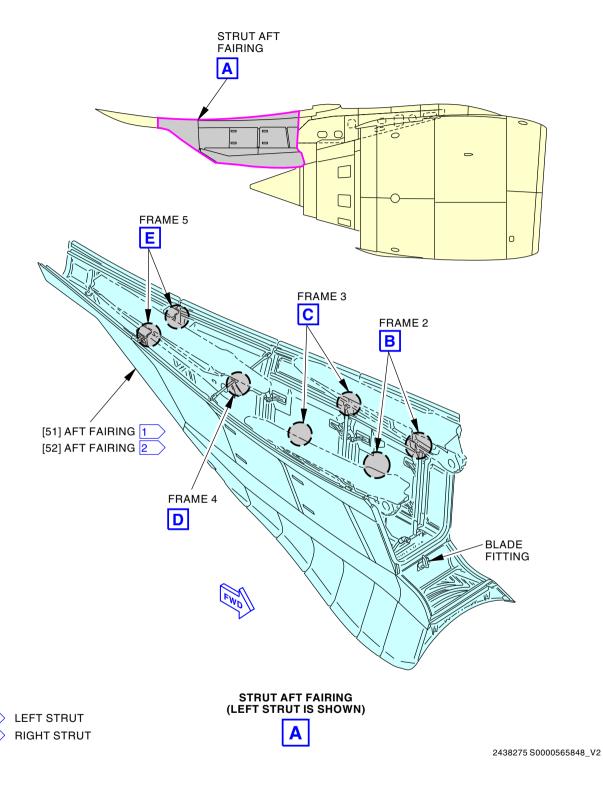
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Strut Aft Fairing Installation Figure 403/54-52-04-990-803 (Sheet 2 of 4)

EFFECTIVITY

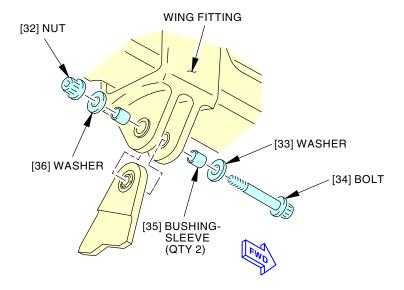
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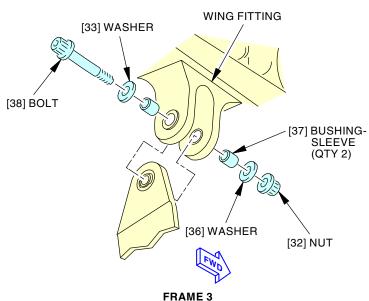
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FRAME 2 (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)





FRAME 3 (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



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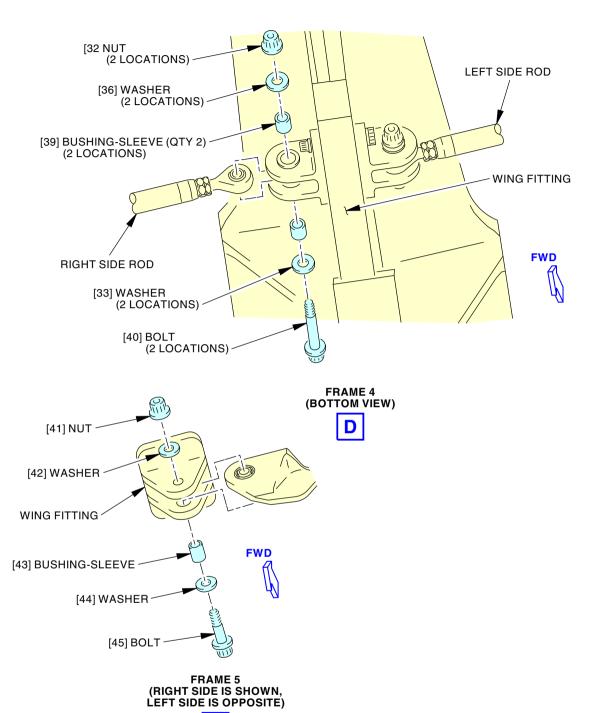
Strut Aft Fairing Installation Figure 403/54-52-04-990-803 (Sheet 3 of 4)

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Strut Aft Fairing Installation Figure 403/54-52-04-990-803 (Sheet 4 of 4)

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TASK 54-52-04-400-801

3. Aft Fairing Installation

(Figure 401, Figure 402, Figure 403) (Figure 401, Figure 402, Figure 403)

A. General

This Procedure is for the Installation of the Aft Fairing.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
54-55-01-200-810-001	Leak Check of the Strut Aft Vapor Barrier (P/B 601)
78-11-02-400-801-H01	Aft Centerbody Installation (P/B 401)
78-11-02-400-802-H01	Forward Centerbody Installation (P/B 401)
78-11-03-400-801-H01	Center Vent Tube Extension 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	
SPL-1561	Jack - Hydraulic	
	Part #: 930002 Supplier: 65834 Part #: J20009-110 Supplier: 81205 Opt Part #: J20009-108 Supplier: 81205 Opt Part #: J20009-109 Supplier: 81205	
SPL-1584	Adapter Assembly - Telescoping Hydraulic	
	Part #: J20009-68 Supplier: 81205	
SPL-14753	Equipment - Removal/Installation, Aft Strut Fairing	
	Part #: J54004-131 Supplier: 81205	
SPL-14755	Equipment - Removal/Installation, Aft Strut Fairing (Applicable to 777 Line Number 1346 and on)	
	Part #: J54004-132 Supplier: 81205	

D. Location Zones

Zone	Area	
433	Aft Torque Box - Left Nacelle Strut	
443	Aft Torque Box - Right Nacelle Strut	

E. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing

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(Continued)

Number	Name/Location
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

F. Aft Fairing Installation

SUBTASK 54-52-04-580-002

(1) Use the aft strut fairing equipment, SPL-14753 or aft strut fairing equipment, SPL-14755, with the hydraulic jack, SPL-1561 and the telescoping hydraulic adapter assembly, SPL-1584, to lift the aft fairing [51] or aft fairing [52] into its position under the wing.

SUBTASK 54-52-04-400-001

- (2) Do these steps to install the aft fairing [51] or aft fairing [52] under the wing: (Figure 403)
 - (a) Install the bolt [45], washer [42], washer [44], and nut [41] at the fittings on each side of the aft fairing, at frame 5.
 - NOTE: Make sure the bushing [43] are installed.
 - (b) Install the bolt [40], washer [33], washer [36], and nut [32] at the rod ends at the wing fitting, at frame 4.
 - NOTE: Make sure the bushing [39] are installed.
 - (c) Install the bolt [38], washer [33], washer [36], and nut [32] at the fittings on each side of the aft fairing, at frame 3.
 - NOTE: Make sure the bushing [37] are installed.
 - (d) Install the bolt [34], washer [33], washer [36], and nut [32] at the fittings on each side of the aft fairing, at frame 2.
 - NOTE: Make sure the bushing [35] are installed.

SUBTASK 54-52-04-080-001

(3) Remove the aft strut fairing equipment, SPL-14753 or aft strut fairing equipment, SPL-14755, the hydraulic jack, SPL-1561 and the telescoping hydraulic adapter assembly, SPL-1584. (Figure 401)

SUBTASK 54-52-04-420-001

- (4) Do these steps to connect the strut drains to the aft fairing: (Figure 402)
 - (a) Connect the strut drain hose to the coupling at the strut aft bulkhead.
 - 1) Hold the coupling at the strut aft bulkhead with a wrench.
 - 2) Tighten the end fitting on the strut drain hose to 855-945 pound-inches.
 - (b) Install the coupling [3] and the clamp [2] on the hydraulic reservoir drain tube.
 - (c) Install the nut [4], washer [5], screw [6], and clamp [1] that attach the drain tube to the diagonal brace.

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(d) Install the nut [9], washer [10], screw [11], clamp [7], and clamp [8].

SUBTASK 54-52-04-790-001

(5) Do this task: Leak Check of the Strut Aft Vapor Barrier, TASK 54-55-01-200-810-001.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-04-400-006

- (1) Do these steps:
 - (a) Do this task: Center Vent Tube Extension Installation, TASK 78-11-03-400-801-H01.
 - (b) Do this task: Forward Centerbody Installation, TASK 78-11-02-400-802-H01.
 - (c) Do this task: Aft Centerbody Installation, TASK 78-11-02-400-801-H01.

SUBTASK 54-52-04-410-001

(2) To install the aft fairing access panels, do this task:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location		
434BL	Left Access Panel, Left Strut Aft Fairing		
434BR	Right Access Panel, Left Strut Aft Fairing		
434EL	Left Access Panel, Left Strut Aft Fairing		
434ER	Right Access Panel, Left Strut Aft Fairing		
444BL	Left Access Panel, Right Strut Aft Fairing		
444BR	Right Access Panel, Right Strut Aft Fairing		
444EL	Left Access Panel, Right Strut Aft Fairing		
444ER	Right Access Panel, Right Strut Aft Fairing		

SUBTASK 54-52-04-410-002

(3) To install the doors on the aft fairings, do this task:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-52-04-440-001

- (4) Do this step for the activation of the flaperon:
 - (a) Put the 3 FLT CONTROL HYD VALVE POWER switches for the wing in the NORM position.

SUBTASK 54-52-04-440-002

(5) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

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AFT FAIRING - INSPECTION/CHECK

1. General

- A. This procedure examines the aft fairing.
- B. Examination of the aft fairing includes the aft fairing doors, the aft fairing panels, and the trailing edge panel.

TASK 54-52-04-000-802

2. Aft Fairing Examination

A. References

Reference	Title
51-31-01-160-801	Prepare For Sealing (P/B 201)
51-31-01-390-801	Non-Removable Faying (Mated) Surface Seal Application (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)
54-52-04-400-801	Aft Fairing Installation (P/B 401)
54-52-05-000-801	Aft Fairing Access Door Removal (P/B 401)
54-52-05-400-801	Aft Fairing Access Door Installation (P/B 401)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
54-52-07-000-801	Strut Trailing Edge Removal (P/B 401)
54-52-07-400-801	Strut Trailing Edge Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
A00436	Sealant - Fuel Tank	BMS5-45 (Supersedes
		BMS5-26)

C. Location Zones

Zone	Area
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
434FB	Trailing Edge Fairing, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing

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(Continued)

Number	Name/Location
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing
444FB	Trailing Edge Fairing, Right Strut Aft Fairing

E. Prepare for the Examination

SUBTASK 54-52-04-040-003

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-04-010-003

(2) To remove the applicable access doors from the aft fairing, do this task:

Aft Fairing Access Door Removal, TASK 54-52-05-000-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
434DR	Right Aft Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DL	Left Aft Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-52-04-010-004

(3) To remove the applicable access panels from the aft fairing, do this task:

Aft Fairing Access Panel Removal, TASK 54-52-06-000-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-52-04-010-005

(4) To remove the applicable trailing edge fairings, do this task:

Strut Trailing Edge Removal, TASK 54-52-07-000-801

<u>Number</u>	Name/Location
434FB	Trailing Edge Fairing, Left Strut Aft Fairing
444FB	Trailing Edge Fairing, Right Strut Aft Fairing

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F. Aft Fairing Examination

SUBTASK 54-52-04-210-001

- (1) Do these steps to examine the aft fairing:
 - (a) Examine the aft fairing structure for damage.
 - 1) Examine the aft fairing skin for cracks, separation of the bonded layers, and damage to the paint and protective coating.
 - 2) Examine the frames and bulkheads for cracks or worn areas, and for damage to the protective coating.
 - (b) Examine the support fittings and the underwing fittings for cracks or damage.
 - 1) Make sure that the bushings and bearings have not moved in their bores.
 - 2) Look for damage or worn areas in the bushings and bearings.
 - (c) Make sure the bolts which attach the aft fairing are correctly installed, and are not loose or missing (TASK 54-52-04-400-801).
 - (d) Examine the seal between the top of the aft fairing and the bottom of the wing for damage.
 - (e) Examine the drainlines for cracks or leaks.
 - 1) Examine the clamps and brackets to make sure the drainlines are correctly installed, and are not loose.
 - (f) Examine the exterior of the heat shield castings for cracks or damage.
 - (g) If you find damage to the aft fairing, contact Boeing for corrective action.

SUBTASK 54-52-04-210-002

- (2) Do these steps to examine the trailing edge fairing:
 - (a) Examine the trailing edge fairing for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.
 - (b) Examine the support fittings and wing fittings for cracks or damage (TASK 54-52-07-400-801).
 - (c) Examine the seal between the top of the trailing edge fairing and the bottom of the wing for damage.
 - (d) If you find damage to the trailing edge fairing, contact Boeing for corrective action.

SUBTASK 54-52-04-410-003

3) To install the trailing edge fairings, do this task:

Strut Trailing Edge Installation, TASK 54-52-07-400-801

<u>Number</u>	Name/Location
434FB	Trailing Edge Fairing, Left Strut Aft Fairing
444FB	Trailing Edge Fairing, Right Strut Aft Fairing

SUBTASK 54-52-04-210-003

- (4) Do these steps to examine the aft fairing access panels:
 - (a) Examine the aft fairing panels for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.
 - 1) If you find damage to the aft fairing panels, contact Boeing for corrective action.
 - (b) Examine the formed-in-place gasket around the panel opening in the aft fairing side skin.

EFFECTIVITY 54-52-04



- 1) If the seal around the edge of the panel opening is damaged, do these steps to repair the seal:
 - a) To prepare the panel and the panel opening for sealing, do this task: Prepare For Sealing, TASK 51-31-01-160-801.
 - b) To make a new formed-in-place gasket with sealant, A00436, do this task: Non-Removable Faying (Mated) Surface Seal Application, TASK 51-31-01-390-801.

SUBTASK 54-52-04-410-004

(5) To install the access panels on the aft fairing, do this task:

Aft Fairing Access Panel Installation, TASK 54-52-06-400-801

<u>Number</u>	Name/Location
434BL	Left Access Panel, Left Strut Aft Fairing
434BR	Right Access Panel, Left Strut Aft Fairing
434EL	Left Access Panel, Left Strut Aft Fairing
434ER	Right Access Panel, Left Strut Aft Fairing
444BL	Left Access Panel, Right Strut Aft Fairing
444BR	Right Access Panel, Right Strut Aft Fairing
444EL	Left Access Panel, Right Strut Aft Fairing
444ER	Right Access Panel, Right Strut Aft Fairing

SUBTASK 54-52-04-210-004

- (6) Do these steps to examine the aft fairing access doors:
 - (a) Examine the aft fairing doors for cracks in the skin, separation of the bonded layers, and damage to the paint and protective coating.
 - 1) If you find damage to the aft fairing doors, contact Boeing for corrective action.
 - (b) Examine the latches, hinges, latchkeepers, and hinge bases for cracks, damage, or worn areas.

SUBTASK 54-52-04-410-005

(7) To install the access doors on the aft fairing, do this task:

Aft Fairing Access Door Installation, TASK 54-52-05-400-801

Name/Location
Left Forward Access Door, Left Strut Aft Fairing
Right Forward Access Door, Left Strut Aft Fairing
Left Aft Access Door, Left Strut Aft Fairing
Right Aft Access Door, Left Strut Aft Fairing
Left Forward Access Door, Right Strut Aft Fairing
Right Forward Access Door, Right Strut Aft Fairing
Left Aft Access Door, Right Strut Aft Fairing
Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-52-04-210-005

(8) Make sure the aft fairings are in the aerodynamic smoothness limits (TASK 54-52-00-910-807-001).

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G. Put the Airplane Back to its Usual Condition

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(1) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

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AFT FAIRING ACCESS DOORS - MAINTENANCE PRACTICES

1. General

- A. This procedure has one task:
 - (1) An operation of the aft fairing access doors.

TASK 54-52-05-800-801

2. Aft Fairing Access Doors Operation

(Figure 201)

A. General

- (1) The operational procedure opens and closes the aft fairing access doors.
- (2) Each strut has a forward and an aft access door (referred to as an access door) on each side of the aft fairing.
- (3) Each access door has an upper and a lower latch.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-05-200-801	Aft Fairing Access Door Adjustment (P/B 501)

C. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

D. Prepare for the Operation

SUBTASK 54-52-05-040-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

E. Door Operation

SUBTASK 54-52-05-980-001

- (1) Do these steps to open the access doors:
 - (a) Push the trigger on each latch to release the latch handle.
 - NOTE: If it is necessary, you can carefully use a screwdriver to operate the trigger.
 - (b) Pull the handles out to release each latch, and open the door until it locks into the hold open device in the lower hinge.

SUBTASK 54-52-05-980-002

- (2) Do these steps to close the access doors:
 - (a) Push the tab on the lower hinge assembly, identified with the label "Push To Close", to release the hold open device for the door.
 - (b) Engage the latch hook with the latch keeper on each latch.



DO NOT USE TOO MUCH FORCE TO CLOSE THE LATCH HANDLE ON THE ACCESS DOOR. IF YOU USE TOO MUCH FORCE, DAMAGE TO THE ACCESS PANEL OR STRUCTURE CAN OCCUR.

(c) Use hand pressure only to push the latch handles closed (flush with the door).

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1) If you can not close the latch when you use hand pressure, adjust the latch keeper (TASK 54-52-05-200-801).

F.	Put the	Airplane	Back to	Its U	sual (Condition
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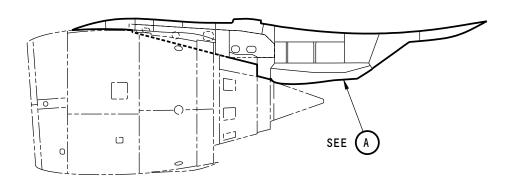
SUBTASK 54-52-05-440-001

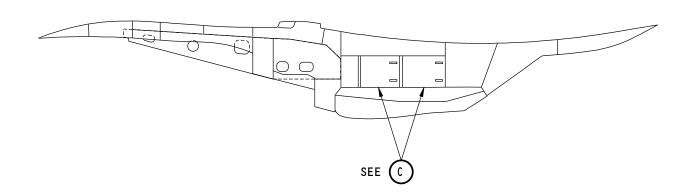
(1) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

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STRUT AFT FAIRING ACCESS DOORS (LEFT SIDE)



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Aft Fairing Access Doors Figure 201/54-52-05-990-802 (Sheet 1 of 6)

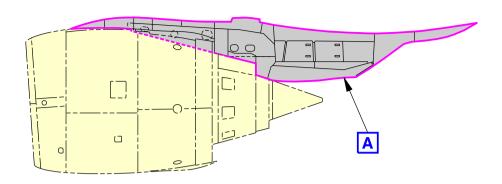
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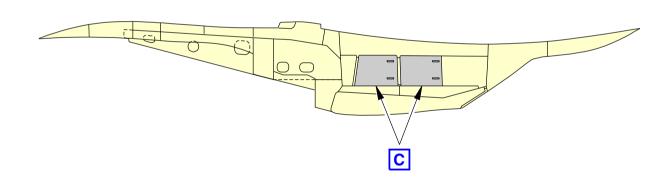
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STRUT AFT FAIRING ACCESS DOORS (LEFT SIDE)



2438306 S0000565745_V2

Aft Fairing Access Doors Figure 201/54-52-05-990-802 (Sheet 2 of 6)

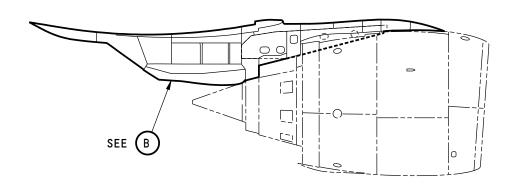
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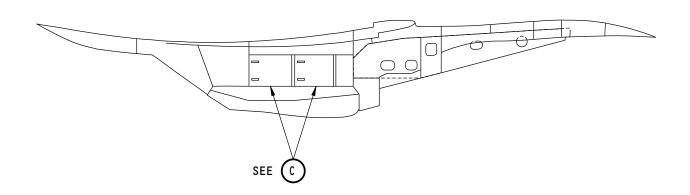
D633W101-ARO

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STRUT AFT FAIRING ACCESS DOORS (RIGHT SIDE)



E21495 S0006427798_V1

Aft Fairing Access Doors Figure 201/54-52-05-990-802 (Sheet 3 of 6)

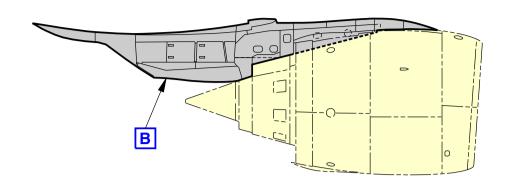
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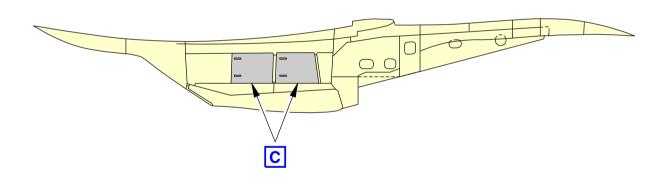
D633W101-ARO

54-52-05

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STRUT AFT FAIRING ACCESS DOORS (RIGHT SIDE)



2438367 S0000565746_V2

Aft Fairing Access Doors Figure 201/54-52-05-990-802 (Sheet 4 of 6)

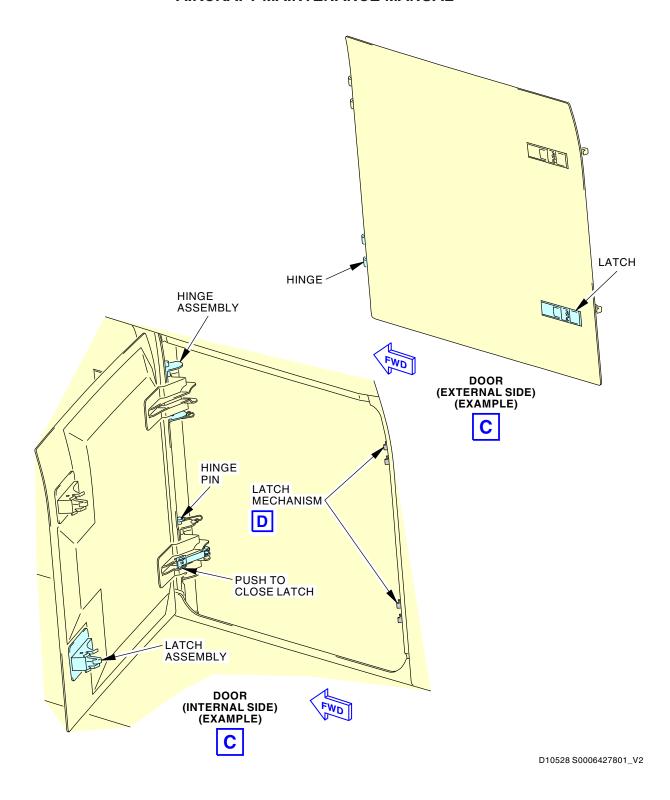
ARO 014-999

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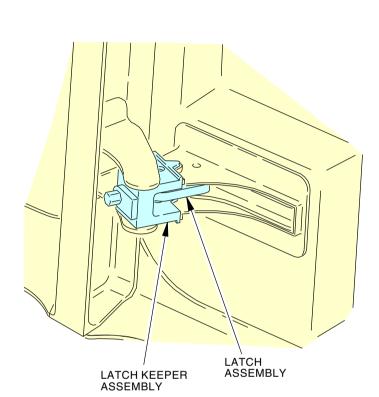


Aft Fairing Access Doors Figure 201/54-52-05-990-802 (Sheet 5 of 6)

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54-52-05 ARO ALL Sep 05/2017 l D633W101-ARO ECCN 9E991 BOEING PROPRIETARY - Copyright © Unpublished Work - See title page for details





LATCH MECHANISM (EXAMPLE)



E21438 S0006427802_V2

Aft Fairing Access Doors Figure 201/54-52-05-990-802 (Sheet 6 of 6)

ARO ALL

54-52-05

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AFT FAIRING ACCESS DOOR - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
 - (1) A removal of the aft fairing access door.
 - (2) An installation of the aft fairing access door.

TASK 54-52-05-000-801

2. Aft Fairing Access Door Removal

(Figure 401)

A. General

 This task gives the instructions for the removal of the aft fairing access doors (referred to as the access doors).

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)

C. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-52-05-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-52-05-010-001

(2) Open the applicable access doors (TASK 54-52-05-800-801).

E. Aft Fairing Access Door Removal

ARO 001-013

SUBTASK 54-52-05-000-001

- (1) Do these steps to remove the applicable access door:
 - (a) Hold the open end of the applicable access door.
 - (b) Airplanes with button head hinge pins, do this step:
 - 1) While you push the button on the head of the hinge pin, pull each hinge pin out (in the direction of the head) until the hinge on the door is released.
 - (c) Airplanes with hex head hinge bolts, do this step:
 - 1) Remove the nut and washer, and remove the hex head bolt.
 - (d) Disengage the hinge arms on the door from the hinge bases on the aft fairing, and remove the access door [1], access door [2], access door [3], access door [4], access door [5], access door [6], access door [7], or access door [8].

ARO 014-999

SUBTASK 54-52-05-000-003

(2) Do these steps to remove the applicable access door:

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ARO 014-999 (Continued)

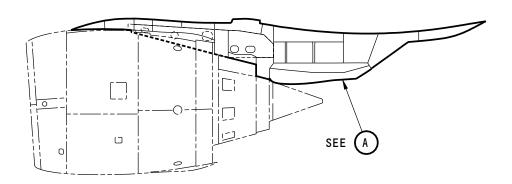
- (a) Hold the open end of the applicable access door.
- (b) Remove the nut and washer, and remove the hex head bolt.
- (c) Disengage the hinge arms on the door from the hinge bases on the aft fairing, and remove the access door [1], access door [2], access door [3], access door [4], access door [5], access door [6], access door [7], or access door [8].

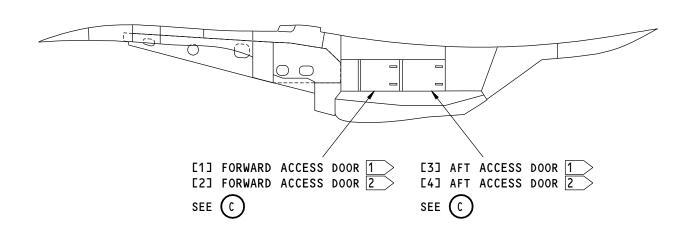
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ARO ALL







AFT FAIRING ACCESS DOORS (LEFT SIDE)

1 LEFT STRUT
2 RIGHT STRUT

E21518 S0006427820_V1

Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 1 of 7)

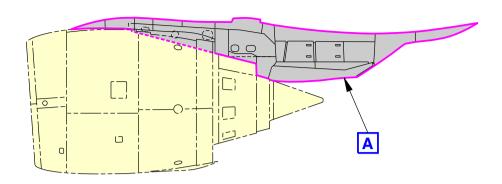
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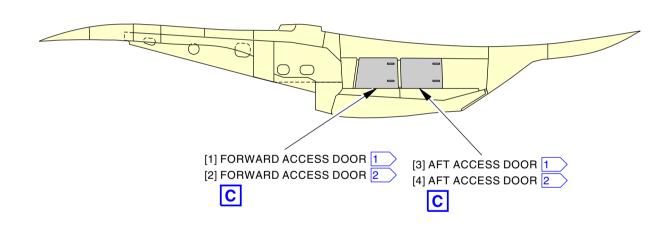
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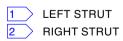






AFT FAIRING ACCESS DOORS (LEFT SIDE)





2438410 S0000565718_V2

Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 2 of 7)

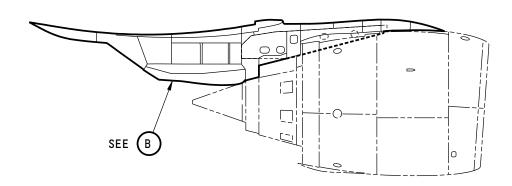
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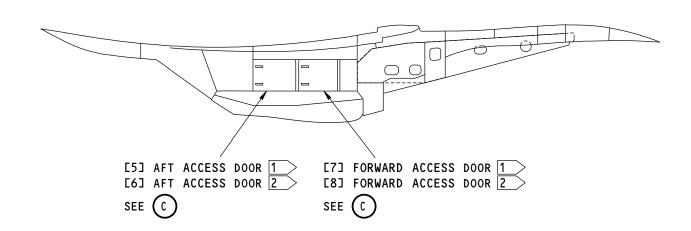
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AFT FAIRING ACCESS DOORS (RIGHT SIDE)

E21523 S0006427824_V1

Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 3 of 7)

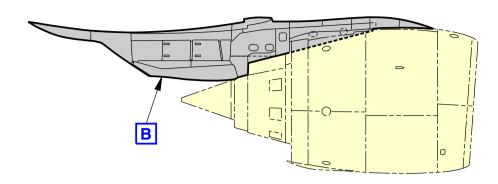
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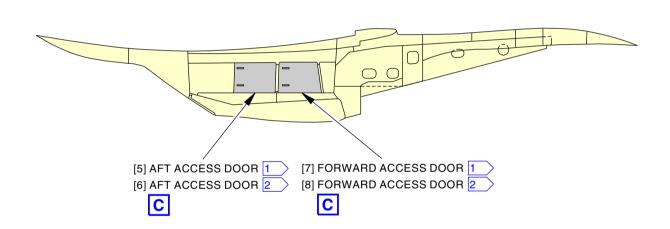
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AFT FAIRING ACCESS DOORS (RIGHT SIDE)



2438420 S0000565719_V2

Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 4 of 7)

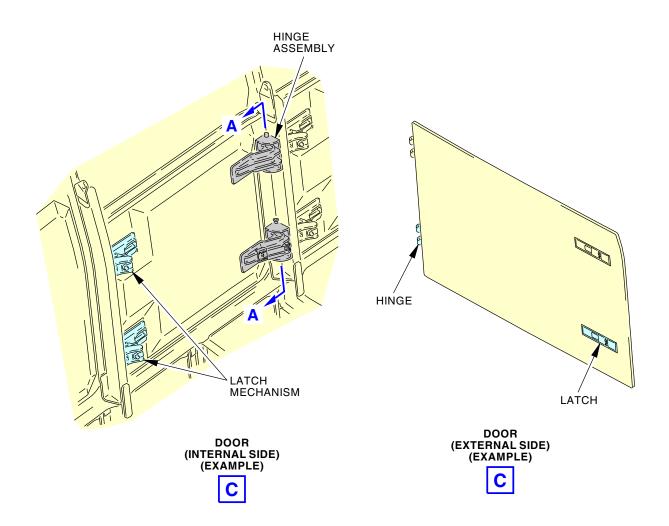
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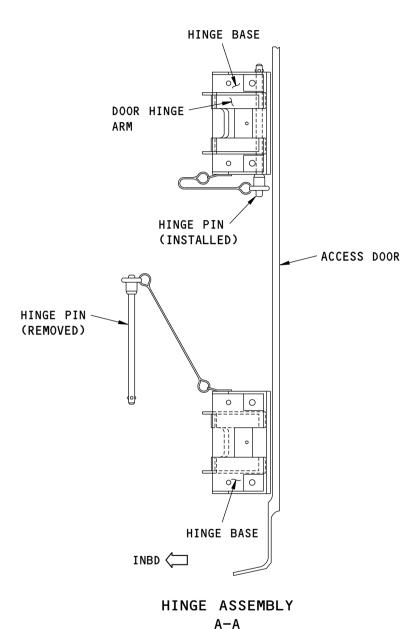
Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 5 of 7)

ARO ALL

54-52-05

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D10567 S0006427828_V1

Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 6 of 7)

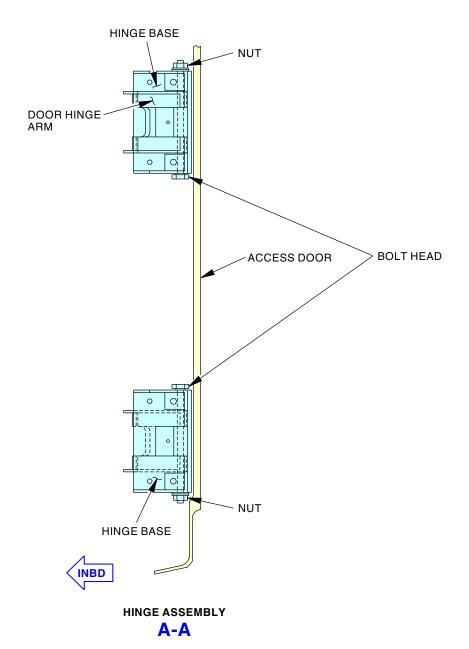
ARO 001-013

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2438425 S0000565720_V2

Aft Fairing Access Doors Installation Figure 401/54-52-05-990-803 (Sheet 7 of 7)

ARO 014-999 l D633W101-ARO 54-52-05

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TASK 54-52-05-400-801

3. Aft Fairing Access Door Installation

(Figure 401)

A. General

(1) This task gives the instructions for the installation of the aft fairing access doors (referred to as the access doors).

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)

C. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

D. Aft Fairing Access Door Installation

ARO 001-013

SUBTASK 54-52-05-400-001

- (1) Do these steps to install the access doors:
 - (a) Put the access door [1], access door [2], access door [3], access door [4], access door [5], access door [6], access door [7], or access door [8] in its position on the aft fairing, and engage the hinge arms on the door with the hinge bases on the aft fairing.
 - (b) Align the holes in the hinge arms with the holes in the hinge bases.
 - (c) Airplanes with button head hinge pins, do these steps:
 - 1) While you push the button on the head of the hinge pin, carefully push the hinge pin completely through the hinge base.
 - 2) When the hinge pin is all the way in the hole release the button and make sure the button on the head of the pin fully releases (comes back out again).
 - (d) Airplanes with hex head hinge bolts, do these steps:
 - 1) Insert the hex head bolt all the way through the hole.
 - 2) Install the washer and self-locking nut on the hex head bolt.

ARO 014-999

SUBTASK 54-52-05-400-003

- (2) Do these steps to install the access doors:
 - (a) Put the access door [1], access door [2], access door [3], access door [4], access door [5], access door [6], access door [7], or access door [8] in its position on the aft fairing, and engage the hinge arms on the door with the hinge bases on the aft fairing.
 - (b) Align the holes in the hinge arms with the holes in the hinge bases.
 - (c) Insert the hex head bolt all the way through the hole.
 - (d) Install the washer and self-locking nut on the hex head bolt.

ARO ALL

ARO ALL



E. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-05-410-001

(1) Close the access doors, (TASK 54-52-05-800-801).

SUBTASK 54-52-05-440-002

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

ARO ALL



AFT FAIRING ACCESS DOORS - ADJUSTMENT/TEST

1. General

- A. This procedure has one task:
 - (1) A check and adjustment of the aft fairing access doors.

TASK 54-52-05-200-801

2. Aft Fairing Access Door Adjustment

(Figure 501)

A. General

- (1) This task gives instructions on how to check and adjust the aft fairing access door latches.
- (2) Each aft fairing has four access doors.
- (3) Each access door has an upper latch and a lower latch.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)
54-52-05-800-801	Aft Fairing Access Doors Operation (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-1557	Gauge - Force
COIVI-1337	Part #: DG-200 Supplier: 92456 Part #: FDIX 100 Supplier: 0BFD9 Part #: FDIX 50 Supplier: 0BFD9 Part #: LG-010 Supplier: 92456 Part #: LG-050 Supplier: 92456 Part #: LG-100 Supplier: 92456 Opt Part #: DPP-500G Supplier: 92456 Opt Part #: DPPH-150 Supplier: 92456 Opt Part #: DPPH-200 Supplier: 92456 Opt Part #: DPPH-50 Supplier: 92456 Opt Part #: DPPH-50 Supplier: 92456 Opt Part #: FDI 100 Supplier: 0BFD9
	Opt Part #: FDI 50 Supplier: 0BFD9
	Opt Part #: FDV 100 Supplier: 0BFD9
	Opt Part #: FDV 50 Supplier: 0BFD9

D. Location Zones

Zone	Area
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Prepare for the Adjustment

SUBTASK 54-52-05-040-003

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

ARO ALL



F. Aft Fairing Access Door Adjustment

SUBTASK 54-52-05-200-001

- (1) Do these steps to check the aft fairing access doors:
 - (a) Make sure the access doors are in the aerodynamic smoothness limits (TASK 54-52-00-910-807-001).
 - (b) Open the applicable aft fairing access door (TASK 54-52-05-800-801).
 - (c) For each latch, use a force gauge, COM-1557, to apply a force to close the latch handle as follows:
 - 1) Apply a force of 30-40 pounds to the latch handle.
 - 2) Apply the force perpendicular to the latch handle.
 - 3) Apply the force 0.50 inches from the end of the latch handle.

SUBTASK 54-52-05-200-002

- (2) If the access door latch handle does not close with 30-40 pounds of force, do these steps to adjust the latch:
 - (a) Adjust the latch keeper nut to increase or decrease the force required to close the latch (Figure 501).
 - (b) Do the force check again until the latch closes with 30-40 pounds of force.

G. Put the Airplane Back to its Usual Condition.

SUBTASK 54-52-05-410-002

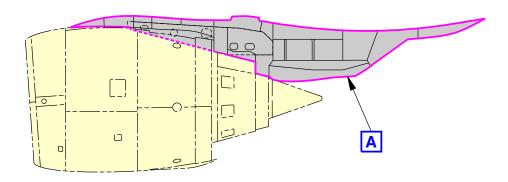
(1) Close the aft fairing access doors (TASK 54-52-05-800-801).

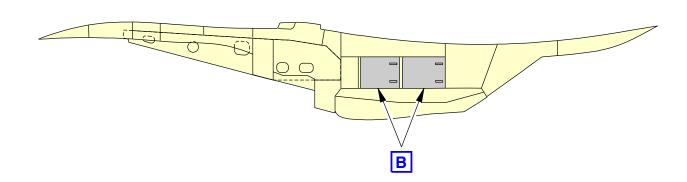
SUBTASK 54-52-05-440-003

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

------ END OF TASK ------







STRUT AFT FAIRING ACCESS DOORS (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



F10996 S0006427843_V2

Aft Fairing Access Doors Figure 501/54-52-05-990-801 (Sheet 1 of 3)

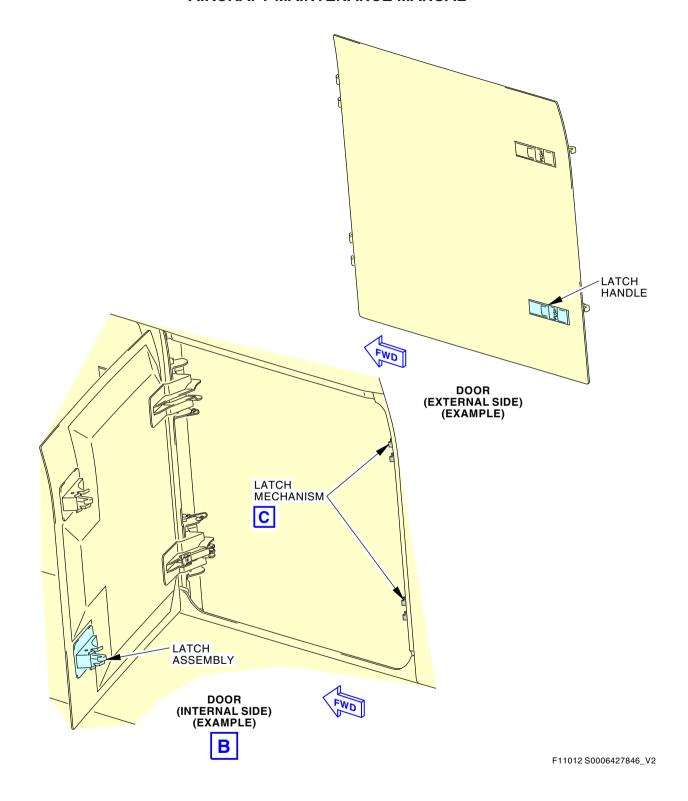
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Aft Fairing Access Doors Figure 501/54-52-05-990-801 (Sheet 2 of 3)

EFFECTIVITY

ARO ALL

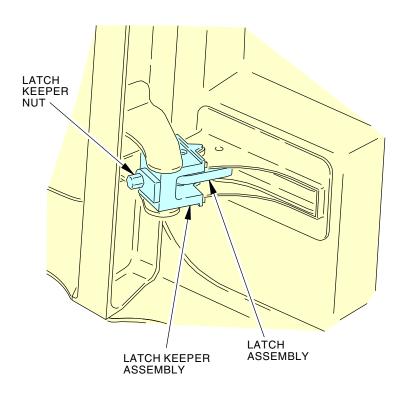
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LATCH MECHANISM (EXAMPLE)



F11056 S0006427847_V2

Aft Fairing Access Doors Figure 501/54-52-05-990-801 (Sheet 3 of 3)

ARO ALL

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D633W101-ARO



AFT FAIRING ACCESS PANELS - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
 - (1) A removal of the aft fairing access panels.
 - (2) An installation of the aft fairing access panels.
- B. See SRM 51-10-08 for missing fastener requirement in wing leading edge panels.

TASK 54-52-06-000-801

2. Aft Fairing Access Panel Removal

(Figure 401)

A. General

- (1) This task gives the instructions on how to remove the access panels on the strut aft fairing.
- (2) Each strut has these access panels on the aft fairing:
 - (a) Two forward access panels (one on each side of the strut).
 - (b) Two aft access panels (one on each side of the strut).

ARO 014-999

- (c) Two forward lower access panels (one on each side of the strut).
- (d) Two aft lower access panels (one on each side of the strut).

ARO ALL

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-52-06-040-004

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

E. Aft Fairing Access Panel Removal

ARO 001-013

SUBTASK 54-52-06-000-016

- (1) Do these steps to remove the forward access panel [1] or forward access panel [7]:
 - (a) Remove the bolt [10] and bolt [9] that attach the forward access panel to the strut aft fairing.
 - (b) Remove the forward access panel [1] or forward access panel [7].

ARO ALL



ARO 014-999

SUBTASK 54-52-06-000-017

- (2) Do these steps to remove the forward access panel [13] or forward access panel [14]:
 - (a) Remove the bolt [10] and bolt [9] that attach the forward access panel to the strut aft fairing.
 - (b) Remove the forward access panel [13] or forward access panel [14].

ARO 001-013

SUBTASK 54-52-06-000-018

- (3) Do these steps to remove the outboard aft access panel [2] or outboard aft access panel [6]:
 - (a) Remove the bolt [10] and bolt [9] that attach the aft access panel to the strut aft fairing.
 - (b) Remove the outboard aft access panel [2] or outboard aft access panel [6].

SUBTASK 54-52-06-000-019

- (4) Do these steps to remove the inboard aft access panel [3] or inboard aft access panel [5]:
 - (a) Remove the bolt [10] and bolt [9] that attach the aft access panel to the strut aft fairing.
 - (b) Remove the inboard aft access panel [3] or inboard aft access panel [5].

ARO 014-999

SUBTASK 54-52-06-000-020

- (5) Do these steps to remove the aft access panel [15] or aft access panel [16]:
 - (a) Remove the bolt [10] and bolt [9] that attach the aft access panel to the strut aft fairing.
 - (b) Remove the inboard aft access panel [15] or inboard aft access panel [16].

SUBTASK 54-52-06-000-021

- (6) Do these steps to remove the forward lower access panel [18] or forward lower access panel [19]:
 - (a) Remove the bolts [20], [21], [22], [23], [24], and collars [25], that attach the forward lower access panel to the strut aft fairing.
 - (b) Remove the forward lower access panel [18] or forward lower access panel [19].

SUBTASK 54-52-06-000-022

- (7) Do these steps to remove the aft lower access panel [28] or aft lower access panel [29]:
 - (a) Remove the bolts [30], [31], [32], [33], [34], [35], and collars [36], that attach the aft lower access panel to the strut aft fairing.
 - (b) Remove the aft lower access panel [28] or aft lower access panel [29].

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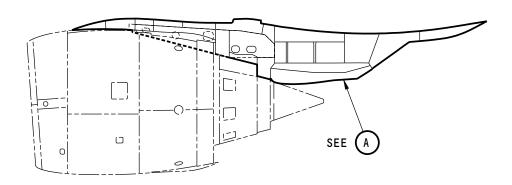
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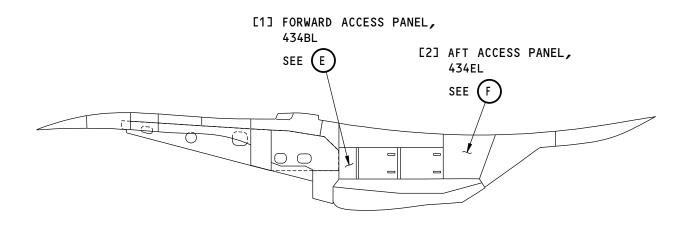
54-52-06

ARO ALL

EFFECTIVITY







LEFT AFT FAIRING ACCESS PANELS (LEFT_SIDE)



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Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 1 of 14)

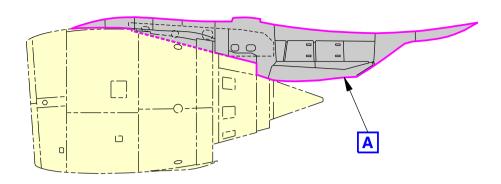
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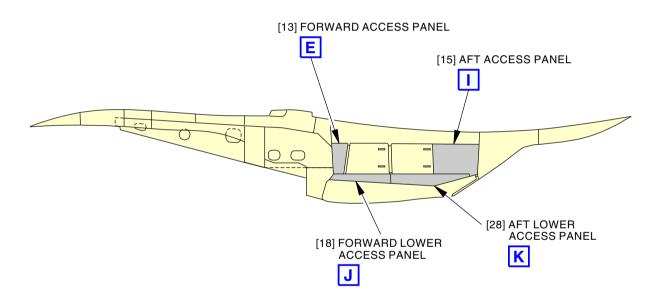
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LEFT AFT FAIRING ACCESS PANELS (LEFT SIDE)



2440676 S0000565802_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 2 of 14)

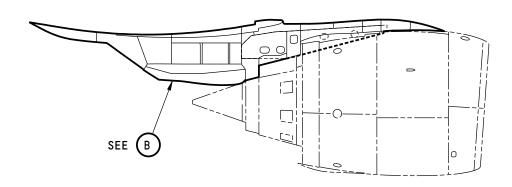
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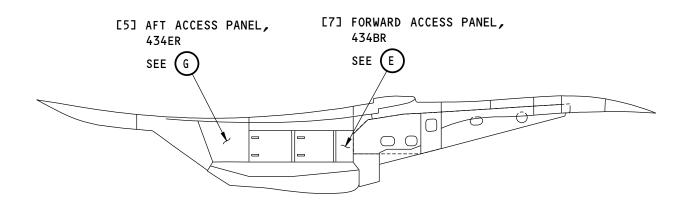
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54-52-06

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LEFT AFT FAIRING ACCESS PANELS (RIGHT SIDE)



E68895 S0006427876_V1

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 3 of 14)

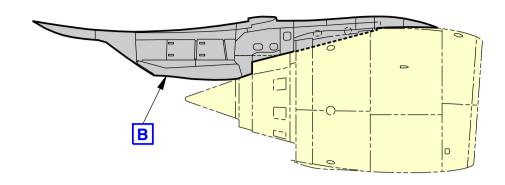
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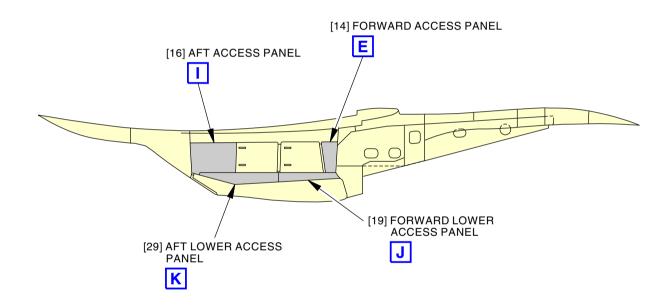
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LEFT AFT FAIRING ACCESS PANELS (RIGHT SIDE)



2440684 S0000565804_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 4 of 14)

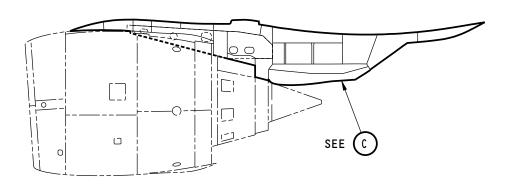
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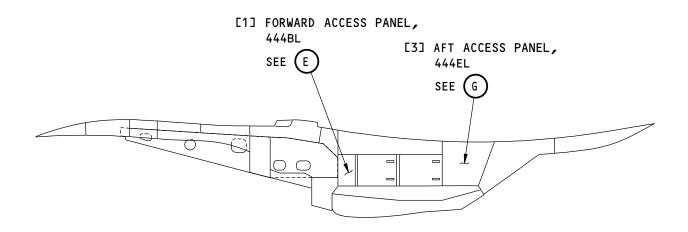
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RIGHT AFT FAIRING ACCESS PANELS (LEFT SIDE)

E68876 S0006427878_V1

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 5 of 14)

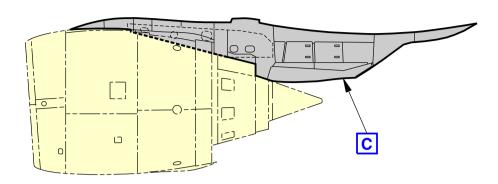
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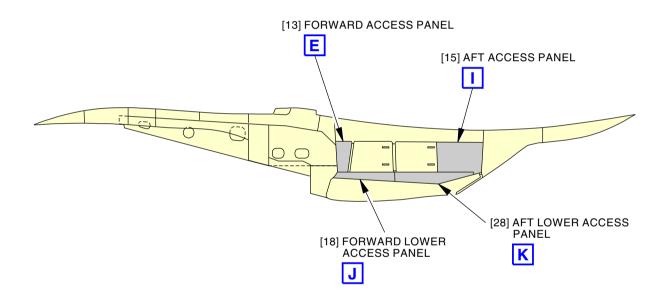
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LEFT AFT FAIRING ACCESS PANELS (LEFT SIDE)



2440693 S0000565807_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 6 of 14)

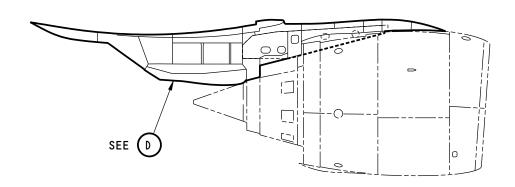
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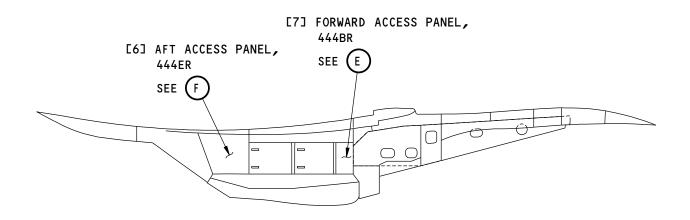
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54-52-06

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RIGHT AFT FAIRING ACCESS PANELS (RIGHT SIDE)



E68887 S0006427880_V1

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 7 of 14)

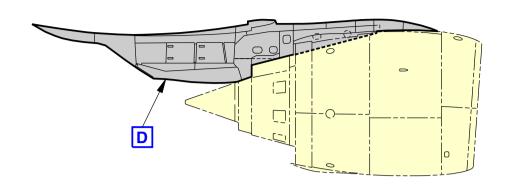
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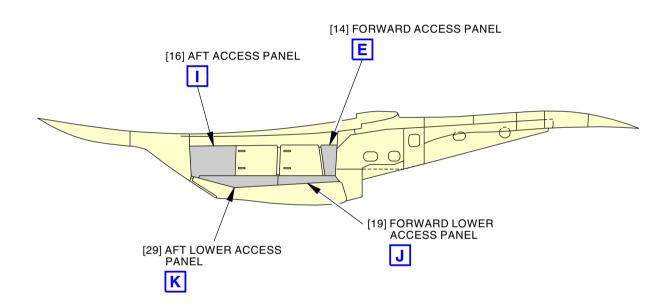
D633W101-ARO

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LEFT AFT FAIRING ACCESS PANELS (RIGHT SIDE)



2440702 S0000565813_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 8 of 14)

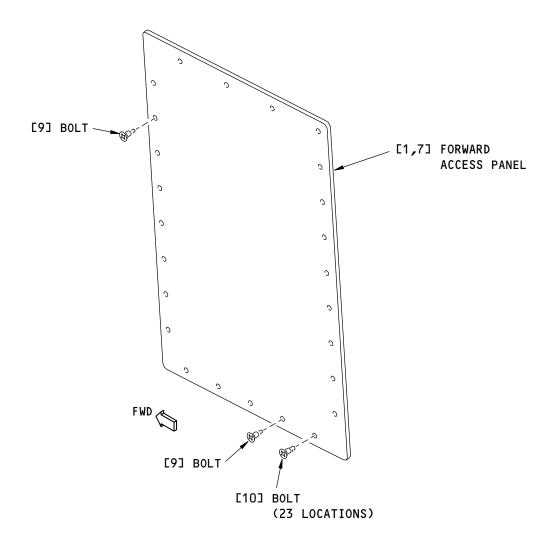
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FORWARD ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



D10311 S0006427886_V1

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 9 of 14)

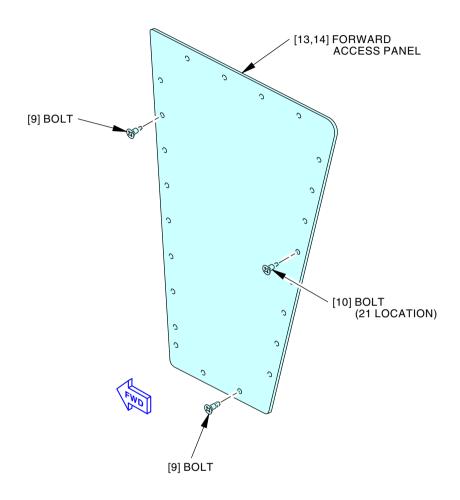
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D633W101-ARO

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FORWARD ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



2440723 S0000565814_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 10 of 14)

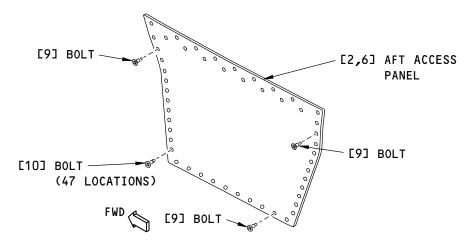
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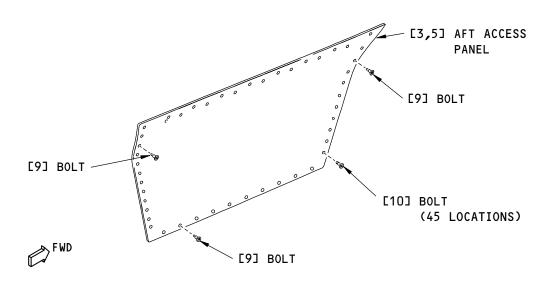
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OUTBOARD AFT ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)





INBOARD AFT ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



D10327 S0006427887_V1

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 11 of 14)

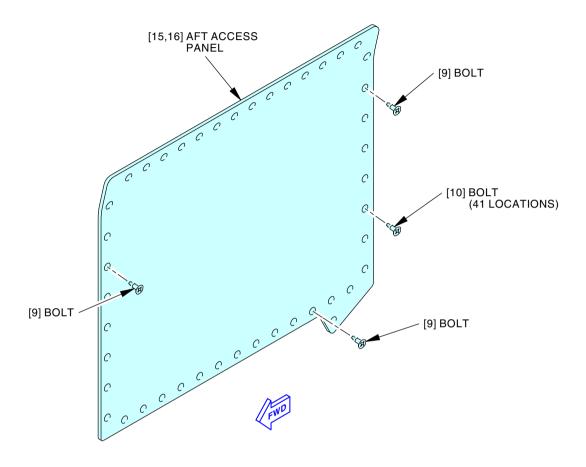
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AFT ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



 $2440726\,S0000565815_V2$

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 12 of 14)

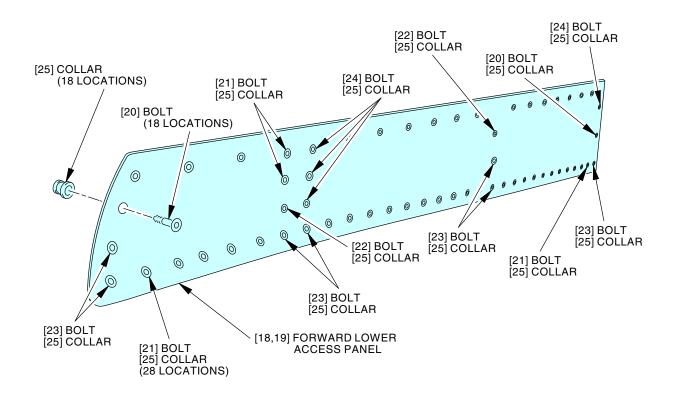
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FORWARD LOWER ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



2440788 S0000566721_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 13 of 14)

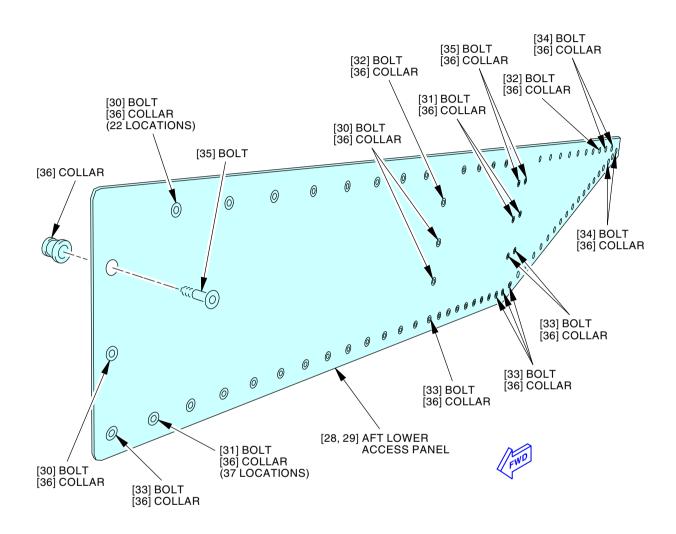
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AFT LOWER ACCESS PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



2440839 S0000566722_V2

Aft Fairing Access Panels Installation Figure 401/54-52-06-990-804 (Sheet 14 of 14)

ARO 014-999

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TASK 54-52-06-400-801

3. Aft Fairing Access Panel Installation

(Figure 401)

A. General

- (1) This task gives the instructions on how to install the access panels on the strut aft fairing.
- (2) Each strut has these access panels on the aft fairing:
 - (a) Two forward access panels (one on each side of the strut).
 - (b) Two aft access panels (one on each side of the strut).

ARO 014-999

- (c) Two forward lower access panels (one on each side of the strut).
- (d) Two aft lower access panels (one on each side of the strut).

ARO ALL

B. References

Reference	Title
51-31-01-160-801	Prepare For Sealing (P/B 201)
51-31-01-390-801	Non-Removable Faying (Mated) Surface Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)

C. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
A00436	Sealant - Fuel Tank	BMS5-45 (Supersedes
		BMS5-26)

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Prepare the Access Panels

SUBTASK 54-52-06-200-001

(1) Do a check of the formed-in-place gasket around the panel opening in the strut side skin.

SUBTASK 54-52-06-390-001

- (2) If the seal around the edge of the panel opening is damaged, do these steps to repair the seal:
 - (a) Prepare the panel and the panel opening for sealing (TASK 51-31-01-160-801).
 - (b) Make a new formed-in-place gasket with sealant, A00436 (TASK 51-31-01-390-801).

F. Access Panel Installation

ARO 001-013

SUBTASK 54-52-06-400-001

(1) Do these steps to install the forward access panel [1] or forward access panel [7]:

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ARO 001-013 (Continued)

- (a) Put the forward access panel [1] or forward access panel [7] in the location on the aft fairing.
- (b) Install the bolt [10] and bolt [9] that attach the access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at the bolt [10] locations.

ARO 014-999

SUBTASK 54-52-06-400-012

- (2) Do these steps to install the forward access panel [13] or forward access panel [14]:
 - (a) Put the forward access panel [13] or forward access panel [14] in the location on the aft fairing.
 - (b) Install the bolt [10] and bolt [9] that attach the access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at the bolt [10] locations.

ARO 001-013

SUBTASK 54-52-06-400-002

- (3) Do these steps to install the aft outboard access panel [2] or aft outboard access panel [6]:
 - (a) Put the aft outboard access panel [2] or aft outboard access panel [6] in the location on the aft fairing.
 - (b) Install the bolt [10] and bolt [9] that attach the access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at the bolt [10] locations.

SUBTASK 54-52-06-400-003

- (4) Do these steps to install the aft inboard access panel [3] or aft inboard access panel [5]:
 - (a) Put the aft inboard access panel [3] or aft inboard access panel [5] in the location on the aft fairing.
 - (b) Install the bolt [10] and bolt [9] that attach the access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at the bolt [10] locations.

ARO 014-999

SUBTASK 54-52-06-400-013

- (5) Do these steps to install the aft access panel [15] or aft access panel [16]:
 - (a) Put the aft access panel [15] or aft access panel [16] in the location on the aft fairing.
 - (b) Install the bolt [10] and bolt [9] that attach the access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at the bolt [10] locations.

SUBTASK 54-52-06-400-014

- (6) Do these steps to install the forward lower access panel [18] or forward lower access panel [19]:
 - (a) Put the forward lower access panel [18] or forward lower access panel [19] in its location on the strut aft fairing.

ARO ALL



ARO 014-999 (Continued)

- (b) Align the holes of the panels with the holes on the strut aft fairing.
- (c) Apply a thin amount of sealant, A00160 into the holes and bolt threads.
- (d) Install the 18 bolts [20], 28 bolts [21], two bolts [22], seven bolts [23], four bolts [24], and collars [25], that attach the forward lower access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at bolt locations not shown in illustration.
 - 1) Tighten the bolts.

SUBTASK 54-52-06-400-015

- (7) Do these steps to install the aft lower access panel [28] or aft lower access panel [29]:
 - (a) Put the aft lower access panel [28] or aft lower access panel [29] in its location on the strut aft fairing.
 - (b) Align the holes of the panels with the holes on the strut aft fairing.
 - (c) Apply a thin amount of sealant, A00160 into the holes and bolt threads.
 - (d) Install the 22 bolts [30], 37 bolts [31], two bolts [32], seven bolts [33], four bolts [34], three bolts [35], and collars [36], that attach the forward lower access panel to the strut aft fairing.
 - NOTE: Make sure you install the bolts at the locations as shown in the illustration. You can not use bolts with alternate grip lengths at bolt locations not shown in illustration.
 - 1) Tighten the bolts.

ARO ALL

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-06-440-001

(1) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

ARO ALL



STRUT TRAILING EDGE - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the strut trailing edge.
 - (2) An installation of the strut trailing edge.

TASK 54-52-07-000-801

2. Strut Trailing Edge Removal

(Figure 401)

A. General

(1) The strut trailing edge is installed under the wing at the aft end of the aft fairing at four attach points, with two on each side.

B. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

C. Prepare for the Removal

SUBTASK 54-52-07-040-001



DO THE DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE FLAPERONS. THE ACCIDENTAL OPERATION OF THE FLAPERONS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (1) Do this step for the deactivation of the flaperons:
 - (a) Put the 3 FLT CONTROL HYD VALVE POWER switches for the wing in the SHUT OFF position.

D. Strut Trailing Edge Removal

SUBTASK 54-52-07-020-001

- (1) Remove the strut trailing edge strut trailing edge [1] or strut trailing edge [2] as follows:
 - (a) Remove the four plugs [3] from the strut trailing edge.
 - (b) Remove the four bolts [4] and four washers [5] that attach the strut trailing edge [1] or strut trailing edge [2] to the support structure under the wing.

NOTE: When you remove the strut trailing edge, the four bushings [6] can fall out and be lost.

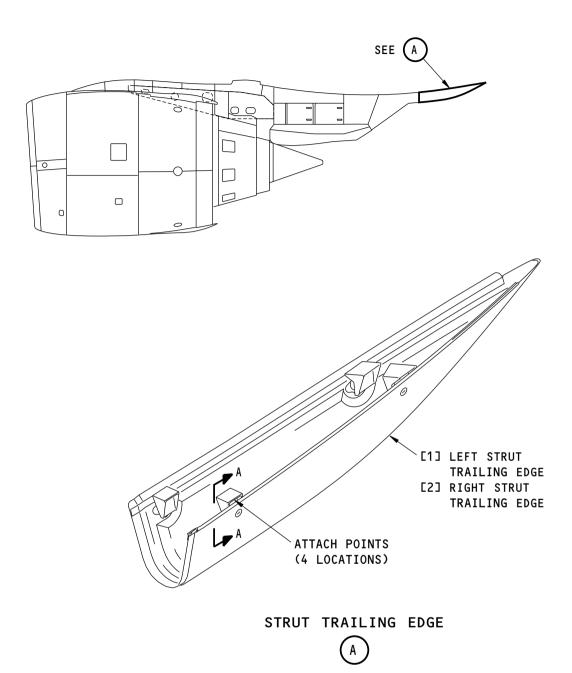
- (c) Remove the strut trailing edge [1] or strut trailing edge [2]:
 - 1) Lower the aft end of the strut trailing edge [1] or strut trailing edge [2] to release the forward end from the aft fairing.
 - 2) Move the strut trailing edge [1] or strut trailing edge [2] aft and remove it.

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NOTE: LEFT STRUT TRAILING EDGE SHOWN,
RIGHT STRUT TRAILING EDGE OPPOSITE.

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Strut Trailing Edge Installation Figure 401/54-52-07-990-801 (Sheet 1 of 3)

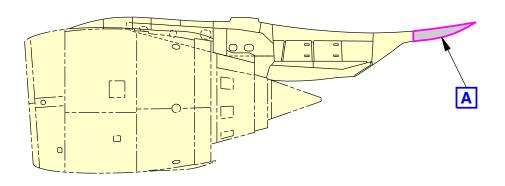
ARO 001-013

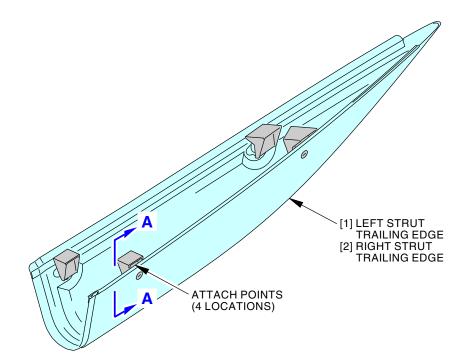
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STRUT TRAILING EDGE



NOTE:

LEFT STRUT TRAILING EDGE SHOWN. RIGHT STRUT TRAILING EDGE OPPOSITE.

2438489 S0000565541_V2

Strut Trailing Edge Installation Figure 401/54-52-07-990-801 (Sheet 2 of 3)

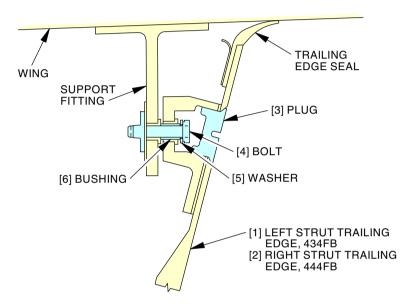
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ATTACH POINT (EXAMPLE)

E03903 S0006427908_V2

Strut Trailing Edge Installation Figure 401/54-52-07-990-801 (Sheet 3 of 3)

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TASK 54-52-07-400-801

3. Strut Trailing Edge Installation

(Figure 401)

A. General

(1) The strut trailing edge is installed under the wing at the aft end of the aft fairing at four attach points, with two on each side.

B. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Strut trailing edge	54-52-04-07D-070	ARO 001-013
2	Strut trailing edge	54-52-04-07D-075	ARO 001-013
3	Plug	54-52-04-14-015	ARO ALL

D. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

E. Strut Trailing Edge Installation

SUBTASK 54-52-07-420-001

- (1) Install the strut trailing edge [1] or strut trailing edge [2]:
 - (a) Make sure the four bushings [6] are installed wet with grease, D00633.
 - (b) Put the strut trailing edge [1] or strut trailing edge [2] under the wing.
 - (c) Install the front of the strut trailing edge [1] or strut trailing edge [2] between the aft end of the aft fairing and the wing.
 - (d) Wet install the four bolts [4] with grease, D00633 and the four washers [5] through the strut trailing edge [1] or strut trailing edge [2], and into the support fittings under the wing.
 - (e) Install the four plugs [3] into the holes in the strut trailing edge [1] or strut trailing edge [2].

F. Put the Airplane Back to Its Usual Condition

SUBTASK 54-52-07-440-001

ARO ALL

- (1) Do this step for the activation of the flaperon:
 - (a) Put the 3 FLT CONTROL HYD VALVE POWER switches for the wing in the NORM position.

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STRUT ACCESS DOORS - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
 - (1) A removal of the strut access doors
 - (2) An installation of the strut access doors.

TASK 54-53-01-000-802-001

2. Strut Access Doors Removal

(Figure 401)

A. General

- (1) This task is the removal procedure for the strut access doors.
- (2) Each strut has eight doors.
 - (a) Five doors are behind the thrust reverser cowls, and it is not necessary that they be in the aerodynamic smoothness limits:
 - 1) 432BL, Left Access Door, Left Strut.
 - 2) 432DR, Right Access Door, Left Strut.
 - 3) 432EL, Left Access Door, Left Strut.
 - 4) 432FR, Right Access Door, Left Strut.
 - 5) 432GL, Left Access Door, Left Strut.
 - 6) 442BL, Left Access Door, Right Strut.
 - 7) 442DR, Right Access Door, Right Strut.
 - 8) 442EL, Left Access Door, Right Strut.
 - 9) 442FR, Right Access Door, Right Strut.
 - 10) 442GL, Left Access Door, Right Strut.
 - (b) Three doors are exposed to the air stream, and they must be in the aerodynamic smoothness limits:
 - 1) 433CL, Left Aft Mount Access Door, Left Strut.
 - 2) 433CR, Right Aft Mount Access Door, Left Strut.
 - 3) 433DL, Left Access Door, Left Strut.
 - 4) 443CL, Left Aft Mount Access Door, Right Strut.
 - 5) 443CR, Right Aft Mount Access Door, Right Strut.
 - 6) 443DL, Left Access Door, Right Strut.
- (3) Each door has captive fasteners, but the fasteners can fall out if the latch bolts are loosened too much.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)

ARO ALL

54-53-01

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C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

E. Prepare for the Removal

SUBTASK 54-53-01-040-002-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-53-01-010-002-001

- (2) For the doors behind the thrust reversers, do these tasks to safely open the thrust reversers:
 - (a) For the left and right fan cowl panels, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

(b) For the left and right thrust reversers, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Strut Access Doors Removal

SUBTASK 54-53-01-020-002-001

(1) Remove the applicable strut access door:



DO NOT USE POWER TOOLS TO REMOVE THE DOORS. DAMAGE TO THE DOORS CAN OCCUR.

ARO ALL

54-53-01

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(CAUTION PRECEDES)



DO NOT CONTINUE TO LOOSEN THE LATCH BOLTS AFTER THE INDICATORS HAVE TURNED. IF YOU DO, THE LATCH BOLTS AND LATCH CAN FALL OUT.

- (a) Loosen the latch bolts with a handtool until the slots in the indicators turn approximately 90 degrees counterclockwise from the closed position.
- (b) Remove the applicable strut access door.

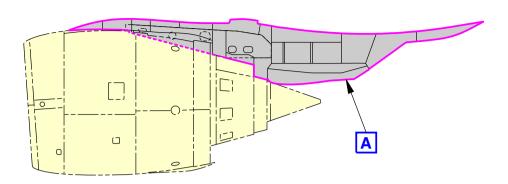
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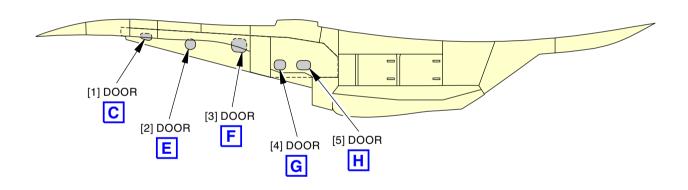
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STRUT ACCESS DOORS (LEFT SIDE)



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Strut Access Door Installation Figure 401/54-53-01-990-802-001 (Sheet 1 of 5)

EFFECTIVITY

ARO ALL

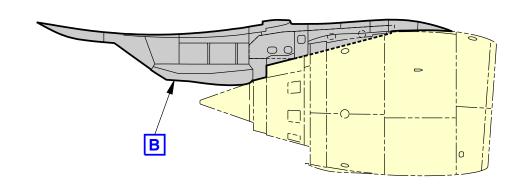
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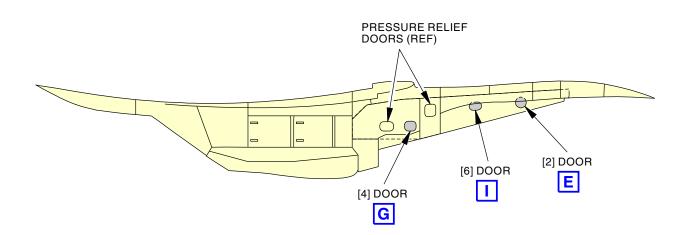
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STRUT ACCESS DOORS (RIGHT SIDE)



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Strut Access Door Installation Figure 401/54-53-01-990-802-001 (Sheet 2 of 5)

EFFECTIVITY

ARO ALL

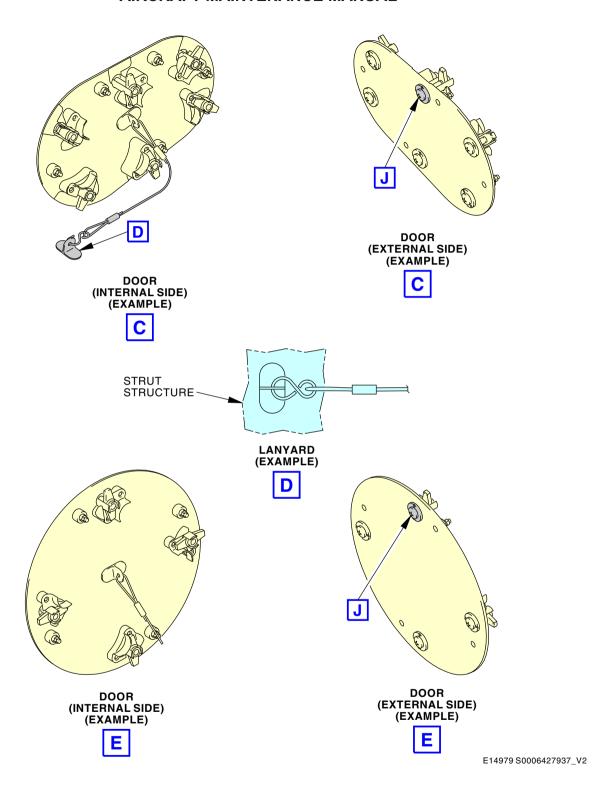
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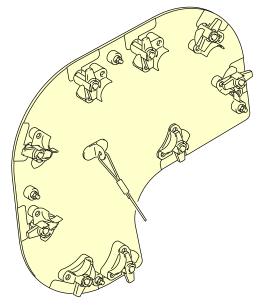
Strut Access Door Installation Figure 401/54-53-01-990-802-001 (Sheet 3 of 5)

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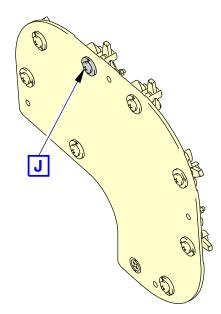
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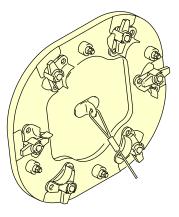




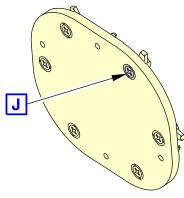
DOOR (INTERNAL SIDE) (EXAMPLE)



DOOR (EXTERNAL SIDE) (EXAMPLE)



DOOR (INTERNAL SIDE) (EXAMPLE)



DOOR (EXTERNAL SIDE) (EXAMPLE)

E14981 S0006427938_V2

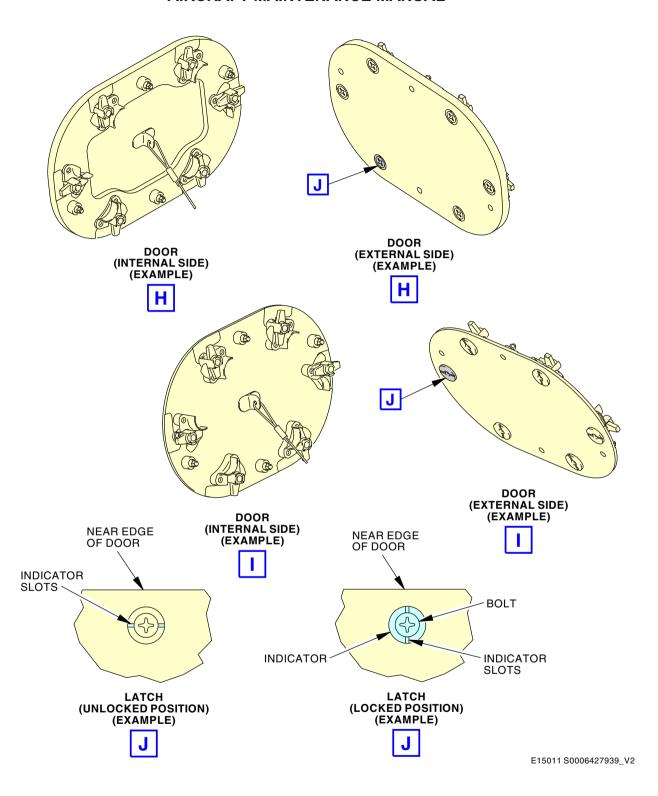
Strut Access Door Installation Figure 401/54-53-01-990-802-001 (Sheet 4 of 5)

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54-53-01

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Strut Access Door Installation Figure 401/54-53-01-990-802-001 (Sheet 5 of 5)

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54-53-01

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TASK 54-53-01-400-802-001

3. Strut Access Doors Installation

(Figure 401)

A. General

- (1) This task is the installation procedure for the strut access doors.
- (2) Each strut has eight doors.
 - (a) Five doors are behind the thrust reverser cowls, and it is not necessary that they be in the aerodynamic smoothness limits:
 - 1) 432BL, Left Access Door, Left Strut.
 - 2) 432DR, Right Access Door, Left Strut.
 - 3) 432EL, Left Access Door, Left Strut.
 - 4) 432FR, Right Access Door, Left Strut.
 - 5) 432GL, Left Access Door, Left Strut.
 - 6) 442BL, Left Access Door, Right Strut.
 - 7) 442DR, Right Access Door, Right Strut.
 - 8) 442EL, Left Access Door, Right Strut.
 - 9) 442FR, Right Access Door, Right Strut.
 - 10) 442GL, Left Access Door, Right Strut.
 - (b) Three doors are exposed to the air stream, and they must be in the aerodynamic smoothness limits:
 - 1) 433CL, Left Aft Mount Access Door, Left Strut.
 - 2) 433CR, Right Aft Mount Access Door, Left Strut.
 - 3) 433DL, Left Access Door, Left Strut.
 - 4) 443CL, Left Aft Mount Access Door, Right Strut.
 - 5) 443CR, Right Aft Mount Access Door, Right Strut.
 - 6) 443DL, Left Access Door, Right Strut.
- (3) Each door has captive fasteners, but the fasteners can fall out if the latch bolts are loosened too much.

B. References

Reference	Title
51-31-01-160-801	Prepare For Sealing (P/B 201)
51-31-01-390-801	Non-Removable Faying (Mated) Surface Seal Application (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)

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C. Consumable Materials

Reference	Description	Specification
A00900	Sealant - Silicone, RTV - Dow Corning 93-006-1RF (Formerly 93-006-1. Use until Stock depleted)	

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Prepare for the Installation

SUBTASK 54-53-01-210-001-001

(1) Examine the formed-in-place gasket around the door opening in the strut side skin.

SUBTASK 54-53-01-390-002-001

- (2) If the seal around the edge of the door opening is damaged, do these steps to repair the seal:
 - (a) To prepare the door and the door opening for sealing, do this task: Prepare For Sealing, TASK 51-31-01-160-801.
 - (b) To make a new formed-in-place gasket with Dow Corning 93-006-1 RF sealant, A00900, do this task: Non-Removable Faying (Mated) Surface Seal Application, TASK 51-31-01-390-801.

G. Strut Access Doors Installation

SUBTASK 54-53-01-400-003-001

(1) Install the applicable access door with the captive latch bolts as follows:



- (a) Tighten the latch bolts to 20-40 pound-inches (2.3-4.5 Nm) with a handtool only.
- (b) Make sure you turn the indicator slots until the indicator slots are approximately perpendicular to the edge of the door nearest the latch bolt.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-53-01-410-002-001

(1) For the doors behind the thrust reversers, do these tasks to safely close the thrust reversers:

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(a) For the left and right thrust reversers, do this task:

Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

(b) For the left and right fan cowl panels, do this task:

Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-53-01-210-002-001

(2) For the doors which are exposed to the airstream, do this task: Aerodynamic Smoothness Requirements, TASK 54-52-00-910-807-001.

SUBTASK 54-53-01-440-002-001

(3) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

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STRUT FAIRINGS - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the strut fairings.
 - (2) An installation of the strut fairings.

TASK 54-53-02-000-801-001

2. Strut Fairings Removal

(Figure 401)

A. General

- (1) This task is the removal of the strut fairings.
- (2) Each strut has two fairings.
 - (a) 433EL, Left Aft Cowl Forward Fairing, Left Strut.
 - (b) 433ER, Right Aft Cowl Forward Fairing, Left Strut.
 - (c) 443EL, Left Aft Cowl Forward Fairing, Right Strut.
 - (d) 443ER, Right Aft Cowl Forward Fairing, Right Strut.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-53-02-040-001-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

E. Strut Fairings Removal

SUBTASK 54-53-02-000-001-001



DO NOT USE POWER TOOLS TO REMOVE THE FAIRINGS. DAMAGE TO THE FAIRINGS CAN OCCUR.

(1) Remove the 15 bolts [1] which hold the aft cowl forward fairing in its position.

SUBTASK 54-53-02-000-002-001

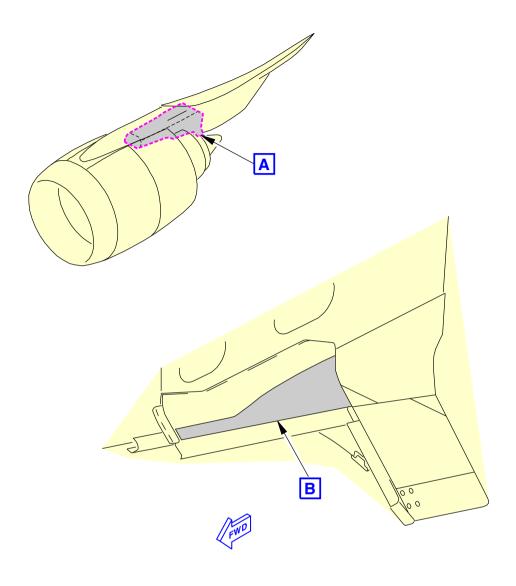
(2) Remove the aft cowl fairing [2] or aft cowl fairing [3].

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AFT COWL FORWARD FAIRING (LEFT SIDE SHOWN RIGHT SIDE OPPOSITE)



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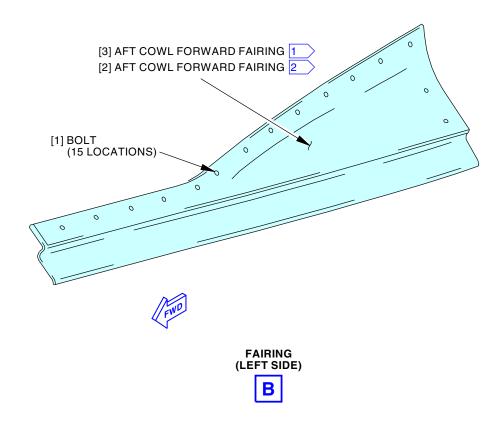
Strut Fairing Installation Figure 401/54-53-02-990-801-002 (Sheet 1 of 2)

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1 LEFT SIDE 2 RIGHT SIDE

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Strut Fairing Installation Figure 401/54-53-02-990-801-002 (Sheet 2 of 2)

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TASK 54-53-02-400-801-001

3. Strut Fairings Installation

(Figure 401)

A. General

- (1) This task is the installation of the strut fairings.
- (2) Each strut has two fairings.
 - (a) 433EL, Left Aft Cowl Forward Fairing, Left Strut.
 - (b) 433ER, Right Aft Cowl Forward Fairing, Left Strut.
 - (c) 443EL, Left Aft Cowl Forward Fairing, Right Strut.
 - (d) 443ER, Right Aft Cowl Forward Fairing, Right Strut.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Strut Fairings Installation

SUBTASK 54-53-02-400-001-001

(1) Put the aft cowl fairing [2] or aft cowl fairing [3] in its position.

SUBTASK 54-53-02-420-001-001



DO NOT USE POWER TOOLS TO INSTALL THE FAIRINGS. DAMAGE TO THE FAIRINGS CAN OCCUR.

- (2) Install the 15 bolts [1].
 - (a) Tighten the bolts with a hand tool only.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 54-53-02-440-002-001

(1) Make sure the aft cowl fairings are in the aerodynamic smoothness limits (TASK 54-52-00-910-807-001).

SUBTASK 54-53-02-440-001-001

(2) If you will do no more maintenance operations on the strut, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

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EFFECTIVITY — 54-53-02



STRUT PRESSURE RELIEF DOOR LATCHES - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
 - (1) A removal of the strut pressure relief door latches.
 - (2) An installation of the strut pressure relief door latches.

TASK 54-53-03-000-803-001

2. Strut Pressure Relief Door Latch Removal

(Figure 401)

A. General

- (1) This task is the removal procedure for the strut pressure relief door latches.
- (2) Each strut has two pressure relief door latches on the right side of the strut:
 - (a) One forward pressure relief door latch.
 - (b) One aft pressure relief door latch.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Prepare for the Removal

SUBTASK 54-53-03-040-003-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-53-03-010-002-001

(2) Open the applicable pressure relief door.

E. Strut Pressure Relief Door Latch Removal

SUBTASK 54-53-03-000-003-001

- (1) Do these steps to remove the forward pressure relief door latch [4]:
 - (a) Remove the four nuts [3], four washers [2], and four bolts [1] which attach the latch to the door.
 - (b) Remove the forward pressure relief door latch [4].
 - (c) If you find shims between the door and the latch, keep the shims with the door.

SUBTASK 54-53-03-000-004-001

- (2) Do these steps to remove the aft pressure relief door latch [4]:
 - (a) Remove the four nuts [3], four washers [2], and four bolts [1] which attach the latch to the door.
 - (b) Remove the forward pressure relief door latch [4].

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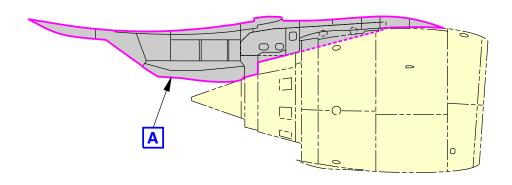


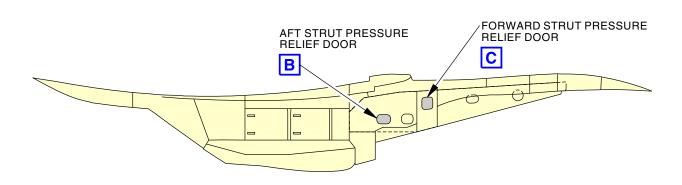
(c)	If you find shims between the door and the latch, keep the shims with the door.
	END OF TASK

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STRUT PRESSURE RELIEF DOORS



NOTE:

THE LEFT STRUT IS SHOWN, THE RIGHT STRUT IS EQUIVALENT.

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Strut Pressure Relief Door Latch Installation Figure 401/54-53-03-990-804-001 (Sheet 1 of 3)

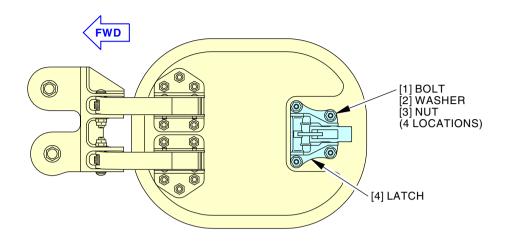
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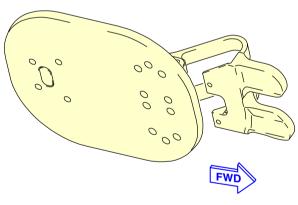
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AFT STRUT PRESSURE RELIEF DOOR (INTERNAL SIDE)





AFT STRUT PRESSURE RELIEF DOOR (EXTERNAL SIDE)



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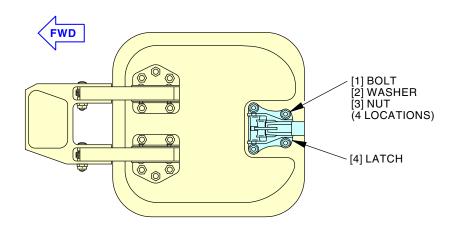
Strut Pressure Relief Door Latch Installation Figure 401/54-53-03-990-804-001 (Sheet 2 of 3)

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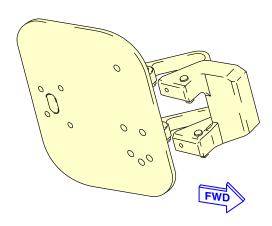
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FORWARD STRUT PRESSURE RELIEF DOOR (INTERNAL SIDE)





FORWARD STRUT PRESSURE RELIEF DOOR (EXTERNAL SIDE)



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Strut Pressure Relief Door Latch Installation Figure 401/54-53-03-990-804-001 (Sheet 3 of 3)

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TASK 54-53-03-000-804-001

3. Strut Pressure Relief Door Latch Installation

(Figure 401)

A. General

- (1) This task is the installation procedure for the strut pressure relief door latches.
- (2) Each strut has two pressure relief door latches on the right side of the strut:
 - (a) One forward pressure relief door latch.
 - (b) One aft pressure relief door latch.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-00-910-807-001	Aerodynamic Smoothness Requirements (P/B 201)
54-53-03-200-801	Strut Pressure Relief Door Latch Test (P/B 501)

C. Consumable Materials

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion	BMS10-79 Type III
	Resistant (Less Than 1% Aromatic Amines)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Latch	54-53-03-01-050	ARO ALL
		54-53-03-01-380	ARO ALL

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Strut Pressure Relief Door Latch Installation

SUBTASK 54-53-03-400-004-001

- (1) Do these steps to install the forward pressure relief door latch [4]:
 - (a) Install the forward pressure relief door latch [4] so that the holes in the latch align with the holes in the door.
 - (b) If you found shims when you removed the latch, install the shims between the door and the latch.
 - (c) Install the four bolts [1] with wet primer, C00175.
 - (d) Install the four washers [2], and four nuts [3].
 - (e) Tighten the four nuts [3] to 12-15 pound-inches.

SUBTASK 54-53-03-400-005-001

- (2) Do these steps to install the aft pressure relief door latch [4]:
 - (a) Install the aft pressure relief door latch [4] so that the holes in the latch align with the holes in the door.

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- (b) If you found shims when you removed the latch, install the shims between the door and the latch.
- (c) Install the four bolts [1] with wet primer, C00175.
- (d) Install the four washers [2], and four nuts [3].
- (e) Tighten the four nuts [3] to 12-15 pound-inches.

G. Installation Test

SUBTASK 54-53-03-200-005-001

(1) Make sure the doors open and close smoothly.

SUBTASK 54-53-03-200-006-001

(2) Do this task: Strut Pressure Relief Door Latch Test, TASK 54-53-03-200-801.

SUBTASK 54-53-03-200-007-001

(3) Make sure the doors are in the aerodynamic smoothness limits (TASK 54-52-00-910-807-001).

H. Put the Airplane Back to its Usual Condition

SUBTASK 54-53-03-410-003-001

(1) Close all of the pressure relief doors.

SUBTASK 54-53-03-440-003-001

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

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STRUT PRESSURE RELIEF DOOR LATCHES - ADJUSTMENT/TEST

1. General

- A. This procedure has one task:
 - (1) A test of the strut pressure relief door latches.

TASK 54-53-03-200-801

2. Strut Pressure Relief Door Latch Test

(Figure 501)

A. General

- (1) This task is a test for the strut pressure relief door latches.
- (2) Each strut has two pressure relief doors on the right side of the strut:
 - (a) One forward pressure relief door.
 - (b) One aft pressure relief door.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-53-03-000-803-001	Strut Pressure Relief Door Latch Removal (P/B 401)
54-53-03-000-804-001	Strut Pressure Relief Door Latch 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
SPL-4410	Adapter Equipment - Load Test, Pressure Relief Door Latch
	Part #: B71044-28 Supplier: 81205
	Opt Part #: B71044-10 Supplier: 81205

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Prepare for the Test

SUBTASK 54-53-03-040-002

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-53-03-480-001

(2) Prepare the adapter equipment, SPL-4410 to test the strut pressure relief door latch, .

F. Strut Pressure Relief Door Latch Test

SUBTASK 54-53-03-700-001

(1) Do a test of the latches on the pressure relief door.

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- (a) Attach the adapter equipment, SPL-4410 adapter assembly to the pressure relief door latch with two screws, washers and nuts finger tight.
- (b) Attach the pivot support assembly and torque wrench to the adapter assembly.
- (c) With the torque wrench handle parallel to the door edge, turn the handle until the latch releases, noting the torque required.

NOTE: Apply a perpendicular force until the pressure relief door opens.

SUBTASK 54-53-03-200-004

- (2) Compare the torque just noted with the requirements (below).
 - NOTE: The adapter/pivot tool will apply a torque value that is two times the load necessary to open the latch. To apply a latch opening load of 50 lbf (222 N), set the torque wrench to 100 in-lb (11 N·m).
 - (a) For each pressure relief door, make sure the latch opens immediately when you apply a force of 135-165 pounds to the door.

SUBTASK 54-53-03-400-003

(3) If the latch is defective, replace the latch.

These are the tasks:

Strut Pressure Relief Door Latch Removal, TASK 54-53-03-000-803-001,

Strut Pressure Relief Door Latch Installation, TASK 54-53-03-000-804-001.

G. Put the Airplane Back to its Usual Condition.

SUBTASK 54-53-03-080-001

(1) Remove the adapter equipment, SPL-4410 from the pressure relief door.

SUBTASK 54-53-03-410-002

(2) Make sure you close all of the pressure relief doors.

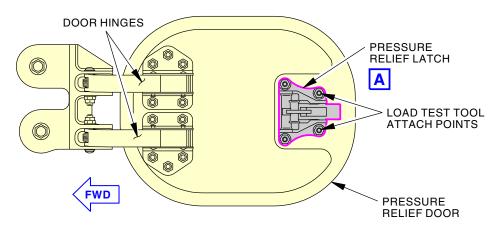
SUBTASK 54-53-03-440-002

(3) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

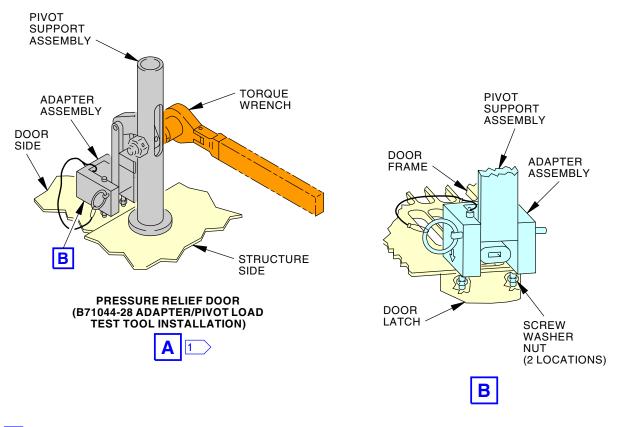
----- END OF TASK -----

54-53-03





HINGED PRESSURE RELIEF DOOR (EXAMPLE)



STRUT PRESSURE RELIEF DOOR SHOWN IS FOR REFERENCE ONLY TO SHOW TOOL INSTALLATION (REFER TO 777 AMM 54-53-03/401).

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Pressure Relief Door Latch Test Figure 501/54-53-03-990-801 (Sheet 1 of 2)

EFFECTIVITY

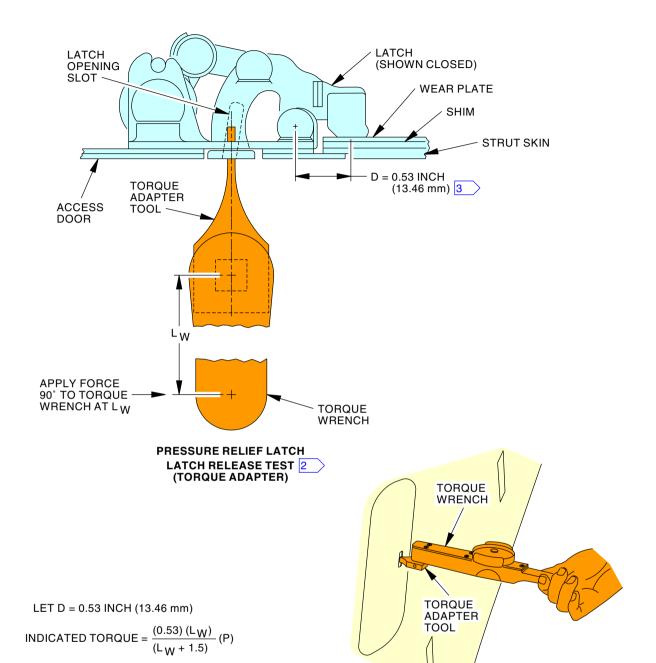
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DOORS WITH PERMANENT FASTENERS, AND ALTERNATE TOOL FOR DOORS WITH REMOVABLE FASTENERS.

MEASURE THE DISTANCE "D" TO CHECK THAT IT IS 0.53 INCH (13.46 mm).

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Pressure Relief Door Latch Test Figure 501/54-53-03-990-801 (Sheet 2 of 2)

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STRUT FIRE SEAL AND FIREWALL - INSPECTION/CHECK

1. General

- A. This procedure has this task:
 - (1) An examination of the strut fire seal and firewall.

TASK 54-54-00-200-802-001

2. Strut Fireseal and Firewall Examination

(Figure 601)

A. General

- (1) This task examines the strut fire seal and firewall.
- (2) The strut fire seal makes a seal between the side of the strut and the thrust reversers.
- (3) The firewall prevents damage to the bottom of the strut, caused by too much heat.
- (4) This task has these steps:
 - (a) Get access to the strut fire seal and firewall.
 - (b) Examine the fire seal and firewall for damage.
 - (c) Close access to the fire seal and firewall.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-53-01-000-802-001	Strut Access Doors Removal (P/B 401)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)
54-54-01-000-803-001	Strut Forward Thermal Blanket Removal (P/B 401)
54-54-01-000-804-001	Strut Mid Thermal Blanket Removal (P/B 401)
54-54-01-000-805-001	Strut Aft Thermal Blanket Removal (P/B 401)
54-54-01-400-803-001	Strut Forward Thermal Blanket Installation (P/B 401)
54-54-01-400-804-001	Strut Mid Thermal Blanket Installation (P/B 401)
54-54-01-400-805-001	Strut Aft Thermal Blanket Installation (P/B 401)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)
78-31-01-300-823-H00	Temporary Repair of the Thrust Reverser Metal-Faced Thermal Insulation Blankets (P/B 801)

C. Tools/Equipment

Reference	Description
STD-1081	Flashlight - Explosion Proof

D. Location Zones

Zone	Area
410	PowerPlant, Left

ARO ALL

54-54-00



(Continued)

Zone	Area
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
432BL	Left Access Door, Left Strut
432DR	Right Access Door, Left Strut
432FR	Right Access Door, Left Strut
432GL	Left Access Door, Left Strut
433BR	Pressure Relief Door, Left Strut
433CL	Left Pressure Relief Door, Left Strut
433CR	Right Aft Mount Access Panel, Left Strut
433DL	Left Aft Mount Access Panel, Left Strut
433DR	Right Pressure Relief Door, Left Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut
442BL	Left Access Door, Right Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut
442FR	Right Access Door, Right Strut
442GL	Left Access Door, Right Strut
443BR	Right Strut Pressure Relief Door
443CL	Left Pressure Relief Door, Right Strut
443CR	Right Aft Mount Access Panel, Right Strut
443DL	Left Aft Mount Access Panel, Right Strut
443DR	Right Pressure Relief Door, Right Strut
Propare fo	or the Evamination

F. Prepare for the Examination

SUBTASK 54-54-00-040-002-001

 $(1) \quad \hbox{Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002}.$

SUBTASK 54-54-00-010-002-001

(2) Open the applicable access doors and panels as follows:

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54-54-00



(a) To remove the applicable forward fairings, do this task:
 Forward Fairings Removal, TASK 54-52-01-000-801-001

<u>Number</u>	Name/Location
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut

(b) To remove the applicable strut access doors, do this task: Strut Access Doors Removal, TASK 54-53-01-000-802-001

Number Name/Location

Nullibel	Name/Location
432BL	Left Access Door, Left Strut
432DR	Right Access Door, Left Strut
432FR	Right Access Door, Left Strut
432GL	Left Access Door, Left Strut
433CL	Left Pressure Relief Door, Left Strut
433CR	Right Aft Mount Access Panel, Left Strut
433DL	Left Aft Mount Access Panel, Left Strut
442BL	Left Access Door, Right Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut
442FR	Right Access Door, Right Strut
442GL	Left Access Door, Right Strut
443CL	Left Pressure Relief Door, Right Strut
443CR	Right Aft Mount Access Panel, Right Strut
443DL	Left Aft Mount Access Panel, Right Strut

(c) Open the applicable strut pressure relief doors:

<u>Number</u>	Name/Location
433BR	Pressure Relief Door, Left Strut
433DR	Right Pressure Relief Door, Left Strut
443BR	Right Strut Pressure Relief Door
443DR	Right Pressure Relief Door, Right Strut

(d) To open the applicable fan cowl panels, do this task:

Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00

Э

(e) To open the applicable thrust reverser panels, do this task:

Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

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G. Strut Fire Seal and Firewall Examination

SUBTASK 54-54-00-210-005-001

(1) Examine the fire seal for gaps or damage. Make sure the fire seal parts are not loose, damaged, or missing.

SUBTASK 54-54-00-210-006-001

(2) Examine the firewall structure for cracks, nicks, dents, distortion, or other damage.

SUBTASK 54-54-00-210-007-004

- (3) With a explosion proof flashlight, STD-1081, look inside the strut to examine the upper surface of the firewall.
 - (a) Make sure the surface is clean, and that the strut drains are not blocked or clogged.

SUBTASK 54-54-00-210-008-001

- (4) Examine the firewall insulation blankets on the bottom of the strut.
 - (a) Make sure the thermal blankets are not loose, damaged, or missing.
 - (b) If a thermal blanket on the bottom of the strut is damaged, replace or repair the blanket.
 - 1) To replace the forward blanket,

These are the tasks:

Strut Forward Thermal Blanket Removal, TASK 54-54-01-000-803-001,

Strut Forward Thermal Blanket Installation, TASK 54-54-01-400-803-001.

2) To replace the mid blanket,

These are the tasks:

Strut Mid Thermal Blanket Removal, TASK 54-54-01-000-804-001,

Strut Mid Thermal Blanket Installation, TASK 54-54-01-400-804-001.

3) To replace the aft blanket,

These are the tasks:

Strut Aft Thermal Blanket Removal, TASK 54-54-01-000-805-001.

Strut Aft Thermal Blanket Installation, TASK 54-54-01-400-805-001.

4) To repair the blanket, do this task: Temporary Repair of the Thrust Reverser Metal-Faced Thermal Insulation Blankets, TASK 78-31-01-300-823-H00.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-00-100-002-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Remove all unwanted materials from the strut compartments.

SUBTASK 54-54-00-410-002-001

- (2) Do these steps to close the access doors and panels:
 - (a) To close the thrust reversers, do this task:

Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00

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<u>ition</u>
Reverser, Left Engine
t Reverser, Left Engine
Reverser, Right Engine
t Reverser, Right Engine

(b) To close the fan cowl panels, do this task:

Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

(c) Close the strut pressure relief doors:

<u>Number</u>	Name/Location
433BR	Pressure Relief Door, Left Strut
433DR	Right Pressure Relief Door, Left Strut
443BR	Right Strut Pressure Relief Door
443DR	Right Pressure Relief Door, Right Strut

(d) To install the strut access doors, do this task:

Strut Access Doors Installation, TASK 54-53-01-400-802-001

<u>Number</u>	Name/Location
432BL	Left Access Door, Left Strut
432DR	Right Access Door, Left Strut
432FR	Right Access Door, Left Strut
432GL	Left Access Door, Left Strut
433CL	Left Pressure Relief Door, Left Strut
433CR	Right Aft Mount Access Panel, Left Strut
433DL	Left Aft Mount Access Panel, Left Strut
442BL	Left Access Door, Right Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut
442FR	Right Access Door, Right Strut
442GL	Left Access Door, Right Strut
443CL	Left Pressure Relief Door, Right Strut
443CR	Right Aft Mount Access Panel, Right Strut
443DL	Left Aft Mount Access Panel, Right Strut

(e) To install the forward fairings, do this task:

Forward Fairings Installation, TASK 54-52-01-400-801-001

Number	Name/Location
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut

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SUBTASK	54-54-00-440	-002-001

(3)	If you will do no more maintenance operations, do this task: Put the Strut Back to its Usua
	Condition, TASK 54-51-01-440-802-002.

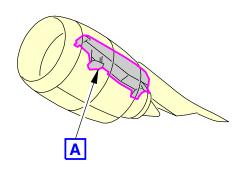
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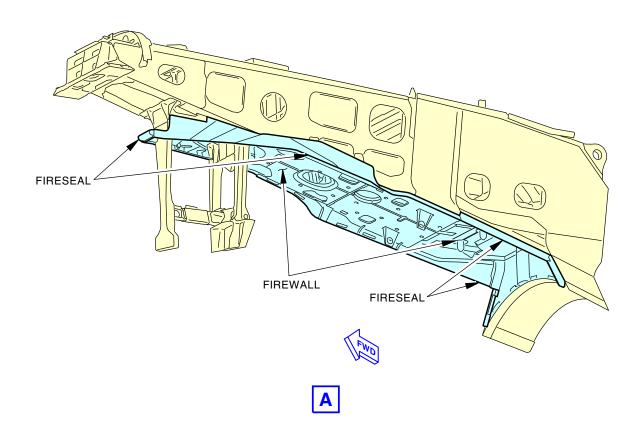
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Strut Fireseal and Firewall Inspection Figure 601/54-54-00-990-801-001

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THERMAL BLANKET - REMOVAL/INSTALLATION

1. General

- A. This procedure gives the instructions for the removal/installation of the strut thermal blankets.
- B. This procedure has these tasks:
 - (1) A removal of the strut forward thermal blankets.
 - (2) A removal of the strut mid thermal blankets.
 - (3) A removal of the strut aft thermal blankets.
 - (4) A removal of the aft fairing heatshield thermal blankets.
 - (5) An installation of the strut forward thermal blankets.
 - (6) An installation of the strut mid thermal blankets.
 - (7) An installation of the strut aft thermal blankets.
 - (8) An installation of the aft fairing heatshield thermal blankets.
- C. Because some thermal blankets have an overlap or share fasteners with other blankets, it will be easier to remove the blankets in the specified sequence.
- D. It may be possible to remove only one thermal blanket, but you may have to remove additional fasteners or brackets.

TASK 54-54-01-000-803-001

2. Strut Forward Thermal Blanket Removal

(Figure 401)

A. General

- (1) This task gives the instructions on how to remove the strut forward thermal blankets.
- (2) This task has these steps:
 - (a) Open the access panels.
 - (b) Remove the fan cowl opening actuators.
 - (c) Remove the forward thermal blankets.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
71-12-02-000-804-H00	Thrust Reverser Cowl Opening Actuators Removal (P/B 401)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
413AI	Left Fan Cowl Panel Left Engine

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(Continued)

Number	Name/Location
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

E. Prepare for the Removal

SUBTASK 54-54-01-040-003-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-54-01-010-006-001

(2) Open the applicable fan cowl panels:

(TASK 71-11-04-010-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-010-007-001

(3) Open the applicable thrust reverser panels:

(TASK 78-31-00-010-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Strut Forward Thermal Blanket Removal

SUBTASK 54-54-01-000-025-001

- (1) To remove the thermal blanket [3], do these steps:
 - (a) Remove the nut [4], and washer [2].
 - (b) Remove the two screws [1], and two washers [2].
 - (c) Remove the thermal blanket [3].

SUBTASK 54-54-01-000-026-001

- (2) To remove the thermal blanket [6], do these steps:
 - (a) Do this task: Thrust Reverser Cowl Opening Actuators Removal, TASK 71-12-02-000-804-H00.
 - (b) Remove the screw [7], and washer [2].
 - (c) Remove the screw [1], and washer [2].
 - (d) Remove the two screws [5], and two washers [2].
 - (e) Remove the thermal blanket [6].

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SUBTASK 54-54-01-000-027-001

- (3) To remove the thermal blanket [8] and the thermal blanket [9], do these steps:
 - (a) Remove the nut [4], and washer [2].
 - (b) Remove the screw [1], and washer [2].
 - (c) Remove the screw [7], and washer [2].
 - (d) Remove the thermal blanket [8].
 - (e) Remove the thermal blanket [9].

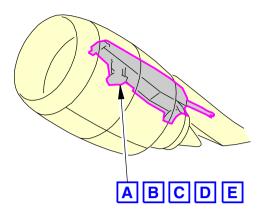
SUBTASK 54-54-01-000-028-001

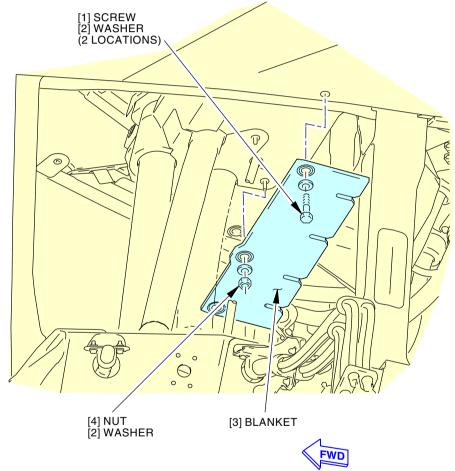
- (4) To remove the thermal blanket [10] and the thermal blanket [11], do these steps:
 - (a) Remove the two screws [5], and two washers [2].
 - (b) Remove the thermal blanket [10].
 - (c) Remove the two screws [5], and two washers [2].
 - (d) Remove the thermal blanket [11].



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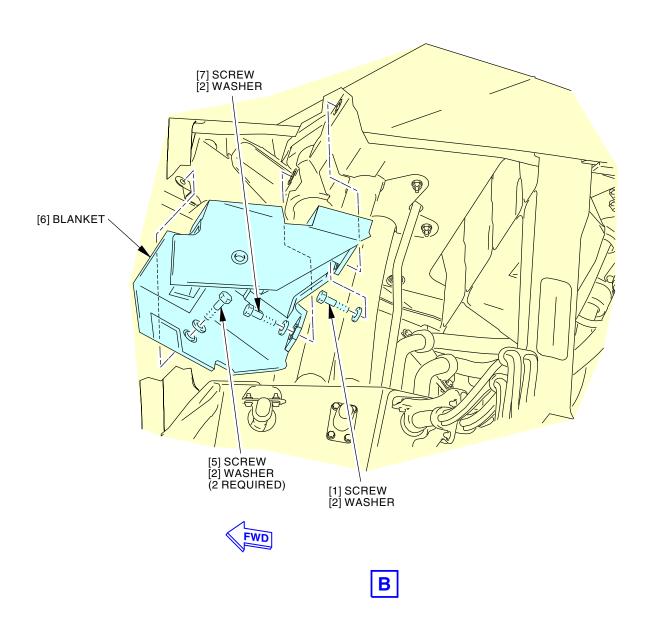
Strut Forward Thermal Blankets Installation Figure 401/54-54-01-990-803-001 (Sheet 1 of 5)

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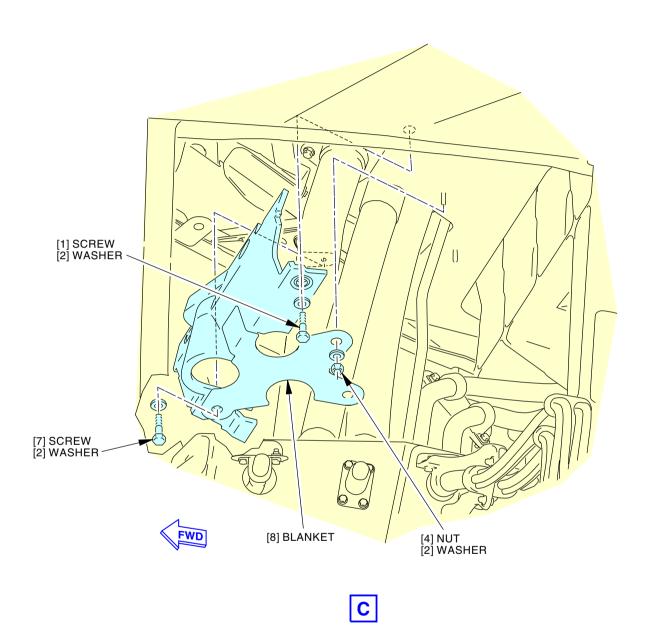
Strut Forward Thermal Blankets Installation Figure 401/54-54-01-990-803-001 (Sheet 2 of 5)

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Strut Forward Thermal Blankets Installation Figure 401/54-54-01-990-803-001 (Sheet 3 of 5)

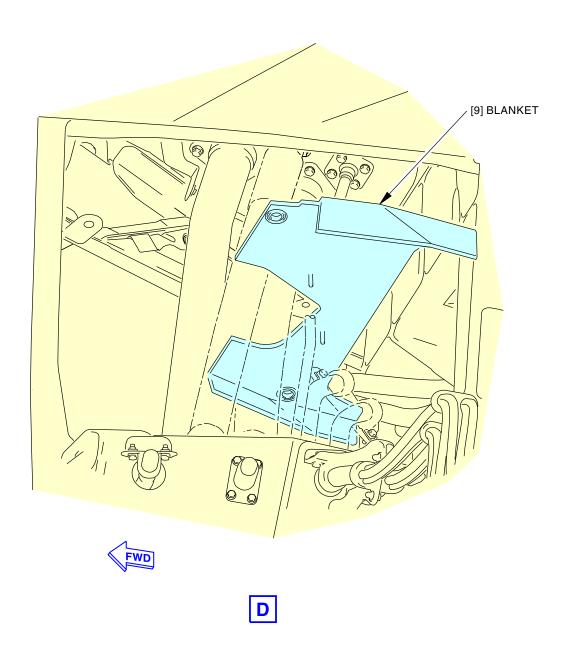
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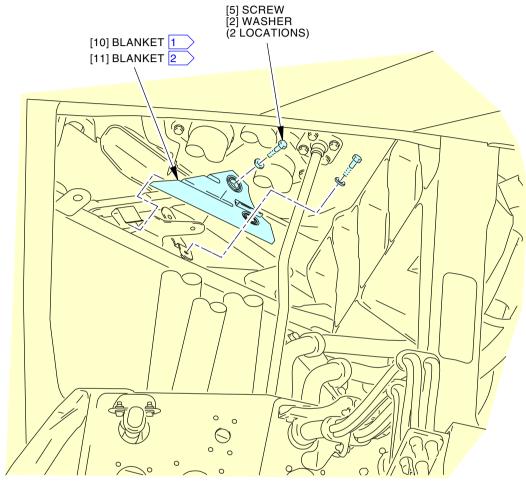
Strut Forward Thermal Blankets Installation Figure 401/54-54-01-990-803-001 (Sheet 4 of 5)

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1 RIGHT SIDE OF STRUT

LEFT SIDE OF STRUT-OPPOSITE (NOT SHOWN)

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Strut Forward Thermal Blankets Installation Figure 401/54-54-01-990-803-001 (Sheet 5 of 5)

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TASK 54-54-01-000-804-001

3. Strut Mid Thermal Blanket Removal

(Figure 402)

A. General

- (1) This task gives the instructions on how to remove the strut mid thermal blankets.
- (2) This task has these steps:
 - (a) Open the access panels.
 - (b) Remove the mid thermal blankets.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

E. Prepare for the Removal

SUBTASK 54-54-01-040-004-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-54-01-010-008-001

(2) Open the applicable fan cowl panels:

(TASK 71-11-04-010-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-010-009-001

(3) Open the applicable thrust reverser panels:

(TASK 78-31-00-010-816-H00)

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<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-000-029-001

- (4) Do these steps to remove the bracket assembly [32]:
 - (a) Put a tag on the rod assembly [37] to identify the airplane number and the strut location where you removed it.

NOTE: You must install the same rod assembly, or a new rod with the same length, at the same strut location.

- (b) Remove the nut [34], washer [33], washer [36], and the bolt [35].
- (c) Support the bracket assembly [32], and the rod assembly [37] so they do not fall.
- (d) Remove the two nuts [34], two washers [33], two washers [36], and the two bolts [35].
- (e) Remove the bracket assembly [32], and the rod assembly [37].

F. Strut Mid Thermal Blanket Removal

SUBTASK 54-54-01-000-030-001

- (1) Remove these blankets in this sequence:
 - (a) To remove the thermal blanket [44], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [38].
 - 2) Remove the nut [42], and the washer [2].
 - 3) Remove the screw [7], and the washer [2].
 - 4) Remove the thermal blanket [44].
 - (b) To remove the thermal blanket [43], do these steps:
 - 1) Remove the four screws [39], four washers [40], and two brackets [38].
 - 2) Remove the three nuts [42], and three washers [2].
 - 3) Remove the screw [7], and the washer [2].
 - 4) Remove the thermal blanket [43].
 - (c) To remove the thermal blanket [48], do these steps:
 - 1) Remove the nut [42], and the washer [2].
 - 2) Remove the screw [7], and the washer [2].
 - 3) Remove the thermal blanket [48].
 - (d) To remove the thermal blanket [52], do these steps:
 - 1) Remove the nut [42], and the washer [2].
 - 2) Remove the three screws [7], and three washers [2].
 - 3) Remove the thermal blanket [52].
 - (e) To remove the thermal blanket [49], do these steps:
 - 1) Remove the screw [1], and the washer [2].
 - 2) Remove the screw [7], and the washer [2].
 - 3) Remove the thermal blanket [49].

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SUBTASK 54-54-01-000-031-001

- (2) Remove these blankets in this sequence:
 - (a) To remove the thermal blanket [41], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [38].
 - 2) Remove the nut [42], and the washer [2].
 - 3) Remove the screw [7], and the washer [2].
 - 4) Remove the thermal blanket [41].
 - (b) To remove the thermal blanket [47], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [38].
 - 2) Remove the three nuts [42], and three washers [2].
 - 3) Remove the screw [7], and the washer [2].
 - 4) Remove the thermal blanket [47].
 - (c) To remove the thermal blanket [54] and the thermal blanket [56], do these steps:
 - 1) Remove the nut [42], and the washer [2].
 - 2) Remove the screw [7], and the washer [2].
 - 3) Remove the thermal blanket [54].
 - 4) Remove the thermal blanket [56].
 - (d) To remove the thermal blanket [51], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [38].
 - 2) Remove the nut [42], and the washer [2].
 - 3) Remove the screw [1], and the washer [2].
 - 4) Remove the two screws [7], and two washers [2].
 - 5) Remove the thermal blanket [51].
 - (e) To remove the thermal blanket [55], do these steps:
 - 1) Remove the screw [7], and the washer [2].
 - 2) Remove the thermal blanket [55].

SUBTASK 54-54-01-000-032-001

- (3) Remove these blankets in this sequence:
 - (a) To remove the thermal blanket [50], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [45].
 - 2) Remove the three screws [7], and three washers [2].
 - 3) Remove the thermal blanket [50].
 - (b) To remove the thermal blanket [46], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [45].
 - 2) Remove the three screws [7], and three washers [2].
 - 3) Remove the thermal blanket [46].
 - (c) To remove the thermal blanket [53], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [38].
 - 2) Remove the screw [7], and the washer [2].

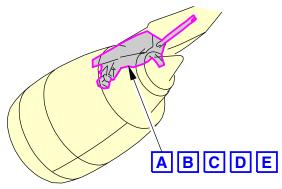


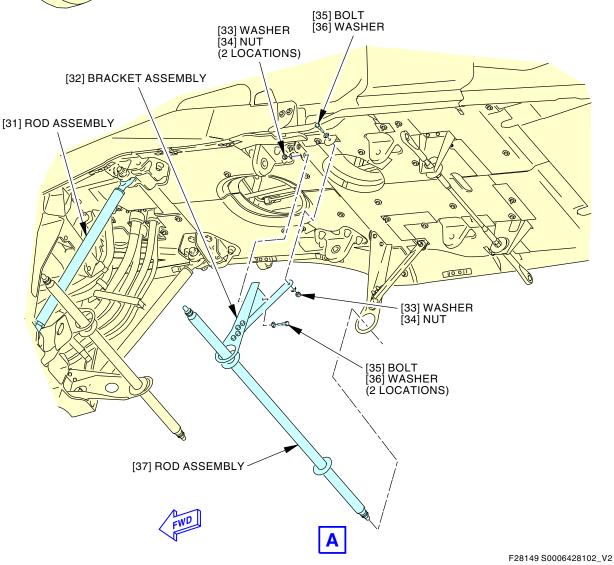
- 3) Remove the thermal blanket [53].
- (d) To remove the thermal blanket [57], do these steps:
 - 1) Remove the two screws [39], two washers [40], and the bracket [38].
 - 2) Remove the screw [7], and the washer [2].
 - 3) Remove the thermal blanket [57].

----- END OF TASK -----

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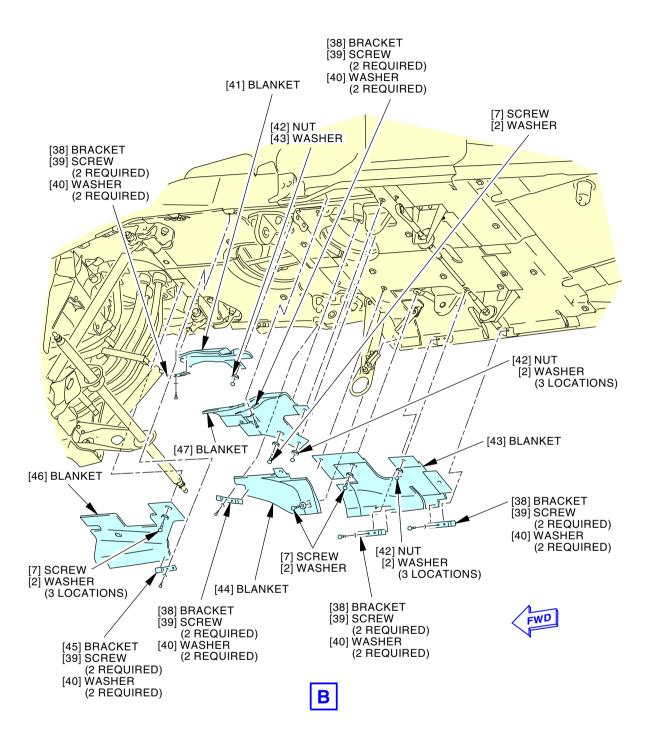
Strut Mid Thermal Blankets Installation Figure 402/54-54-01-990-804-001 (Sheet 1 of 5)

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Strut Mid Thermal Blankets Installation Figure 402/54-54-01-990-804-001 (Sheet 2 of 5)

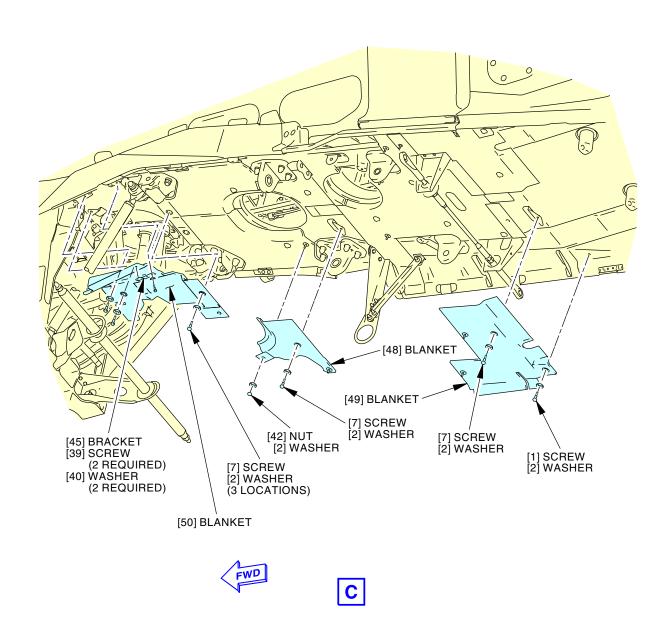
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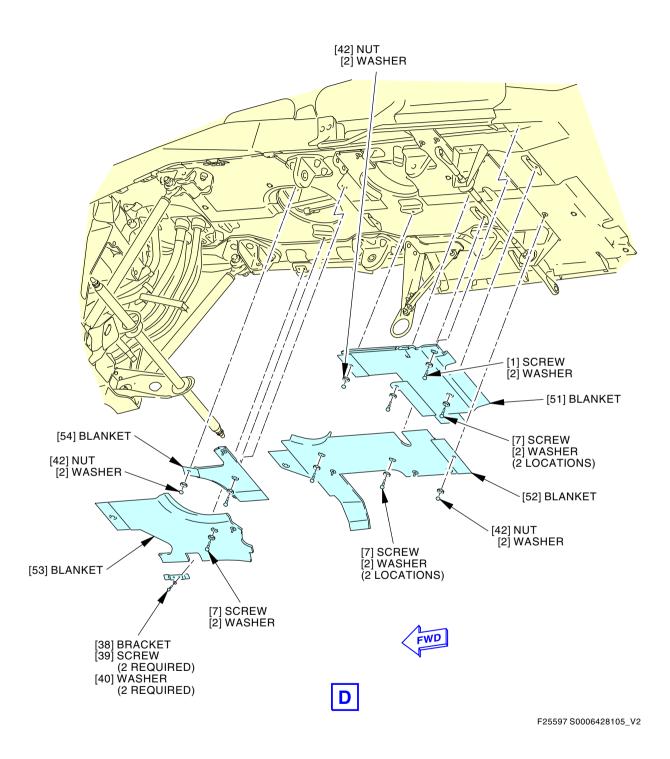
Strut Mid Thermal Blankets Installation Figure 402/54-54-01-990-804-001 (Sheet 3 of 5)

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Strut Mid Thermal Blankets Installation Figure 402/54-54-01-990-804-001 (Sheet 4 of 5)

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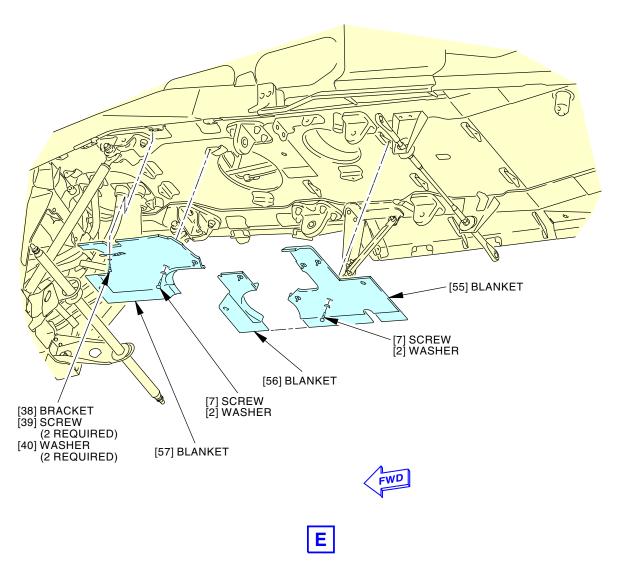
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Strut Mid Thermal Blankets Installation Figure 402/54-54-01-990-804-001 (Sheet 5 of 5)

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TASK 54-54-01-000-805-001

4. Strut Aft Thermal Blanket Removal

(Figure 403)

A. General

- (1) This task gives the instructions on how to remove the strut aft thermal blankets.
- (2) This task has these steps:
 - (a) Open the access panels.
 - (b) Remove the aft thermal blankets.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

D. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

E. Prepare for the Removal

SUBTASK 54-54-01-040-005-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-54-01-010-010-001

(2) Open the applicable fan cowl panels:

(TASK 71-11-04-010-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-010-011-001

(3) Open the applicable thrust reverser panels:

(TASK 78-31-00-010-816-H00)

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<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Strut Aft Thermal Blanket Removal

SUBTASK 54-54-01-000-033-001

- (1) To remove the thermal blanket [73], do these steps:
 - (a) Remove the four screws [39], four washers [40], and two brackets [38].
 - (b) Remove the thermal blanket [73].

SUBTASK 54-54-01-000-034-001

- (2) To remove the thermal blanket [72], do these steps:
 - (a) Remove the screws [1], and washers [2].
 - (b) Remove the screws [7], and washers [2].
 - (c) Remove the thermal blanket [72].

SUBTASK 54-54-01-000-035-001

- (3) To remove the thermal blanket [75], do these steps:
 - (a) Remove the four screws [39], four washers [40], and two brackets [38].
 - (b) Remove the thermal blanket [75].

SUBTASK 54-54-01-000-036-001

- (4) To remove the thermal blanket [71], do these steps:
 - (a) Remove the screws [1], and washers [2].
 - (b) Remove the screws [7], and washers [2].
 - (c) Remove the thermal blanket [71].

SUBTASK 54-54-01-000-037-001

- (5) To remove the thermal blanket [74], do these steps:
 - (a) Remove the three screws [1], and three washers [2].
 - (b) Remove the thermal blanket [74].

SUBTASK 54-54-01-000-038-001

- (6) To remove the thermal blanket [78], do these steps:
 - (a) Remove the two screws [39], two washers [40], and the bracket [76].
 - (b) Remove the two screws [39], two washers [40], and the bracket [45].
 - (c) Remove the two screws [7], and two washers [2].
 - (d) Remove the thermal blanket [78].

SUBTASK 54-54-01-000-039-001

- (7) To remove the thermal blanket [77], do these steps:
 - (a) Remove the two screws [39], two washers [40], and the bracket [76].
 - (b) Remove the two screws [39], two washers [40], and the bracket [45].
 - (c) Remove the screw [7], and washer [2].



——— END OF TASK ———

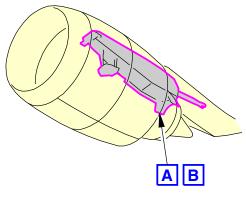
(d)	Remove the thermal blanket [77].

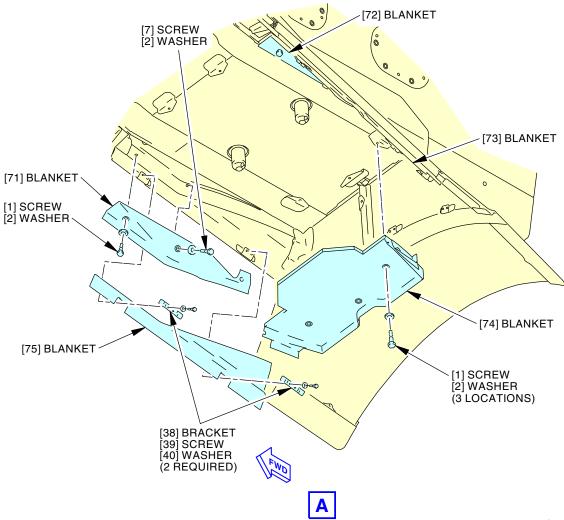
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Strut Aft Thermal Blankets Installation Figure 403/54-54-01-990-805-001 (Sheet 1 of 2)

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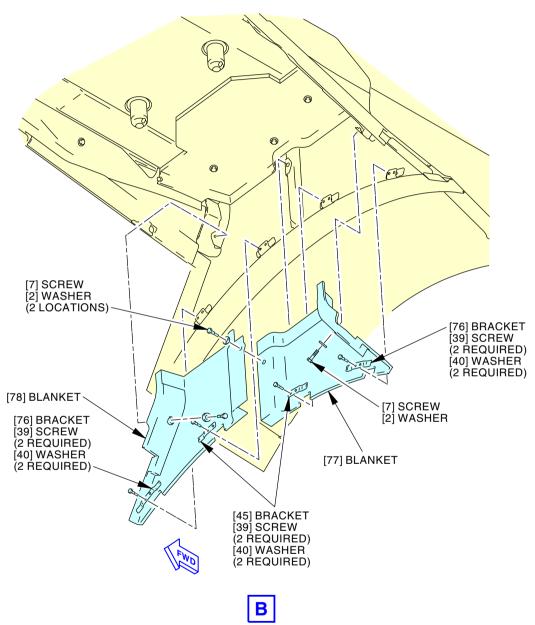
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Strut Aft Thermal Blankets Installation Figure 403/54-54-01-990-805-001 (Sheet 2 of 2)

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ARO 001-013

TASK 54-54-01-000-818-001

5. Aft Fairing Heatshield Thermal Blanket Removal

(Figure 404)

A. General

- (1) This task gives the instructions on how to remove the aft fairing heatshield thermal blankets.
- (2) This task has these steps:
 - (a) Open the access panels.
 - (b) Remove the heatshield thermal blankets.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)

C. Consumable Materials

Reference	Description	Specification
A00209	Compound - Silicone Rubber - Dow Corning	
	RTV3110	

D. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Prepare for the Removal

SUBTASK 54-54-01-040-018-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002

SUBTASK 54-54-01-010-038-001

(2) Open the applicable fan cowl panels:

(TASK 71-11-04-010-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine

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ARO 001-013 (Continued)

(Continued)

<u>Number</u>	Name/Location
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-010-039-001

(3) Open the applicable thrust reverser panels:

(TASK 78-31-00-010-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

G. Aft Fairing Heatshield Thermal Blanket Removal

SUBTASK 54-54-01-000-152-001

- (1) To remove the Pan Number 1 thermal blankets[1], do these steps:
 - (a) Remove the leveling compound Dow Corning 3110 RTV silicone rubber compound, A00209 as necessary to gain access to the bolts [13].
 - (b) Remove the bolts [12], [13], [14], washers [15], [16], bolts [17], [19], washers [18], [20], [21], and nuts [22].
 - (c) Remove the pan [23] and the thermal blankets [1].

SUBTASK 54-54-01-000-153-001

- (2) To remove the Pan Number 2 thermal blankets [2], do these steps:
 - (a) Remove the leveling compound Dow Corning 3110 RTV silicone rubber compound, A00209 as necessary to gain access to the bolts[13].
 - (b) Remove the bolts [12], [13], [14] and washers [15], [16].
 - (c) Remove the pan [24] and the thermal blankets [2].

SUBTASK 54-54-01-000-154-001

- (3) To remove the Pan Number 3 thermal blankets[3], do these steps:
 - (a) Remove the leveling compound Dow Corning 3110 RTV silicone rubber compound, A00209 as necessary to gain access to the bolts[13].
 - (b) Remove the bolts [12], [13], [14] and washer [15], [16].
 - (c) Remove the pan [25] and the thermal blankets [3].

SUBTASK 54-54-01-000-155-001

- (4) To remove the Pan Number 4 thermal blankets[4], do these steps:
 - (a) Remove the leveling compound Dow Corning 3110 RTV silicone rubber compound, A00209 as necessary to gain access to the bolts[13].
 - (b) Remove the bolts [12], [13], [14] and washer [15], [16].
 - (c) Remove the pan [26] and the thermal blankets [4].

SUBTASK 54-54-01-000-156-001

- (5) To remove the Pan Number 5 thermal blankets[5], do these steps:
 - (a) Remove the leveling compound Dow Corning 3110 RTV silicone rubber compound, A00209 as necessary to gain access to the bolts[13].

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ARO 001-013 (Continued)

- (b) Remove the bolts [12], [13], [14] and washer [15], [16].
- (c) Remove the pan [27] and the thermal blankets [5].

SUBTASK 54-54-01-000-157-001

- (6) To remove the Pan Number 6 thermal blankets[6], do these steps:
 - (a) Remove the leveling compound Dow Corning 3110 RTV silicone rubber compound, A00209 as necessary to gain access to the bolts[13].
 - (b) Remove the bolts [12], [13], [29], [30] and washer [15], [16].
 - (c) Remove the pan [28] and the thermal blankets [6].

SUBTASK 54-54-01-000-158-001

(7) Remove the Velcro [7], [8], [9], [10], [11].

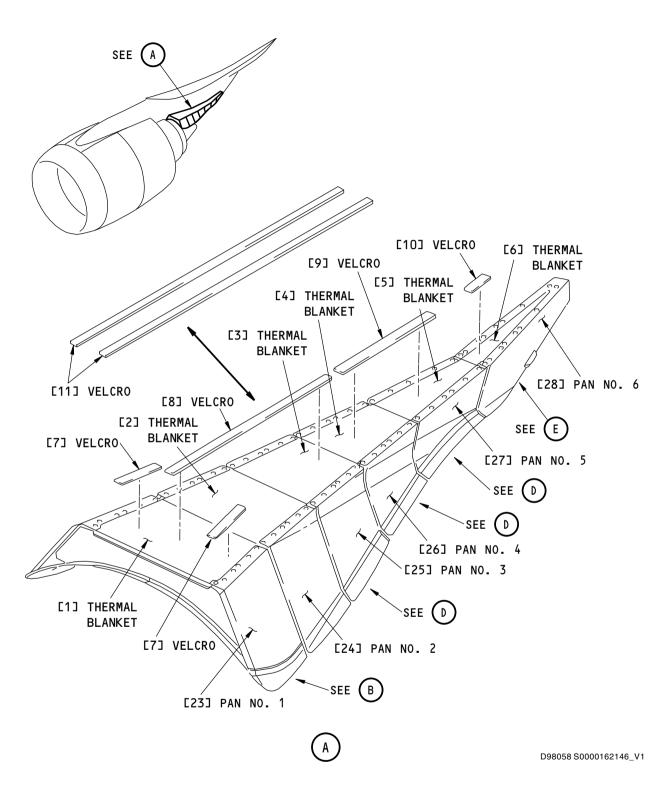
----- END OF TASK -----

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Aft Fairing Heatshield Thermal Blanket Installation Figure 404/54-54-01-990-824-001 (Sheet 1 of 5)

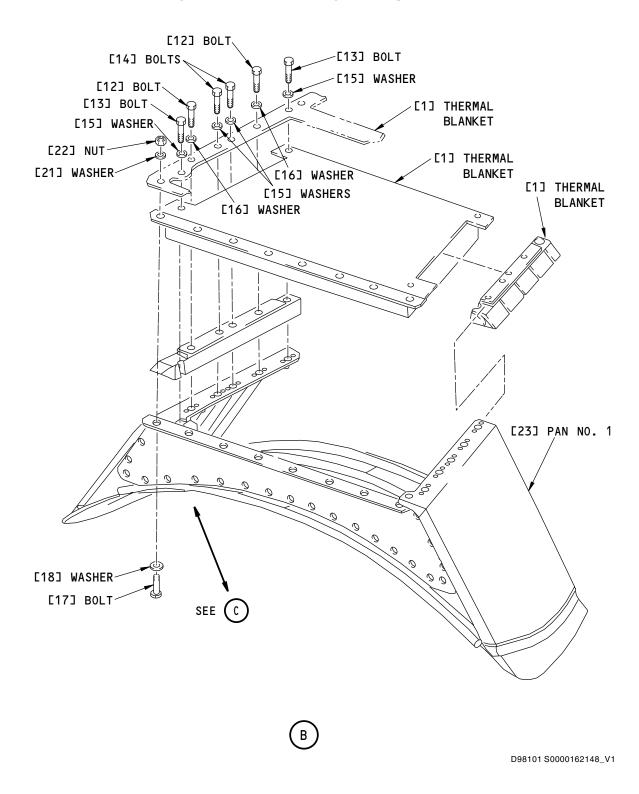
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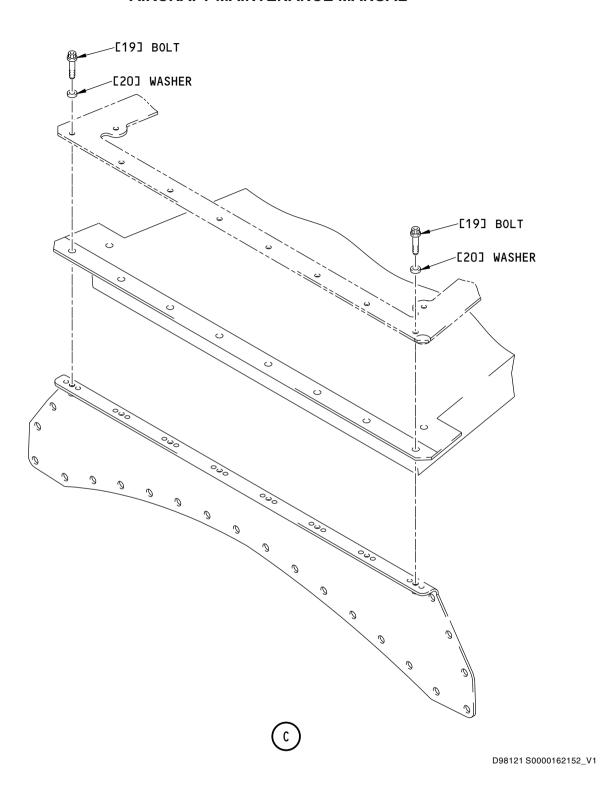


Aft Fairing Heatshield Thermal Blanket Installation Figure 404/54-54-01-990-824-001 (Sheet 2 of 5)

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Aft Fairing Heatshield Thermal Blanket Installation Figure 404/54-54-01-990-824-001 (Sheet 3 of 5)

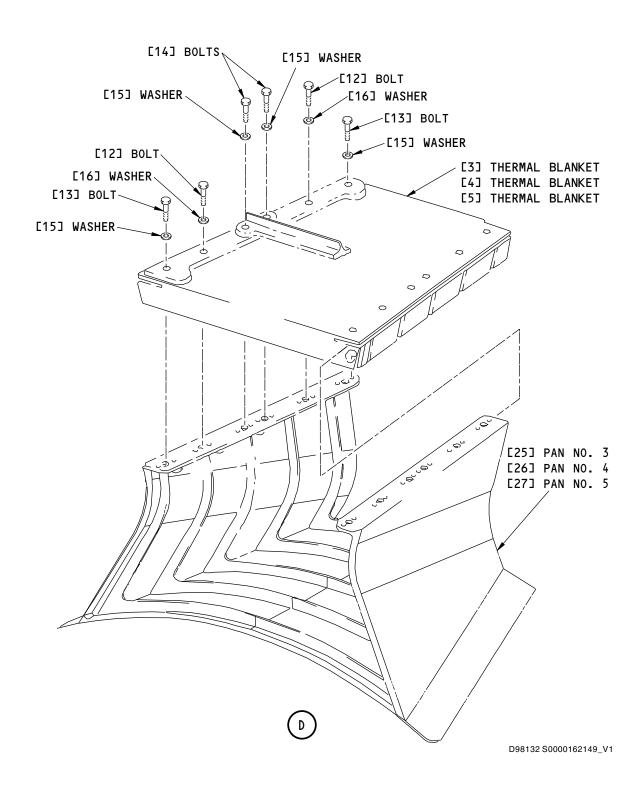
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Aft Fairing Heatshield Thermal Blanket Installation Figure 404/54-54-01-990-824-001 (Sheet 4 of 5)

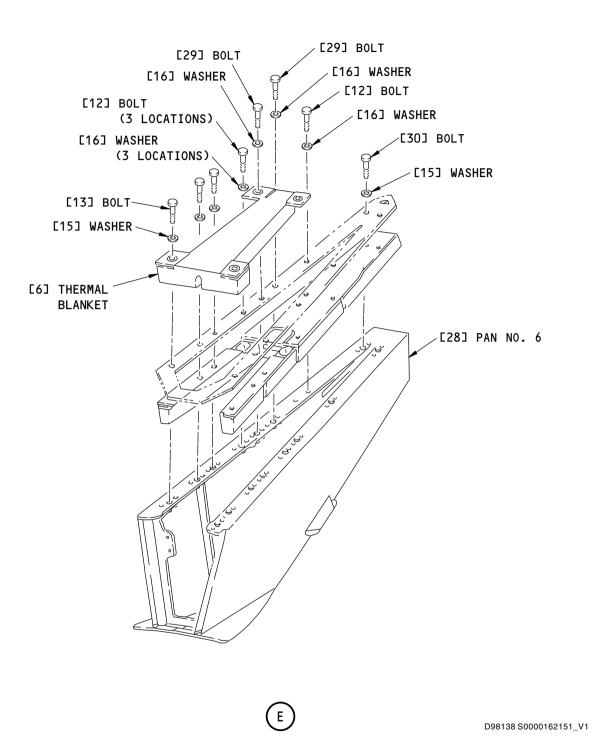
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Aft Fairing Heatshield Thermal Blanket Installation Figure 404/54-54-01-990-824-001 (Sheet 5 of 5)

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TASK 54-54-01-000-821-001

6. Aft Fairing Heatshield Thermal Blanket Removal

(Figure 405)

A. General

- (1) This task gives the instructions to remove the aft fairing heatshield thermal blankets.
- (2) This task has these steps:
 - (a) Open the access panels.
 - (b) Remove the heatshield thermal blankets.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-06-000-801	Aft Fairing Access Panel Removal (P/B 401)
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area	
434	Aft Strut Fairing - Left Nacelle Strut	
444	Aft Strut Fairing - Right Nacelle Strut	

D. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

E. Prepare for the Removal

SUBTASK 54-54-01-040-021-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002 SUBTASK 54-54-01-010-046-001

(2) Open the applicable fan cowl panels:

(Open the Fan Cowl Panel (Selection), TASK 71-11-04-010-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

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ARO 014-999 (Continued)

SUBTASK 54-54-01-010-047-001

(3) Open the applicable thrust reverser panels:

(Open the Thrust Reverser (Selection), TASK 78-31-00-010-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-000-176-001

(4) Remove the Forward and the Aft Lower Access Panel. Do this task: TASK 54-52-06-000-801.

F. Aft Fairing Heatshield Thermal Blanket Removal

SUBTASK 54-54-01-000-178-001

- (1) Remove the Forward Lower Spar [15].
 - (a) Remove the bolts [16] and collars [17] from the side skins of the heatshield assembly.
 - (b) Remove the bolts [18] and washers [19] from the top of the Forward Lower Spar [15].
 - (c) Remove the Forward Lower Spar [15].

SUBTASK 54-54-01-000-179-001

- (2) Remove the Aft Lower Spar [20].
 - (a) Remove the bolts [16] and collars [17] from the side skins of the heatshield assembly.
 - (b) Carefully pull the Aft Lower Spar [20] up, in a diagonal direction.
 - NOTE: You can remove the Aft Lower Spar with the exit drain tube attached.

SUBTASK 54-54-01-000-180-001

- (3) Remove the heatshield frame [21].
 - (a) Remove the bolts [16] and collars [17] that attach the heatshield frame [21] to the side skins.
 - (b) Remove the heat shield frame [21].

SUBTASK 54-54-01-000-181-001

(4) Remove the Thermal Blankets.

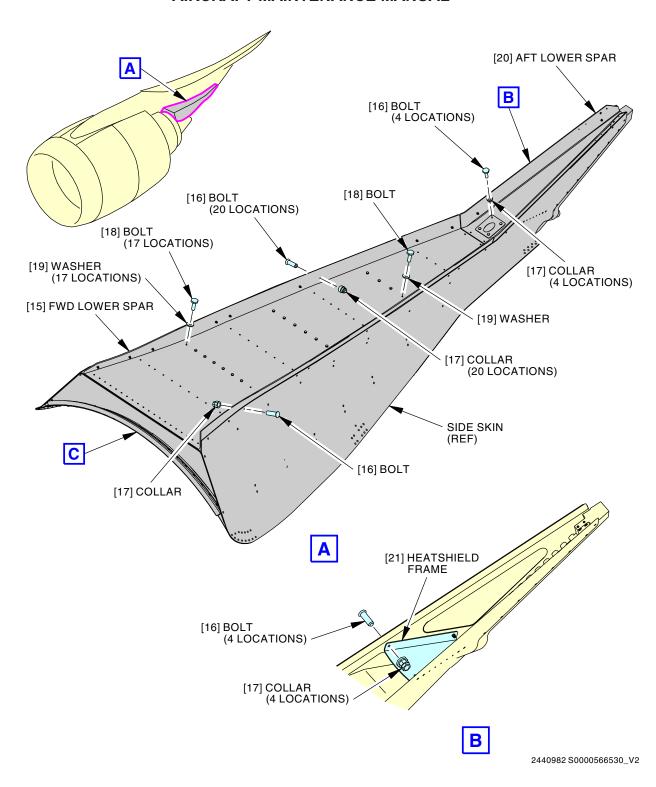
<u>NOTE</u>: The thermal blankets are not bonded or held by Velcro to the bottom heatshield skins. You can remove them easily.

- (a) Remove the #1 thermal blanket [22].
- (b) Remove the #2 thermal blanket [23].
- (c) Remove the #3 thermal blanket [24].
- (d) Remove the #4 thermal blanket [25].
- (e) Remove the #5 thermal blanket [26].
- (f) Remove the #6 thermal blanket [27].
- (g) Remove the #7 thermal blanket [28].
- (h) Remove the #8 thermal blanket [29].
- (i) Remove the #9 thermal blanket [30].

	END	OF	TASK	
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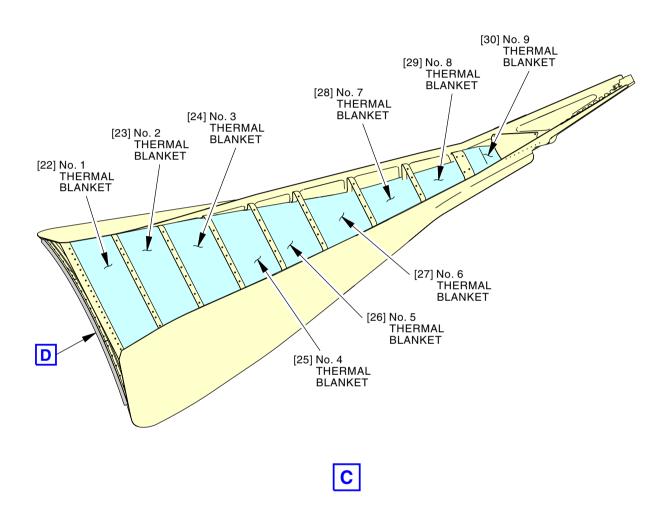
Aft Fairing Heatshield Thermal Blanket Installation Figure 405/54-54-01-990-828-001 (Sheet 1 of 3)

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Aft Fairing Heatshield Thermal Blanket Installation Figure 405/54-54-01-990-828-001 (Sheet 2 of 3)

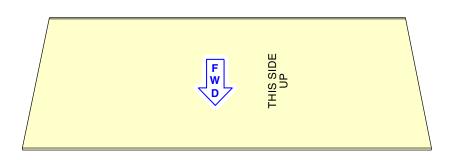
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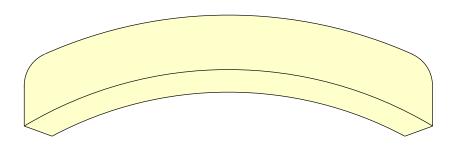
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THERMAL BLANKET INSTALLATION (EXAMPLE)



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Aft Fairing Heatshield Thermal Blanket Installation Figure 405/54-54-01-990-828-001 (Sheet 3 of 3)

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TASK 54-54-01-400-803-001

7. Strut Forward Thermal Blanket Installation

(Figure 401)

A. General

- (1) This task gives the instructions on how to install the strut forward thermal blankets.
- (2) This task has these steps:
 - (a) Install the forward thermal blankets.
 - (b) Install the fan cowl opening actuators.
 - (c) Close the access panels.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
71-12-02-400-804-H00	Thrust Reverser Cowl Opening Actuators Installation (P/B 401)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Thermal blanket	54-54-01-04-180	ARO ALL
6	Thermal blanket	54-54-01-04-100	ARO ALL
8	Thermal blanket	54-54-01-04-165	ARO ALL
9	Thermal blanket	54-54-01-04-135	ARO ALL
10	Thermal blanket	54-54-01-04-115	ARO ALL
11	Thermal blanket	54-54-01-04-120	ARO ALL

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

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F. Strut Forward Thermal Blanket Installation

SUBTASK 54-54-01-400-029-001

- (1) To install the thermal blanket [10] and the thermal blanket [11], do these steps:
 - (a) Put the thermal blanket [10] in its position on the strut.
 - (b) Install the two screws [5], and two washers [2].
 - (c) Put the thermal blanket [11] in its position on the strut.
 - (d) Install the two screws [5], and two washers [2].

SUBTASK 54-54-01-400-030-001

- (2) To install the thermal blanket [8] and the thermal blanket [9], do these steps:
 - (a) Put the thermal blanket [9] in its position on the strut.
 - (b) Put the thermal blanket [8] in its position on the strut.
 - (c) Install the nut [4], and washer [2].
 - (d) Install the screw [1], and washer [2].
 - (e) Install the screw [7], and washer [2].

SUBTASK 54-54-01-400-031-001

- (3) To install the thermal blanket [6], do these steps:
 - (a) Put the thermal blanket [6] in its position on the strut.
 - (b) Install the screw [7], and washer [2].
 - (c) Install the screw [1], and washer [2].
 - (d) Install the two screws [5], and two washers [2].
 - (e) Do this task: Thrust Reverser Cowl Opening Actuators Installation, TASK 71-12-02-400-804-H00.

SUBTASK 54-54-01-400-032-001

- (4) To install the thermal blanket [3], do these steps:
 - (a) Put the thermal blanket [3] in its position on the strut.
 - (b) Install the nut [4], and washer [2].
 - (c) Install the two screws [1], and two washers [2].

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-01-410-006-001

(1) Close the thrust reverser panels:

(TASK 78-31-00-410-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-410-007-001

(2) Close these fan cowl panels:

(TASK 71-11-04-410-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine

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(Continued)

<u>Number</u>	<u>Name/Location</u>
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-440-003-001

(3) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

TASK 54-54-01-400-804-001

8. Strut Mid Thermal Blanket Installation

(Figure 402)

A. General

- (1) This task gives the instructions on how to install the strut mid thermal blankets.
- (2) This task has these steps:
 - (a) Install the mid thermal blankets.
 - (b) Close the access panels.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
41	Thermal blanket	54-54-01-04-370	ARO ALL	
		54-54-01-04-420	ARO ALL	
		54-54-01-04-435	ARO ALL	
		54-54-01-04-440	ARO ALL	
43	Thermal blanket	54-54-01-04-420	ARO ALL	
47	Thermal blanket	54-54-01-04-415	ARO ALL	
		54-54-01-04-420	ARO ALL	
		54-54-01-04-435	ARO ALL	
		54-54-01-04-440	ARO ALL	
49	Thermal blanket	54-54-01-04-325	ARO ALL	
50	Thermal blanket	54-54-01-04-525	ARO ALL	
51	Thermal blanket	54-54-01-04-330	ARO ALL	
53	Thermal blanket	54-54-01-04-435	ARO ALL	
		54-54-01-04-440	ARO ALL	
		54-54-01-04-480	ARO ALL	
55	Thermal blanket	54-54-01-04-300	ARO ALL	
		54-54-01-04-420	ARO ALL	
		54-54-01-04-435	ARO ALL	

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity	
55 (cont.)		54-54-01-04-440	ARO ALL	
57	Thermal blanket	54-54-01-04-435	ARO ALL	
		54-54-01-04-440	ARO ALL	

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Strut Mid Thermal Blanket Installation

SUBTASK 54-54-01-400-033-001

- (1) Install these blankets in this sequence:
 - (a) To install the thermal blanket [57], do these steps:
 - 1) Put the thermal blanket [57] in its position on the strut.
 - 2) Install the screw [7], and the washer [2].
 - 3) Install the two screws [39], two washers [40], and the bracket [38].
 - (b) To install the thermal blanket [53], do these steps:
 - 1) Put the thermal blanket [53] in its position on the strut.
 - Install the screw [7], and the washer [2].
 - 3) Install the two screws [39], two washers [40], and the bracket [38].
 - (c) To install the thermal blanket [46], do these steps:
 - 1) Put the thermal blanket [46] in its position on the strut.
 - 2) Install the three screws [7], and three washers [2].
 - 3) Install the two screws [39], two washers [40], and the bracket [45].
 - (d) To install the thermal blanket [50], do these steps:
 - 1) Put the thermal blanket [50] in its position on the strut.
 - 2) Install the three screws [7], and three washers [2].
 - 3) Install the two screws [39], two washers [40], and the bracket [45].

SUBTASK 54-54-01-400-034-001

(2) Install these blankets in this sequence:

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- (a) To install the thermal blanket [55], do these steps:
 - 1) Put the thermal blanket [55] in its position on the strut.
 - 2) Install the screw [7], and the washer [2].
- (b) To install the thermal blanket [51], do these steps:
 - Put the thermal blanket [51] in its position on the strut.
 - 2) Install the nut [42], and the washer [2].
 - 3) Install the screw [1], and the washer [2].
 - 4) Install the two screws [7], and two washers [2].
 - 5) Install the two screws [39], two washers [40], and the bracket [38].
- (c) To install the thermal blanket [56] and the thermal blanket [54], do these steps:
 - 1) Put the thermal blanket [56] in its position on the strut.
 - 2) Put the thermal blanket [54] in its position on the strut.
 - 3) Install the nut [42], and the washer [2].
 - 4) Install the screw [7], and the washer [2].
- (d) To install the thermal blanket [47], do these steps:
 - 1) Put the thermal blanket [47] in its position on the strut.
 - 2) Install the three nuts [42], and three washers [2].
 - 3) Install the screw [7], and the washer [2].
 - 4) Install the two screws [39], two washers [40], and the bracket [38].
- (e) To install the thermal blanket [41], do these steps:
 - 1) Put the thermal blanket [41] in its position on the strut.
 - 2) Install the nut [42], and the washer [2].
 - 3) Install the screw [7], and the washer [2].
 - 4) Install the two screws [39], two washers [40], and the bracket [38].

SUBTASK 54-54-01-400-035-001

- (3) Install these blankets in this sequence:
 - (a) To install the thermal blanket [49], do these steps:
 - 1) Put the thermal blanket [49] in its position on the strut.
 - 2) Install the screw [1], and the washer [2].
 - 3) Install the screw [7], and the washer [2].
 - (b) To install the thermal blanket [52], do these steps:
 - 1) Put the thermal blanket [52] in its position on the strut.
 - 2) Install the nut [42], and the washer [2].
 - 3) Install the three screws [7], and three washers [2].
 - (c) To install the thermal blanket [48], do these steps:
 - 1) Put the thermal blanket [48] in its position on the strut.
 - 2) Install the nut [42], and the washer [2].
 - 3) Install the screw [7], and the washer [2].
 - (d) To install the thermal blanket [43], do these steps:



- 1) Put the thermal blanket [43] in its position on the strut.
- 2) Install the three nuts [42], and three washers [2].
- 3) Install the screw [7], and the washer [2].
- 4) Install the four screws [39], four washers [40], and two bracket [38].
- (e) To install the thermal blanket [44], do these steps:
 - 1) Put the thermal blanket [44] in its position on the strut.
 - 2) Install the nut [42], and the washer [2].
 - 3) Install the screw [7], and the washer [2].
 - 4) Install the two screws [39], two, and the bracket [38].

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-01-400-036-001

- Do these steps to install the bracket assembly [32]:
 - (a) Look for a tag on the rod assembly [37] to identify the airplane number and the strut location where you removed it.

NOTE: You must install the same rod assembly, or a new rod with the same length, at the same strut location.

- (b) Install the bracket assembly [32], and the rod assembly [37].
- (c) Install the two nuts [34], two washers [33], two washers [36], and the two bolts [35].
- (d) Install the nut [34], washer [33], washer [36], and the bolt [35].

SUBTASK 54-54-01-410-008-001

(2) Close the thrust reverser panels:

(TASK 78-31-00-410-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-410-009-001

(3) Close these fan cowl panels:

(TASK 71-11-04-410-814-H00)

<u>Number</u>	Name/Location		
413AL	Left Fan Cowl Panel, Left Engine		
414AR	Right Fan Cowl Panel, Left Engine		
423AL	Left Fan Cowl Panel, Right Engine		
424AR	Right Fan Cowl Panel, Right Engine		

SUBTASK 54-54-01-440-004-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

FND	OF	TASK	
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TASK 54-54-01-400-805-001

9. Strut Aft Thermal Blanket Installation

(Figure 403)

A. General

- (1) This task gives the instructions on how to install the strut aft thermal blankets.
- (2) This task has these steps:
 - (a) Install the aft thermal blankets.
 - (b) Close the access panels.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
71	Thermal blanket	54-54-01-04-270	ARO ALL
		54-54-01-04-420	ARO ALL
		54-54-01-04-435	ARO ALL
		54-54-01-04-440	ARO ALL
72	Thermal blanket	54-54-01-04-275	ARO ALL
		54-54-01-04-420	ARO ALL
		54-54-01-04-435	ARO ALL
		54-54-01-04-440	ARO ALL
73	Thermal blanket	54-54-01-04-210	ARO ALL
		54-54-01-04-420	ARO ALL
		54-54-01-04-435	ARO ALL
		54-54-01-04-440	ARO ALL
74	Thermal blanket	54-54-01-04-245	ARO ALL
		54-54-01-04-420	ARO ALL
		54-54-01-04-435	ARO ALL
		54-54-01-04-440	ARO ALL
75	Thermal blanket	54-54-01-04-205	ARO ALL
		54-54-01-04-420	ARO ALL
		54-54-01-04-435	ARO ALL
		54-54-01-04-440	ARO ALL
77	Thermal blanket	54-54-01-04-215	ARO ALL
		54-54-01-04-420	ARO ALL
		54-54-01-04-435	ARO ALL
		54-54-01-04-440	ARO ALL
78	Thermal blanket	54-54-01-04-230	ARO ALL
		54-54-01-04-420	ARO ALL

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(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity	
78 (cont.)		54-54-01-04-435	ARO ALL	
		54-54-01-04-440	ARO ALL	

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

F. Strut Aft Thermal Blanket Installation

SUBTASK 54-54-01-400-037-001

- (1) To install the thermal blanket [77], do these steps:
 - (a) Put the thermal blanket [77] in its position on the strut.
 - (b) Install the screw [7], and washer [2].
 - (c) Install the two screws [39], two washers [40], and the bracket [76].
 - (d) Install the two screws [39], two washers [40], and the bracket [45].

SUBTASK 54-54-01-400-038-001

- (2) To install the thermal blanket [78], do these steps:
 - (a) Put the thermal blanket [78] in its position on the strut.
 - (b) Install the two screws [7], and two washers [2].
 - (c) Install the two screws [39], two washers [40], and the bracket [76].
 - (d) Install the two screws [39], two washers [40], and the bracket [45].

SUBTASK 54-54-01-400-039-001

- (3) To install the thermal blanket [74], do these steps:
 - (a) Put the thermal blanket [74] in its position on the strut.
 - (b) Install the three screws [1], and three washers [2].

SUBTASK 54-54-01-400-040-001

- (4) To install the thermal blanket [71], do these steps:
 - (a) Put the thermal blanket [71] in its position on the strut.
 - (b) Install the screws [1], and washers [2].
 - (c) Install the screws [7], and washers [2].

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SUBTASK 54-54-01-400-041-001

- (5) To install the thermal blanket [75], do these steps:
 - (a) Put the thermal blanket [75] in its position on the strut.
 - (b) Install the four screws [39], four washers [40], and two brackets [38].

SUBTASK 54-54-01-400-042-001

- (6) To install the thermal blanket [72], do these steps:
 - (a) Put the thermal blanket [72] in its position on the strut.
 - (b) Install the screws [1], and washers [2].
 - (c) Install the screws [7], and washers [2].

SUBTASK 54-54-01-400-043-001

- (7) To install the thermal blanket [73], do these steps:
 - (a) Put the thermal blanket [73] in its position on the strut.
 - (b) Install the four screws [39], four washers [40], and two brackets [38].

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-01-410-010-001

(1) Close the thrust reverser panels:

(TASK 78-31-00-410-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-410-011-001

(2) Close these fan cowl panels:

(TASK 71-11-04-410-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-440-005-001

(3) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



ARO 001-013

TASK 54-54-01-400-818-001

10. Aft Fairing Heatshield Thermal Blanket Installation

(Figure 404)

A. General

- (1) This task gives the instructions on how to install the aft fairing heatshield thermal blankets.
- (2) This task has these steps:
 - (a) Install the heatshield thermal blankets.

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ARO 001-013 (Continued)

(b) Close the access panels.

B. References

Reference	Title	
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)	
54-55-01-200-811-001	Leak Check of the Aft Fairing (P/B 601)	
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)	
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)	

C. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
A00209	Compound - Silicone Rubber - Dow Corning RTV3110	
A01085	Adhesive - Epoxy, High Temperature Resistant, 2 Part	BAC5010 Type 111 (BMS5-141)
G50912	Catalyst - Dow Corning RTV-3010-S (Formerly S Tin NW)	
G50913	Catalyst - Dow Corning RTV-3000 F (Formerly Dow Corning F) Catalyst	
G50914	Catalyst - Dow Corning 4 Catalyst	

D. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

E. Access Panels

Number	Name/Location	
413AL	Left Fan Cowl Panel, Left Engine	
414AR	Right Fan Cowl Panel, Left Engine	
415AL	Left Thrust Reverser, Left Engine	
416AR	Right Thrust Reverser, Left Engine	
423AL	Left Fan Cowl Panel, Right Engine	
424AR	Right Fan Cowl Panel, Right Engine	
425AL	Left Thrust Reverser, Right Engine	
426AR	Right Thrust Reverser, Right Engine	

F. Aft Fairing Heatshield Thermal Blanket Installation

SUBTASK 54-54-01-400-088-001

- (1) To install the Velcro [7], [8], [9], [10], [11], do these steps:
 - (a) Install the Velcro with adhesive, A01085 as in Figure 404.
 - (b) Trim the Velcro, if necessary, to avoid contact with the heads of fasteners.

SUBTASK 54-54-01-400-089-001

- (2) To install the Pan Number 1 thermal blankets [1], do these steps:
 - (a) Install the pan [23] and the thermal blankets [1] as shown in Figure 404.

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ARO 001-013 (Continued)

- (b) Install the bolts [12], [13], [14], washers [15], [16], bolts [17], [19], washers [18], [20], [21], and nuts [22] with wet sealant, A00160.
 - 1) Apply a sealant, A00160 fillet seal to the heads of the bolts.

SUBTASK 54-54-01-400-090-001

- (3) To install Pan Number 2 thermal blankets [2], do these steps:
 - (a) Install the pan [24] and the thermal blankets [2] as shown in Figure 404.
 - (b) Install the bolts [12], [13], [14] and washers [15], [16] with wet sealant, A00160.
 - 1) Apply a sealant, A00160 fillet seal to the heads of the bolts.

SUBTASK 54-54-01-400-091-001

- (4) To install Pan Number 3 thermal blankets [3], do these steps:
 - (a) Install the pan [25] and the thermal blankets [3] as shown in Figure 404.
 - (b) Install the bolts [12], [13], [14] and washer [15], [16] with wet sealant, A00160.
 - 1) Apply a sealant, A00160 fillet seal to the heads of the bolts.

SUBTASK 54-54-01-400-092-001

- (5) To install Pan Number 4 thermal blankets [4], do these steps:
 - (a) Install the pan [26] and the thermal blankets [4] as shown in Figure 404.
 - (b) Install the bolts [12], [13], [14] and washer [15], [16] with wet sealant, A00160.
 - 1) Apply a sealant, A00160 fillet seal to the heads of the bolts.

SUBTASK 54-54-01-400-093-001

- (6) To install Pan Number 5 thermal blankets [5], do these steps:
 - (a) Install the pan [27] and the thermal blankets [5] as shown in Figure 404.
 - (b) Install the bolts [12], [13], [14] and washer [15], [16] with wet sealant, A00160.
 - 1) Apply a sealant, A00160 fillet seal to the heads of the bolts.

SUBTASK 54-54-01-400-094-001

- (7) To install Pan Number 6 thermal blankets [6], do these steps:
 - (a) Install the pan [28] and the thermal blankets [6] as shown in Figure 404.
 - (b) Install the bolts [12], [13], [29], [30] and washer [15], [16] with wet sealant, A00160.
 - 1) Apply a sealant, A00160 fillet seal to the heads of the bolts.

SUBTASK 54-54-01-914-001-001

(8) Fill the gap between the heatshield castings and the titanium brazed panels with sealant, A00160.

SUBTASK 54-54-01-914-002-001

(9) Fill the gap between the heatshield castings and the heatshield fiberglass panels with sealant, A00160

NOTE: Do not apply sealant common to the forward access panels.

SUBTASK 54-54-01-914-003-001

(10) Do these steps to apply the Dow Corning 3110 RTV silicone rubber compound, A00209.

Table 401/54-54-01-993-801

Dow Corning 3110 RTV silicone rubber compound, A00209

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	Base/Catalyst Mixing Ratio by Weight	Approximate Working Time	Approximate Cure Time
Dow Corning RTV-3010-S Catalyst, G50912	• 5:1 • 10:1	• 1 Hour • 2 Hour	• 5 Hours • 7 Hours
Catalyst, G50512	• 20:1	• 3 Hour	• 12 Hours
Dow Corning RTV-3000 F Catalyst, G50913	• 10:1 • 20:1	• 10 Minutes • 20 Minutes	• 27 Minutes • 80 Minutes
Dow Corning 4 Catalyst, G50914	• 100:1 • 200:1 • 400:1	• 3 Minutes • 5 Minutes • 20 Minutes	• 10 Minutes • 20 Minutes • 2 Hours

NOTE: The leveling compound must be replaced in the areas where it had been removed as necessary to gain access for the replacement of thermal blankets.

- (a) The Aft Fairing Assembly must be oriented in aircraft ground attitude before the pouring of the leveling compound.
 - 1) For the left hand Fairing "looking forward," rotate the Fairing clockwise 5.9 degrees and nose up 1.7 degrees as measured from SAF STA 46.35 to SAF STA 78.85.
 - For right hand Fairing "looking forward," rotate the Fairing counter-clockwise 5.9 degrees and nose up 1.7 degrees as measured from SAF STA 46.35 to SAF STA 78.85.
- (b) Apply the Dow Corning 3110 RTV silicone rubber compound, A00209.

NOTE: Do not move the Aft Fairing Assembly until the leveling compound has cured. Do not block drain tube openings or drain passageways with leveling compound.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-01-200-001-001

(1) Do this task: Leak Check of the Aft Fairing, TASK 54-55-01-200-811-001.

SUBTASK 54-54-01-410-041-001

(2) Close the thrust reverser panels:

(TASK 78-31-00-410-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-410-042-001

(3) Close these fan cowl panels:

(TASK 71-11-04-410-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

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ARO 001-013 (Continued)

SUBTASK 54-54-01-440-020-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

----- END OF TASK -----

ARO 014-999

TASK 54-54-01-400-821-001

11. Aft Fairing Heatshield Thermal Blanket Installation

(Figure 405)

A. General

- (1) This task includes the steps to install the aft fairing heatshield thermal blankets..
- (2) This task has these steps:
 - (a) Install the heatshield thermal blankets.
 - (b) Close the access panels.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-06-400-801	Aft Fairing Access Panel Installation (P/B 401)
54-55-01-200-811-001	Leak Check of the Aft Fairing (P/B 601)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

D. Access Panels

Number	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

E. Prepare for the Installation

SUBTASK 54-54-01-100-001-001

(1) Make sure that the surface of the heatshield skin is clean and free of debris.

SUBTASK 54-54-01-400-111-001

- (2) Make sure that you follow the part mark instruction on top of the thermal blanket.
 - (a) The FWD arrow should be pointing forward.
 - (b) The THIS SIDE UP mark should show on top.

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ARO 014-999 (Continued)

F. Aft Fairing Heatshield Thermal Blanket Installation

SUBTASK 54-54-01-400-112-001

- (1) Install the Thermal Blankets.
 - (a) Put the thermal blanket on the surface of the heatshield skin, between the frame.
 - (b) Make sure that the thermal blanket fits correctly between the frames and the side skin of the heatshield assembly.

NOTE: The thermal blankets are designed to nest with the heatshield on installation. Minor dimension may vary, but fit and function will not be impaired.

- (c) Install the #1 thermal blanket [22].
- (d) Install the #2 thermal blanket [23].
- (e) Install the #3 thermal blanket [24].
- (f) Install the #4 thermal blanket [25].
- (g) Install the #5 thermal blanket [26].
- (h) Install the #6 thermal blanket [27].
- (i) Install the #7 thermal blanket [28].
- (j) Install the #8 thermal blanket [29].
- (k) Install the #9 thermal blanket [30].

SUBTASK 54-54-01-400-113-001

- (2) Install the heat shield frame [21].
 - (a) Install and tighten the bolts [16] and collars [17] that attach the heatshield frame [21] to the side skins.

SUBTASK 54-54-01-400-114-001

- Install the Aft Lower Spar [20].
 - (a) Align the end of the exit drain tube of the Aft Lower Spar [20] with the hole of the trailing edge fitting.
 - Carefully push the exit drain tube through the hole of the trailing edge fitting.
 NOTE: You can install the Aft Lower Spar with the exit drain tube attached.
 - (b) Install the and tighten the bolts [16] and collars [17] that attach the Aft Lower Spar [20] to the side skins of the heatshield assembly.

SUBTASK 54-54-01-400-115-001

- (4) Install the Forward Lower Spar [15].
 - (a) Position and align the holes of the Forward Lower Spar [15] with the holes of the side skins and bottom frames of the heatshield assembly.
 - (b) Install the bolts [18] and washers [19] on the top surface of the Forward Lower Spar [15].
 - 1) Do not tighten the bolts at this time.
 - (c) Install and tighten the bolts [16] and collars [17] on the side skins of the heatshield assembly.
 - (d) Tighten the bolts [18].

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ARO 014-999 (Continued)

G. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-01-400-117-001

(1) Install the Forward and the Aft Lower Access Panel. Do this task: TASK 54-52-06-400-801.

SUBTASK 54-54-01-200-004-001

(2) Do this task: Leak Check of the Aft Fairing, TASK 54-55-01-200-811-001.

SUBTASK 54-54-01-410-046-001

(3) Close the thrust reverser panels:

(Close the Thrust Reverser (Selection), TASK 78-31-00-410-816-H00)

<u>Number</u>	Name/Location
415AL	Left Thrust Reverser, Left Engine
416AR	Right Thrust Reverser, Left Engine
425AL	Left Thrust Reverser, Right Engine
426AR	Right Thrust Reverser, Right Engine

SUBTASK 54-54-01-410-047-001

(4) Close these fan cowl panels:

(Close the Fan Cowl Panel (Selection), TASK 71-11-04-410-814-H00)

<u>Number</u>	Name/Location
413AL	Left Fan Cowl Panel, Left Engine
414AR	Right Fan Cowl Panel, Left Engine
423AL	Left Fan Cowl Panel, Right Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-54-01-440-023-001

(5) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

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STRUT THERMAL INSULATION BLANKET - REPAIRS

1. General

A. This procedure gives a small repair for the strut thermal insulation blanket.

TASK 54-54-01-300-801

2. Repair For Small Area of Localized Damage

A. General

- (1) This procedure gives the instructions for a repair to small areas of damage on the strut thermal insulation blanket. Damage is limited to abrasion, tears, cracks, or punctures in the outer skin (Kapton film) of the blanket.
- (2) This repair is limited to areas where the temperature does not exceed 500 degrees F (260 degrees C) because the adhesive used in this repair can lose its adhesive properties at high temperatures.
 - (a) If the damage is in an area where the temperature exceeds 500 degrees F (260 degrees C), the blanket must be replaced.
 - (b) Blankets that must be replaced can be repaired with procedures given for the thrust reverser thermal insulation blankets.
 - 1) Do this task: (TASK 78-31-01-300-824-H00)
- (3) Clean surfaces for the adhesive are required to get the high strength bonds to hold the patch to the blanket. All unwanted materials such as oils, greases, waxes or dirt must be removed.
- (4) These blankets are a thermal insulation and fire barrier layer which is necessary to keep the strut structurally serviceable and can decrease the damage and repair costs from a duct burst or a fire.

B. References

Reference	Title
78-31-01-300-824-H00	Permanent Repair of the Thrust Reverser Metal-faced Thermal
	Insulation Blankets (P/B 801)

C. Tools/Equipment

Reference	Description
STD-551	Knife - Razor
STD-1053	Knife - Putty, Broad Blade
STD-1315	Spatula - Plastic, Stiff

D. Consumable Materials

Reference	Description	Specification
A00081	Adhesive - Silicone Rubber - RTV 106	BAC5010 Type 74
B00130	Alcohol - Isopropyl	TT-I-735
C00954	Primer - Adhesive Bonding - SS4004P RTV	BAC5010 PSD 6-168 Type 74
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A
G01306	Gloves - Lint-free	
G50005	Sheet - Stainless Steel	

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E. Location Zones

Zone	Area
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Damage Limits for the Repair

SUBTASK 54-54-01-800-001

- (1) If the damage to the insulation blanket is within these damage limits, you can do a small repair:
 - (a) The strut blanket must be in an area where the temperature does not exceed 500 degrees F (260 degrees C).
 - (b) Damage is limited to abrasion, tears, cracks, or punctures in the outer skin (Kapton film) of the blanket.
 - The blanket must be replaced if sections of the inner insulation core are missing or if the damage is a hole through the entire core of the blanket.
 - (c) Damage size limit for this repair is 3.0 inches (76.2 millimeters) in length by 1.0 inch (25.4 millimeters) in width.
 - 1) Total surface area must not be more than 3.0 square inches (19.3 square centimeters).
 - (d) Adjacent repair areas must not be within 2.0 inches (50.8 millimeters) from each other.
 - (e) Repair areas must not be more than 15% of the surface area of the blanket.
 - (f) If the damage is more than these limits, replaced the strut thermal insulation blanket.

G. Repair Limited to Areas Where The Temperature Is Less Than 500 degrees F (260 degrees C)

SUBTASK 54-54-01-210-001

(1) Do a check that the strut thermal insulation blanket is in an area where the temperature does not exceed 500 degrees F (260 degrees C) before you continue this repair (Figure 801).

SUBTASK 54-54-01-350-001

- (2) Prepare the damaged area on the blanket.
 - (a) Trim any loose or ragged Kapton film from the blanket surface with a razor knife, STD-551.
 - (b) Wipe or scrub the blanket to remove any loose soil, oil, grease, or hydraulic fluid with a clean cotton wiper, G00034.



DO NOT GET SOLVENTS IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM THESE MATERIALS. PUT ON A RESPIRATOR, PROTECTIVE SPLASH GOGGLES, AND GLOVES WHEN YOU USE THESE MATERIALS. KEEP THESE MATERIALS AWAY FROM SPARKS, FLAME AND HEAT. THESE MATERIALS ARE POISONOUS AND FLAMMABLE WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.



PREVENT THE SOLVENTS FROM WETTING THE INSULATION MATERIAL. THE SOLVENT AND OTHER FLUIDS WILL DECREASE THE PERFORMANCE AND MATERIAL PROPERTIES OF THE INSULATION BLANKET.

(c) Clean the damaged area and the area around the damaged area with a clean cotton wiper, G00034 moist with alcohol, B00130.

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- 1) Continue to clean the repair area with a new cloth and solvent until the new cloth does not show any more contamination.
- 2) Wipe the area dry with a dry, clean cloth before the solvent evaporates.
- 3) Use clean lint-free gloves, G01306 when you touch the cleaned repair surface.
- 4) Make sure the clean repair surface is not contaminated again.
- (d) Use a clean cotton wiper, G00034 to apply a thin, uniform layer of SS4004P RTV primer, C00954 to the cleaned surface.
 - 1) Protect the primed surface from contamination at all times.
 - 2) Let the primer become dry for 30 minutes minimum at 65-100 degrees F (18.3-37.8 degrees C).

SUBTASK 54-54-01-350-002

- (3) Make the repair patch.
 - (a) View the damaged area and find the size of the repair patch required.
 - NOTE: Damage size limit for this repair is 3.0 inches (76.2 mm) in length by 1.0 inch (25.4 mm) in width. Total surface area must not be more than 3.0 square inches (1935 square mm).
 - 1) The patch must overlap the damaged area in all directions by a minimum of 0.5 inch (12.7 mm).
 - NOTE: A 1.0 inch (25.4 mm) overlap is recommended.
 - 2) Make a paper pattern for the patch and dry fit the paper pattern over the damaged area to make sure the patch is the correct size.
 - NOTE: A paper pattern is used to find the size of the patch if the patch must cover a contoured surface.
 - (b) Use the paper pattern to cut the patch from 0.018-0.025 inch (0.457-0.635 mm) thick CRES stainless steel sheet, G50005.
 - 1) Trim the corners to make a rounded edge that has a minimum radius of 0.25 inch (6.4 mm).
 - (c) Dry fit the patch at the damaged area.



DO NOT GET SOLVENTS IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM THESE MATERIALS. PUT ON A RESPIRATOR, PROTECTIVE SPLASH GOGGLES, AND GLOVES WHEN YOU USE THESE MATERIALS. KEEP THESE MATERIALS AWAY FROM SPARKS, FLAME AND HEAT. THESE MATERIALS ARE POISONOUS AND FLAMMABLE WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (d) Clean the patch with a clean cotton wiper, G00034 moist with alcohol, B00130.
 - 1) Wipe the area dry with a dry, clean cloth before the solvent evaporates.
 - 2) Use clean lint-free gloves, G01306 when you touch the cleaned patch.
 - 3) Make sure the clean patch is not contaminated again.

SUBTASK 54-54-01-350-003

(4) Prepare the RTV 106 adhesive, A00081 per the manufacturer's instructions.

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SUBTASK 54-54-01-350-004



IMMEDIATELY APPLY THE PATCH TO THE BLANKET AFTER THE ADHESIVE IS APPLIED TO THE PATCH. THE SURFACE OF THE ADHESIVE WILL FORM A SKIN AND THE PATCH WILL NOT ADHERE CORRECTLY TO THE BLANKET.

- (5) Apply the patch to the blanket.
 - (a) Apply a uniform layer of adhesive, 0.010-0.020 inch (0.254-0.508 mm) thick, to the patch with a broad blade putty knife, STD-1053 or stiff plastic spatula, STD-1315.
 - (b) Make sure the patch is installed immediately after the adhesive is applied.

NOTE: Immediately after the adhesive is applied, the adhesive will begin to cure and within a few minutes, form a skin on the surface of the adhesive. The patch will not adhere properly if a skin has formed on the adhesive.



EFFECTIVITY

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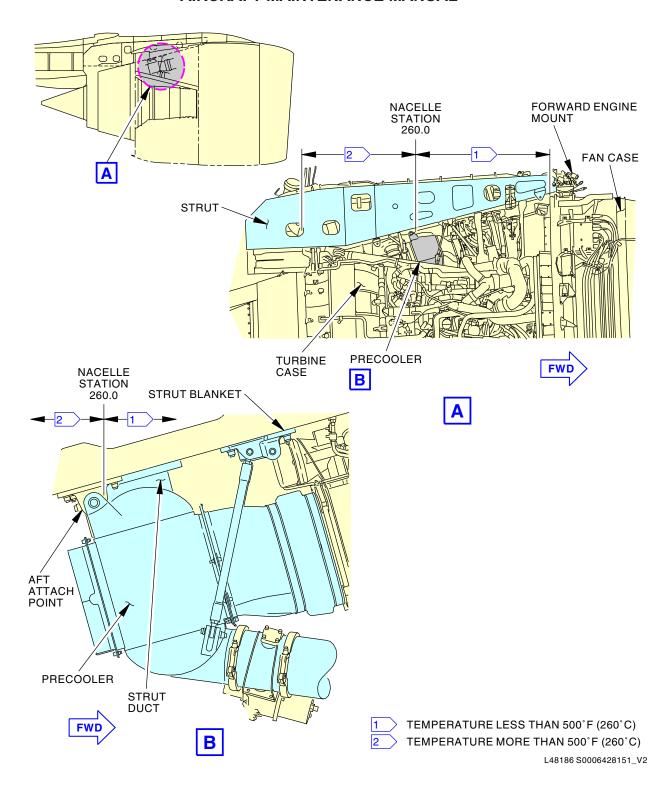
DO NOT APPLY TOO MUCH PRESSURE WHEN THE PATCH IS APPLIED TO THE REPAIR AREA. THE ADHESIVE WILL SQUEEZE OUT FROM UNDER THE PATCH.

- (c) Position and apply the patch over the repair area.
 - 1) Apply light pressure to the patch as the adhesive becomes dry.
 - 2) Remove all extra adhesive from the edges with a clean cloth.
- (d) Allow the adhesive to cure for minimum of 24 hours at a minimum of 65 degrees F (18.3 degrees C).

NOTE: The adhesive requires a minimum of 20 percent relative humidity to cure. Because the adhesive requires moisture from the air to cure, do not cover the adhesive. There will be the smell of acetic acid until the adhesive has cured.

——— END OF TASK ———





Strut Thermal Insulation Blanket Repair Area Figure 801/54-54-01-990-816

EFFECTIVITY

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D633W101-ARO

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AFT FAIRING HEATSHIELD SEAL - REMOVAL/INSTALLATION

1. General

- A. This procedure gives the instructions for the removal/installation of the aft fairing heatshield seal.
- B. This procedure has these tasks:
 - (1) A removal of the aft fairing heatshield seal.
 - (2) An installation of the aft fairing heatshield seal.

TASK 54-54-03-000-801-001

2. Aft Fairing Heatshield Seal Removal

(Figure 401)

A. General

- (1) This task gives the instructions on how to:
 - (a) Remove the aft fairing heatshield seal.
 - (b) Remove the gap cover strips.
- (2) This task has these steps:
 - (a) Get access to the aft fairing heatshield seal.
 - (b) Remove the aft fairing heatshield seal.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-52-04-000-801	Aft Fairing Removal (P/B 401)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)
78-11-03-000-801-H01	Center Vent Tube Extension Removal (P/B 401)

C. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

D. Access Panels

Number	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

E. Prepare for the Removal

SUBTASK 54-54-03-040-001-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

ARO 001-013

SUBTASK 54-54-03-010-001-001

- (2) Get access to the aft fairing heatshield seal by one of the two following methods:
 - (a) Remove the aft fairing:

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ARO 001-013 (Continued)

- 1) To remove the aft fairing, do this task: Aft Fairing Removal, TASK 54-52-04-000-801.
- (b) Remove two of the aft fairing heatshield castings:
 - To remove the engine center vent tube extension, do this task: Center Vent Tube Extension Removal, TASK 78-11-03-000-801-H01.
 - 2) Open the applicable aft fairing access doors, do this task:

Aft Fairing Access Doors Operation, TASK 54-52-05-800-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

- 3) Remove the heatshield casting #1 at the forward end of the aft fairing:
 - a) Remove the 4 bolts [8], 4 bolts [5], 8 washers [4], 12 bolts [3], 8 washers [6], 4 washers [7], heatshield casting #1 [1], and its thermal blanket.
- 4) Remove heatshield casting #2 (adjacent to casting #1):
 - a) Remove the 4 bolts [8], 4 bolts [5], 8 washers [4], 4 bolts [3], 4 washers [7], heatshield casting #2 [2], and its thermal blanket.

ARO 014-999

SUBTASK 54-54-03-010-013-001

(3) Remove the aft fairing. Do this task: Aft Fairing Removal, TASK 54-52-04-000-801.

SUBTASK 54-54-03-010-014-001

(4) Open the applicable aft fairing access doors, do these tasks:

Aft Fairing Access Doors Operation, TASK 54-52-05-800-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

ARO ALL

F. Aft Fairing Heatshield Seal Removal

ARO 001-013

SUBTASK 54-54-03-000-001-001

ARO 001-013 PRE SB 777-54-0041

- (1) Remove the aft fairing heatshield seal from the heatshield casting.
 - (a) Remove the 19 bolts [13], 19 nuts [12], seal retainer [9], seal retainer [10], seal retainer [11], and seal [14].
 - 1) Remove adjacent aft fairing heatshield seals as required.

ARO 001-013 POST SB 777-54-0041

(2) Remove the aft fairing heatshield seal from the heatshield casting.

ARO ALL

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ARO 001-013 POST SB 777-54-0041 (Continued)

- (a) Remove the 19 bolts [13], 19 nuts [12], seal retainer [9], seal retainer [10], seal retainer [11], seal [14], and 19 spacers [16].
 - 1) Remove adjacent aft fairing heatshield seals as required.

ARO 014-999

SUBTASK 54-54-03-000-011-001

- (3) Remove the aft fairing heatshield seal from the forward bottom heatshield skin.
 - (a) Remove the 19 bolts [13], 19 nuts [12], seal retainer [9], seal retainer [10], seal retainer [11], and seal [14].
 - 1) Remove adjacent aft fairing heatshield seals as required.

ARO ALL

G. Gap Cover Strip Removal

ARO 014-999; ARO 001-013 PRE SB 777-54-0042

SUBTASK 54-54-03-010-015-001

- (1) If necessary, remove the gap cover strip [20] from heatshield pan #1.
 - (a) Remove the 30 bolts [17], 2 bolts [19], and 32 washers [18].

SUBTASK 54-54-03-010-016-001

- (2) If necessary, remove the gap cover strip [21] from heatshield pan #2.
 - (a) Remove the 22 bolts [17], 2 bolts [19], and 24 washers [18].

SUBTASK 54-54-03-010-017-001

- (3) If necessary, remove the gap cover strip [22] from heatshield pan #3.
 - (a) Remove the 15 bolts [17], 2 bolts [19], and 17 washers [18].

SUBTASK 54-54-03-010-018-00

- (4) If necessary, remove the gap cover strip [20] and the filler [23] from heatshield pan #1.
 - (a) Remove the 30 bolts [17], 2 bolts [19], and 32 washers [18].

SUBTASK 54-54-03-010-019-001

- (5) If necessary, remove the gap cover strip [21] and the filler [24] from heatshield pan #2.
 - (a) Remove the 22 bolts [17], 2 bolts [19], and 24 washers [18].

SUBTASK 54-54-03-010-020-001

- (6) If necessary, remove the gap cover strip [22] and the filler [25] from heatshield pan #3.
 - (a) Remove the 15 bolts [17], 2 bolts [19], and 17 washers [18].

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TASK 54-54-03-400-801-001

3. Aft Fairing Heatshield Seal Installation

(Figure 401)

A. General

- (1) This task gives the instructions on how to:
 - (a) Install the gap cover strips.

ARO ALL

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- (b) Install the aft fairing heatshield seal.
- (2) This task has these steps:
 - (a) Install the aft fairing heatshield seal.
 - (b) Assemble the aft fairing.

B. References

Reference	Title
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-04-400-801	Aft Fairing Installation (P/B 401)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)
78-11-03-400-801-H01	Center Vent Tube Extension Installation (P/B 401)
SOPM 20-50-01	Bolt and Nut Installation

C. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
A00209	Compound - Silicone Rubber - Dow Corning RTV3110	
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
G50912	Catalyst - Dow Corning RTV-3010-S (Formerly S Tin NW)	
G50913	Catalyst - Dow Corning RTV-3000 F (Formerly Dow Corning F) Catalyst	
G50914	Catalyst - Dow Corning 4 Catalyst	

D. Location Zones

Zone	Area	
410	PowerPlant, Left	
420	PowerPlant, Right	
430	Subzone 430 - Left Nacelle Strut	
440	Subzone 440 - Right Nacelle Strut	

E. Access Panels

Number	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

F. Gap Cover Strip Installation

ARO 014-999; ARO 001-013 PRE SB 777-54-0042

SUBTASK 54-54-03-410-009-001

- (1) If necessary, install the gap cover strip on heatshield pan #1.
 - (a) Install the 30 bolts [17], two bolts [19], and 32 washers [18].

SUBTASK 54-54-03-410-010-001

- (2) If necessary, install the gap cover strip on heatshield pan #2.
 - (a) Install the 22 bolts [17], two bolts [19], and 24 washers [18].

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ARO 014-999; ARO 001-013 PRE SB 777-54-0042 (Continued)

SUBTASK 54-54-03-410-011-001

- (3) If necessary, install the gap cover strip on heatshield pan #3.
 - (a) Install the 15 bolts [17], two bolts [19], and 17 washers [18].

SUBTASK 54-54-03-410-012-001

- (4) If necessary, install the gap cover strip and filler on heatshield pan #1.
 - (a) Install the 30 bolts [17], two bolts [19], and 32 washers [18].

SUBTASK 54-54-03-410-013-001

- (5) If necessary, install the gap cover strip and filler on heatshield pan #2.
 - (a) Install the 22 bolts [17], two bolts [19], and 24 washers [18].

SUBTASK 54-54-03-410-014-001

- (6) If necessary, install the gap cover strip and filler on heatshield pan #3.
 - (a) Install the 15 bolts [17], two bolts [19], and 17 washers [18].

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G. Aft Fairing Heatshield Seal Installation

ARO 001-013

SUBTASK 54-54-03-400-001-001

ARO 001-013 PRE SB 777-54-0041



MAKE SURE THAT THE SEAL RETAINER EDGE IS BENT AWAY FROM THE SEAL. IF THE RETAINER EDGE IS NOT BENT AWAY FROM THE SEAL, DAMAGE TO THE SEAL AND THE AFT STRUT FAIRING BULKHEAD CAN OCCUR.

- (1) Install the 19 bolts [13], 19 nuts [12], seal retainer [9], seal retainer [10], seal retainer [11], and seal [14].
 - (a) Install any adjacent aft fairing heatshield seals as required.

ARO 001-013 POST SB 777-54-0041



MAKE SURE THAT THE SEAL RETAINER EDGE IS BENT AWAY FROM THE SEAL. IF THE RETAINER EDGE IS NOT BENT AWAY FROM THE SEAL, DAMAGE TO THE SEAL AND THE AFT STRUT FAIRING BULKHEAD CAN OCCUR.

- (2) Install the 19 bolts [13], 19 nuts [12], seal retainer [9], seal retainer [10], seal retainer [11], seal [14], and 19 spacers [16].
 - (a) Drill or ream holes in the aft fairing heatshield seals to a diameter of 0.51 in. (12.95 mm)-0.57 in. (14.48 mm). Refer to SOPM 20-50-01 as an accepted procedure.
 - (b) Install any adjacent aft fairing heatshield seals as required.
 - (c) Make sure that you install the spacer through the seal.

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ARO 014-999

SUBTASK 54-54-03-400-012-001



MAKE SURE THAT THE SEAL RETAINER EDGE IS BENT AWAY FROM THE SEAL. IF THE RETAINER EDGE IS NOT BENT AWAY FROM THE SEAL, DAMAGE TO THE SEAL AND THE AFT STRUT FAIRING BULKHEAD CAN OCCUR.

- (3) Install the aft fairing heatshield seal on the forward bottom heatshield skin.
 - (a) Install the 19 bolts [13], 19 nuts [12], seal retainer [9], seal retainer [10], seal retainer [11], and seal [14].
 - 1) Install any adjacent aft fairing heatshield seals as required.

ARO ALL

H. Put the Airplane Back to Its Usual Condition

ARO 001-013

SUBTASK 54-54-03-410-001-001

- (1) Assemble the aft fairing by the applicable method:
 - (a) Install the aft fairing:
 - 1) To install the aft fairing, do this task: Aft Fairing Installation, TASK 54-52-04-400-801.
 - (b) Install the two aft fairing heatshields:
 - Put the heatshield casting #2 loosely in its position (adjacent to casting #1 position).
 NOTE: If you install casting #2 completely, casting #1 possibly will not fit.
 - 2) Put the heatshield casting #1 loosely in its position at the forward end of the aft fairing.
 - 3) Install heatshield casting #2 completely:
 - a) Apply sealant, A00160 to all fasteners as you install the heatshield casting.

NOTE: At a temperature of 77°F (25°C) and a relative humidity of 50%, the mixed sealant will cure within 48 hours.

At a temperature of 120°F (49°C), the mixed sealant will cure within 4 hours.

- b) Install the four bolts [8], four bolts [5], eight washers [4], four bolts [3], four washers [7], heatshield casting #2 [2], and its thermal blanket.
- 4) Install the heatshield casting #1 completely:
 - a) Apply sealant, A00160 to all fasteners as you install the heatshield casting.

NOTE: At a temperature of 77°F (25°C) and a relative humidity of 50%, the mixed sealant will cure within 48 hours.

At a temperature of 120°F (49°C), the mixed sealant will cure within 4 hours.

- b) Install the four bolts [8], four bolts [5], eight washers [4], 12 bolts [3], eight washers [6], four washers [7], heatshield casting #1 [1], and its thermal blanket.
- 5) Using sealant, A00247, fill the gap between the heat shield fiberglass panels and the heat shield castings.

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ARO 001-013 (Continued)

- 6) Fill the gap between the heat shield fiberglass panels and the forward titanium brazed panel.
- 7) Fill the gap between the aft side panes and aft titanium brazed panel and the aft titanium brazed panel.
- 8) Using sealant, A00160, fill the gap between the forward titanium brazed panel and the aft titanium brazed panel.
- 9) After the sealant, A00160 has cured, apply leveling Dow Corning 3110 RTV silicone rubber compound, A00209, (Dow Corning 3110 RTV Rubber Cure Times/Table 401).

NOTE: Cure Dow Corning 3110 RTV silicone rubber compound, A00209 at temperatures above 70°F (21°C).

Table 401/54-54-03-993-816

Dow Corning 3110 RTV silicone rubber compound, A00209			
	Base/Catalyst Mixing Ratio by Weight	Approximate Working Time	Approximate Cure Time
Dow Corning RTV-3010-S Catalyst, G50912	• 5:1 • 10:1 • 20:1	• 1 Hour • 2 Hour • 3 Hour	• 5 Hours • 7 Hours • 12 Hours
Dow Corning RTV-3000 F Catalyst, G50913	• 10:1 • 20:1	• 10 Minutes • 20 Minutes	• 27 Minutes • 80 Minutes
Dow Corning 4 Catalyst, G50914	• 100:1 • 200:1 • 400:1	• 3 Minutes • 5 Minutes • 20 Minutes	• 10 Minutes • 20 Minutes • 2 Hours

10) Close the applicable aft fairing access doors, do this task:

Aft Fairing Access Doors Operation, TASK 54-52-05-800-801

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

11) To install the engine center vent tube, do this task: Center Vent Tube Extension Installation, TASK 78-11-03-400-801-H01.

ARO 014-999

SUBTASK 54-54-03-410-007-001

(2) Install the aft fairing. Do this task: Aft Fairing Installation, TASK 54-52-04-400-801.

SUBTASK 54-54-03-410-008-001

(3) Close the applicable aft fairing access doors, do these tasks:

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing

ARO ALL

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ARO 014-999 (Continued)

(Continued)

<u>Number</u>	Name/Location
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CL	Left Forward Access Door, Right Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

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SUBTASK 54-54-03-440-001-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

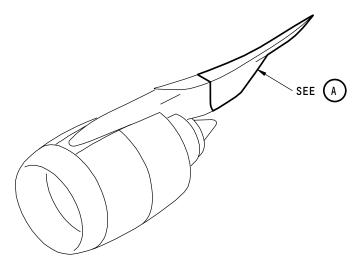
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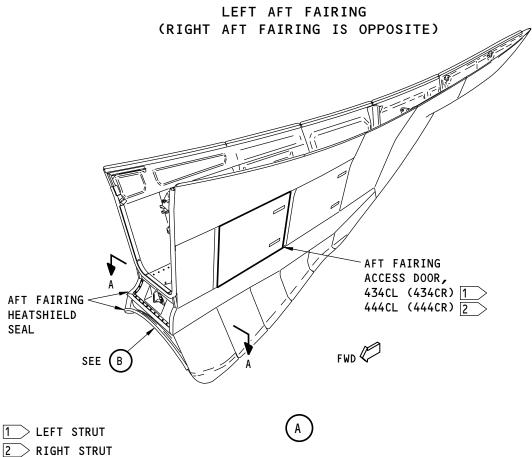
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H13544 S0006428185_V1

Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 1 of 10)

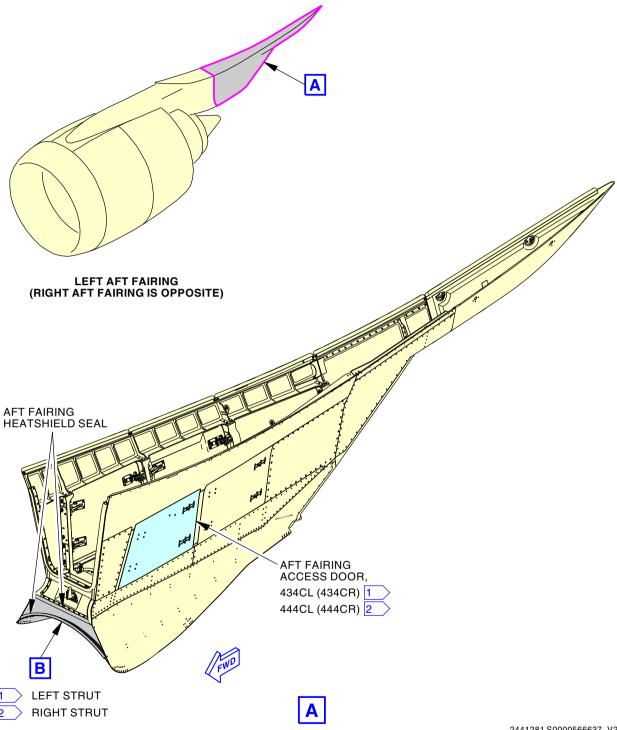
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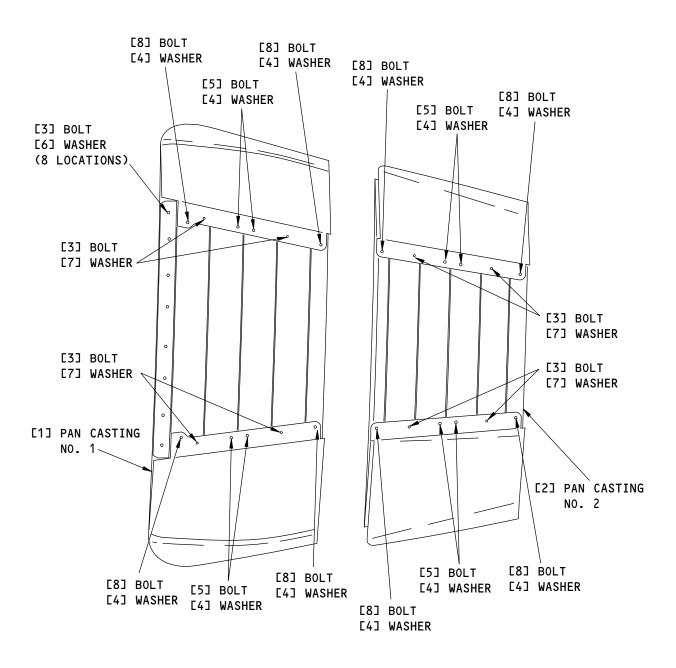
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Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 2 of 10)

EFFECTIVITY ARO 014-999 D633W101-ARO 54-54-03

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Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 3 of 10)

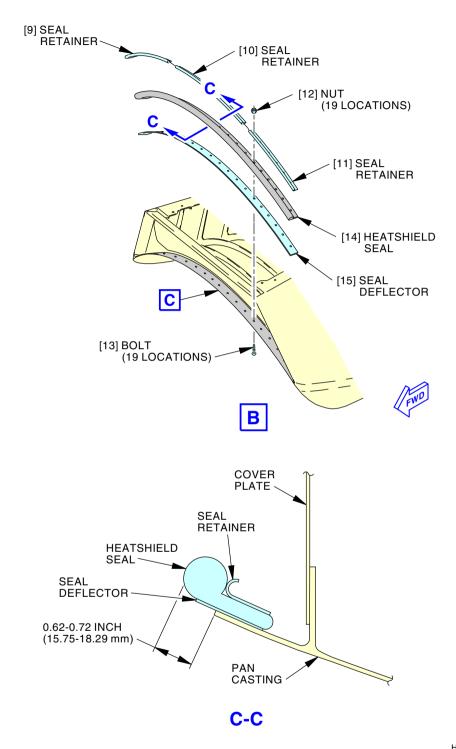
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H16723 S0006428188_V5

Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 4 of 10)

EFFECTIVITY

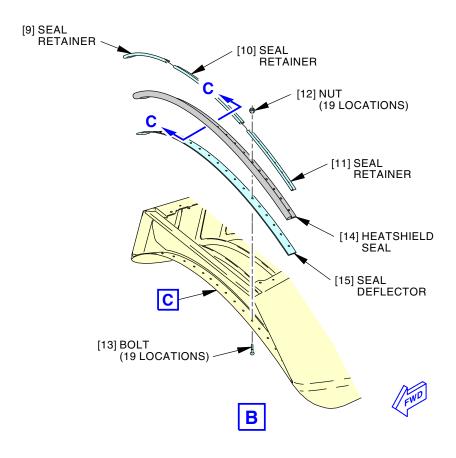
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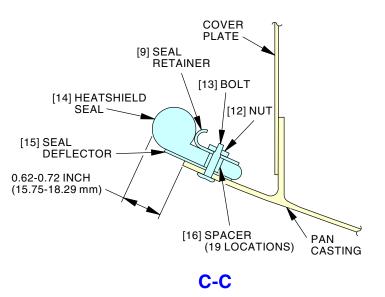
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2487951 S0000585173_V2

Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 5 of 10)

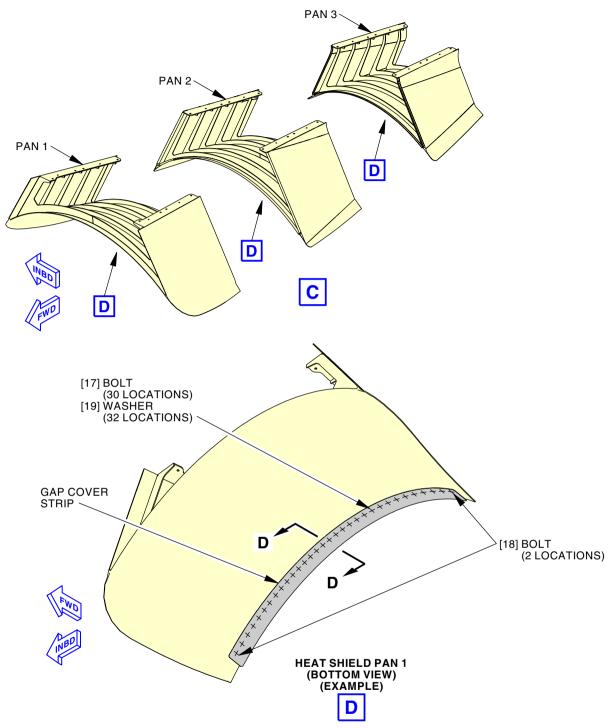
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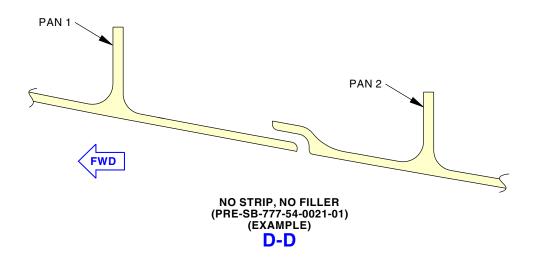
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Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 6 of 10)





AIRCRAFT MAINTENANCE MANUAL



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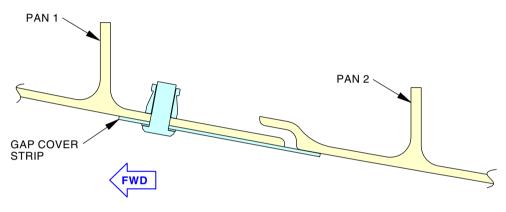
Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 7 of 10)

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54-54-03

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WITH UNTRIMMED TITANIUM STRIPS, NO FILLER (PRE-SB-777-54-0026-02 AND POST-SB-777-54-0021-01) (EXAMPLE)

2816578 S0000649785_V1

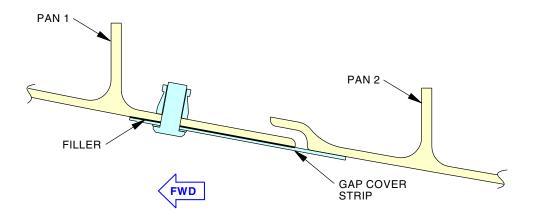
Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 8 of 10)

ARO ALL
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54-54-03

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WITH UNTRIMMED TITANIUM STRIPS AND FILLER (PRE-SB-777-54-0042-00 AND POST-SB-777-54-0026-02) (EXAMPLE)

2816579 S0000649786_V1

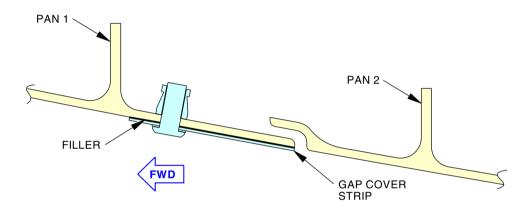
Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 9 of 10)

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WITH TRIMMED TITANIUM STRIPS AND FILLER (POST -SB-777-54-0042-00) (EXAMPLE)

D-D

2518059 S0000591826_V2

Aft Fairing Heatshield Seal Installation Figure 401/54-54-03-990-801-001 (Sheet 10 of 10)

ARO ALL
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AFT FAIRING HEATSHIELD SEAL - INSPECTION/CHECK

1. General

A. This procedure examines the aft fairing heatshield forward seal.

TASK 54-54-03-000-804

2. Aft Fairing Heatshield Seal Inspection

(Figure 601)

A. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-54-03-000-801-001	Aft Fairing Heatshield Seal Removal (P/B 401)
54-54-03-400-801-001	Aft Fairing Heatshield Seal Installation (P/B 401)
NDT Part 6, 51-00-08	Inspection of Heat Damage to Aluminum Structure
SRM 51-20-03	Structural Repair Manual

B. Location Zones

Zone	Area
434	Aft Strut Fairing - Left Nacelle Strut
444	Aft Strut Fairing - Right Nacelle Strut

C. Prepare for the Examination

SUBTASK 54-54-03-040-004

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

D. Aft Fairing Heatshield Seal Examination

SUBTASK 54-54-03-000-004

- (1) Do a visual inspection of the forward end of the aft fairing, (Figure 601)
 - <u>NOTE</u>: It is not necessary to remove the aft fairing or the heatshield castings to do a visual inspection of the heatshield forward seal.
 - (a) If the seal is burned or frayed in the area shown (Figure 601), remove the aft fairing or the applicable heatshield castings, (TASK 54-54-03-000-801-001).
 - (b) If the seal is frayed or missing pieces, replace the seal.
 - (c) If the seal is to be replaced, do one of the following inspections:
 - 1) If the aft fairing was removed for access to the seal, visually inspect the forward bulkhead and the secondary seal.

ARO 001-013

2) If only the heatshield castings were removed for access to the seal, visually inspect the internal condition of the aft fairing.

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- (d) Make sure that there are no signs of blisters, discolored, or darkened primer in the area of the forward bulkhead of the aft fairing.
 - 1) Use a brush to remove any soot as necessary.
 - 2) If the green primer coat is still in good condition, there is no heat damage.
 - 3) If the green primer coat is damaged because of heat, do the following tasks:

ARO ALL



- a) (SRM 51-20-03)
- b) (NDT Part 6, 51-00-08)
- E. Put the Airplane Back to Its Usual Condition

SUBTASK 54-54-03-010-004

(1) If you removed the aft fairing or heatshield castings, do this task: Aft Fairing Heatshield Seal Installation, TASK 54-54-03-400-801-001.

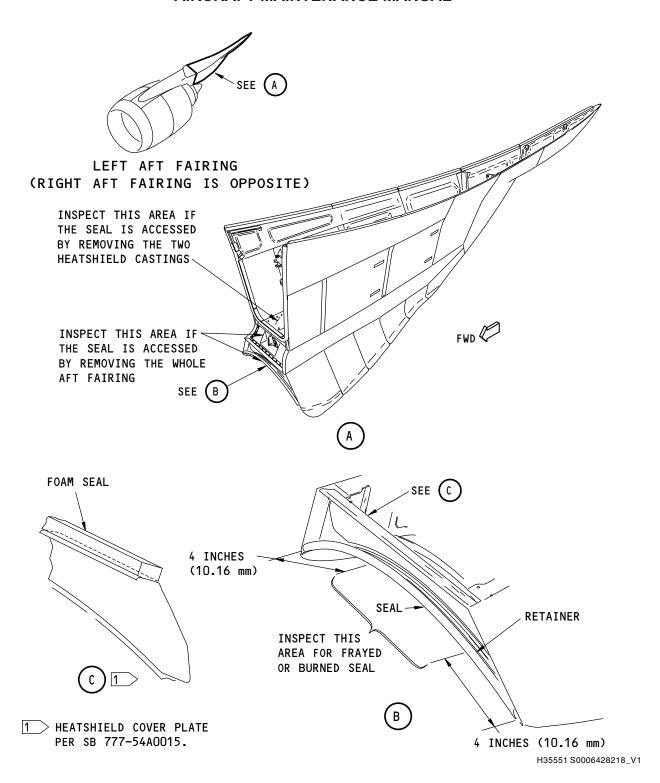
SUBTASK 54-54-03-040-005

(2) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

ARO ALL





Aft Fairing Heatshield Seal Examination Figure 601/54-54-03-990-807 (Sheet 1 of 3)

EFFECTIVITY

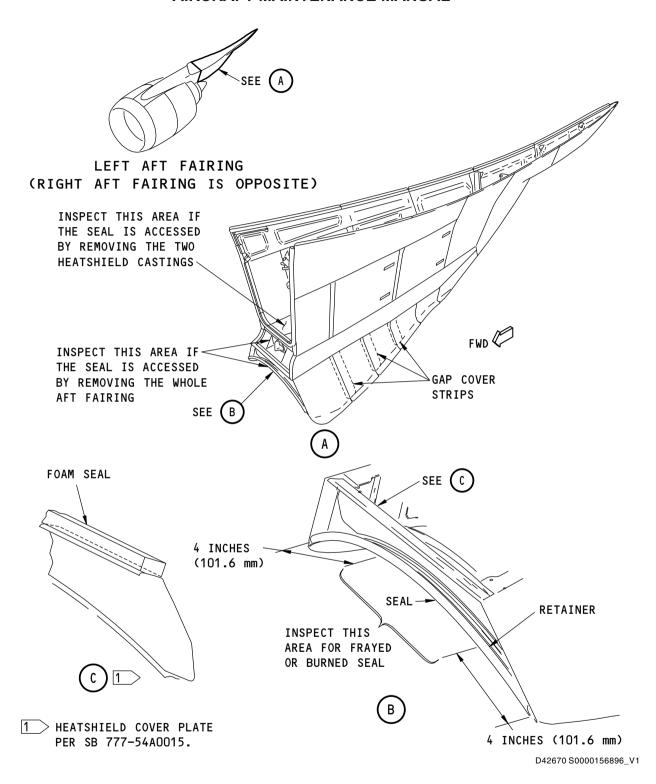
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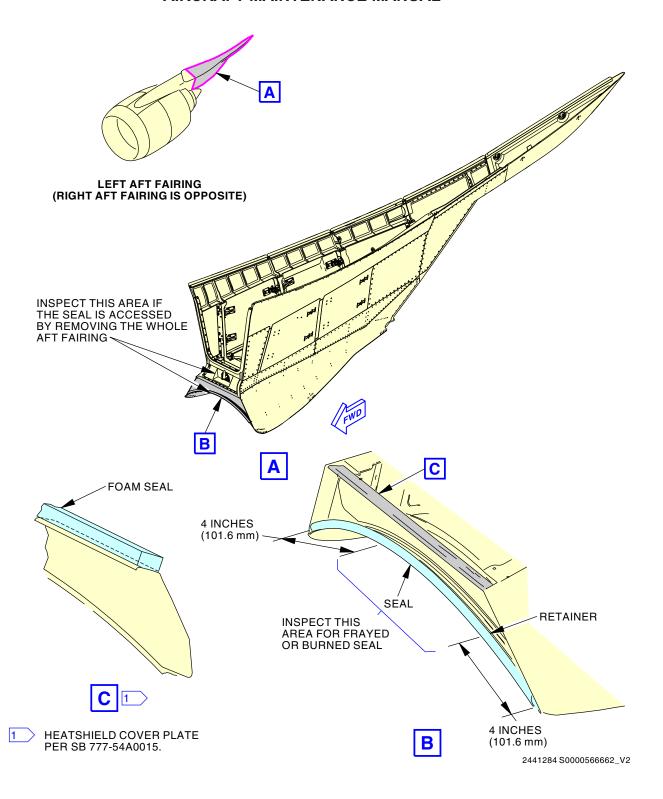
Aft Fairing Heatshield Seal Examination Figure 601/54-54-03-990-807 (Sheet 2 of 3)

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Aft Fairing Heatshield Seal Examination Figure 601/54-54-03-990-807 (Sheet 3 of 3)

EFFECTIVITY
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STRUT DRAINS - MAINTENANCE PRACTICES

1. General

- A. This procedure gives instructions on how to clean the strut drain tubes if they become clogged.
- B. This procedure has these tasks:
 - (1) A task to clean the strut drain.
 - (2) A task to clean the aft fairing drain.

ARO 014-999

(3) A task to clean the hydraulic reservoir drain tube.

ARO ALL

C. The drain tubes carry fluid leakage (fuel, oil, hydraulic fluid, or water) away from a possible leak source to remove it from the nacelle strut compartment.

ARO 014-999

D. The hydraulic reservoir drain tube is connected to the strut drain tube by a T-Fitting aft of Frame 7.

ARO ALL

TASK 54-55-01-100-801-001

2. Strut Drain Clean

(Figure 201)

A. General

- (1) Do this task for the strut drain tubes when it is possible there is blockage.
- (2) The strut drain has two inlets:
 - (a) The forward inlet is in the forward strut compartment (NSTA 230).
 - (b) The aft inlet is on the inboard side of the aft upper spar.

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(3) The hydraulic reservoir overflow drain tube inlet is below the hydraulic reservoir.

ARO 001-013

(4) The strut drain has one outlet at the aft end of the aft fairing heat shield (NSTA 432).

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(5) The strut drain, with the hydraulic reservoir drain and the aft fairing compartment drain, have one outlet at the aft end of the aft fairing heat shield (NSTA 432).

ARO ALL

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)
54-53-01-000-802-001	Strut Access Doors Removal (P/B 401)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)

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(Continued)

Reference	Title
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-653	Platform - Engine and Strut Access
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG

D. Consumable Materials

Reference	Description	Specification
G01505	Lockwire - Safety And Lock	NASM20995

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
432CR	Right Aft Side Fairing, Left Strut
432DR	Right Access Door, Left Strut
434CR	Right Forward Access Door, Left Strut Aft Fairing
442DR	Right Access Door, Right Strut
444CR	Right Forward Access Door, Right Strut Aft Fairing
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

G. Prepare to Clean the Strut Drains

SUBTASK 54-55-01-040-012-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-55-01-480-004-001

(2) Put the engine and strut access platform, STD-653 in position.

SUBTASK 54-55-01-010-011-001

- (3) Do these steps to remove the strut access doors, panels, and fairings:
 - (a) Remove the applicable forward fairing:

(TASK 54-52-01-000-801-001)

NumberName/Location432CRRight Aft Side Fairing, Left Strut

(b) Remove the applicable strut access doors:

(TASK 54-53-01-000-802-001)

<u>Number</u>	Name/Location	
432DR	Right Access Door, Left Strut	
442DR	Right Access Door, Right Strut	

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(c) Remove the applicable wing leading edge panels:

(TASK 57-41-10-000-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

(d) Open the applicable aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434CR	Right Forward Access Door, Left Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

H. Strut Drain Tube Clean

SUBTASK 54-55-01-210-004-001

(1) Use (Figure 201) to find the drain tube(s) that you must check.

SUBTASK 54-55-01-280-001-001

- (2) To check for blockage in the strut forward drain tube, do these steps:
 - (a) Install a plug in the strut drain aft inlet.

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(b) Install a plug in the hydraulic reservoir overflow drain inlet.

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- (c) Put a cloth on the open end of the strut drain forward inlet to collect all unwanted materials.
- (d) Use an 0-50 psig dry filtered regulated air source, STD-1082 to supply 30-40 psig air pressure to the strut drain outlet (NSTA 432).
- (e) Make sure there is airflow through the drain tubes from the drain outlet to the drain forward inlet.
- (f) Remove the air pressure.
- (g) Remove the cloth from the drain inlet.

SUBTASK 54-55-01-280-002-001

- (3) To check for blockage in the strut aft drain tube, do these steps:
 - (a) Install a plug in the strut drain forward inlet.

ARO 014-999

(b) Install a plug in the hydraulic reservoir overflow drain inlet.

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- (c) Put a cloth on the open end of the strut drain aft inlet to collect all unwanted materials.
- (d) Use an 0-50 psig dry filtered regulated air source, STD-1082 to supply 30-40 psig air pressure to the strut drain outlet (NSTA 432).
- (e) Make sure there is airflow through the drain tubes from the drain outlet to the drain aft inlet.
- (f) Remove the air pressure.
- (g) Remove the cloth from the drain inlet.

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SUBTASK 54-55-01-280-007-001

- (4) To check for blockage in the hydraulic reservoir drain tube, do these steps:
 - (a) Install a plug in the strut drain forward inlet.
 - (b) Install a plug in the strut drain aft inlet.
 - (c) Put a cloth on the open end of the strut drain aft inlet to collect all unwanted materials.
 - (d) Use an 0-50 psig dry filtered regulated air source, STD-1082 to supply 30-40 psig air pressure to the strut drain outlet (NSTA 432).
 - (e) Make sure there is airflow through the drain tubes from the drain outlet to the hydraulic reservoir drain inlet.
 - (f) Remove the air pressure.
 - (g) Remove the cloth from the drain inlet.

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SUBTASK 54-55-01-280-003-001

- (5) If it is necessary to check for blockage in the strut drain tube in the aft fairing, do these steps:
 - (a) Disconnect the strut drain tube in the aft fairing at the strut aft bulkhead.
 - (b) Put a cloth on the open end of the strut drain tube to collect all unwanted materials.
 - (c) Use an 0-50 psig dry filtered regulated air source, STD-1082 to supply 30-40 psig air pressure to the strut drain outlet (NSTA 432).
 - (d) Make sure there is airflow through the drain tubes from the drain outlet to the drain inlet.
 - (e) Remove the air pressure.
 - (f) Remove the cloth from the drain inlet.
 - (g) Connect the strut drain tube in the aft fairing at the strut aft bulkhead.

SUBTASK 54-55-01-100-019-001

- (6) If there is no airflow, do these steps to remove the blockage:
 - (a) Remove the drain tube with the blockage.
 - (b) Remove the blockage with a piece of lockwire, G01505.
 - (c) Install the drain tube that you removed.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-160-012-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Make sure that the work area is clean and remove all tools and other items.

SUBTASK 54-55-01-010-014-001

- (2) Do these steps to close the strut access doors, panels, and fairings:
 - (a) Close these aft fairing access doors: (TASK 54-52-05-800-801)

ARO ALL

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Number Name/Location

434CR Right Forward Access Door, Left Strut Aft Fairing
444CR Right Forward Access Door, Right Strut Aft Fairing

(b) Install the wing leading edge panels:

(TASK 57-41-10-400-801)

Number	Name/Location

Upper Nacelle Strut Interface (Gap Cover) Panel
 Upper Nacelle Strut Interface (Gap Cover) Panel

(c) Install these strut access doors

(TASK 54-53-01-400-802-001)

<u>Number</u>	<u>Name/Location</u>
432DR	Right Access Door, Left Strut
442DR	Right Access Door, Right Strut

(d) Install the forward fairing:

(TASK 54-52-01-400-801-001)

432CR Right Aft Side Fairing, Left Strut

SUBTASK 54-55-01-080-004-001

(3) Remove the engine and strut access platform, STD-653.

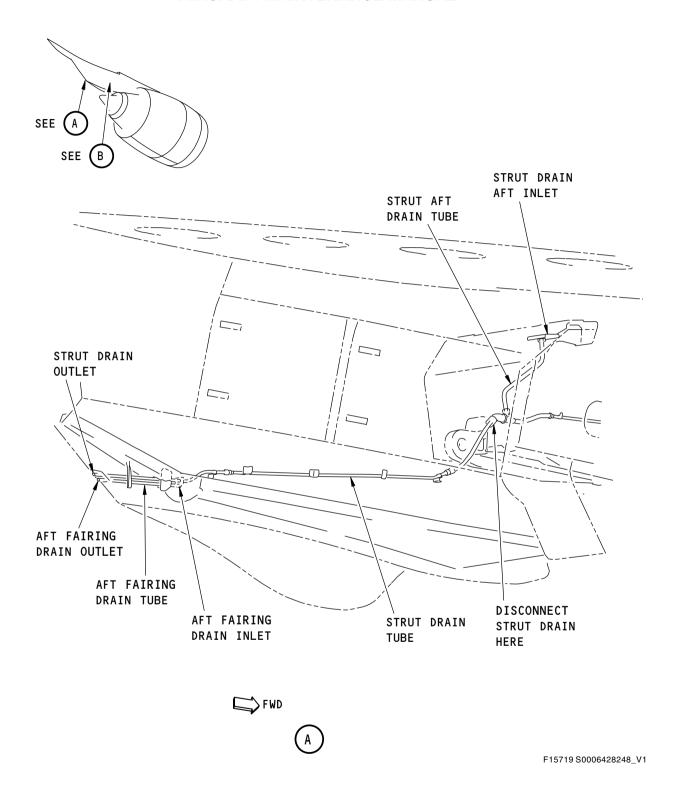
SUBTASK 54-55-01-440-010-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

ARO ALL 54-55-01



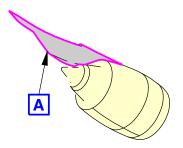


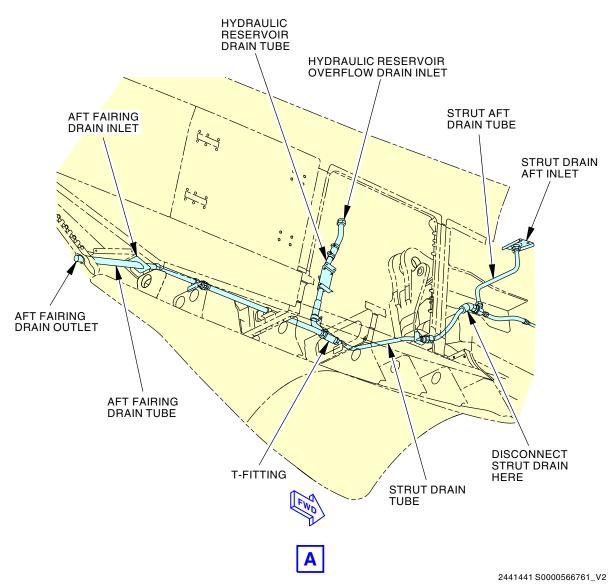
Strut Drain Clean Figure 201/54-55-01-990-804-001 (Sheet 1 of 3)

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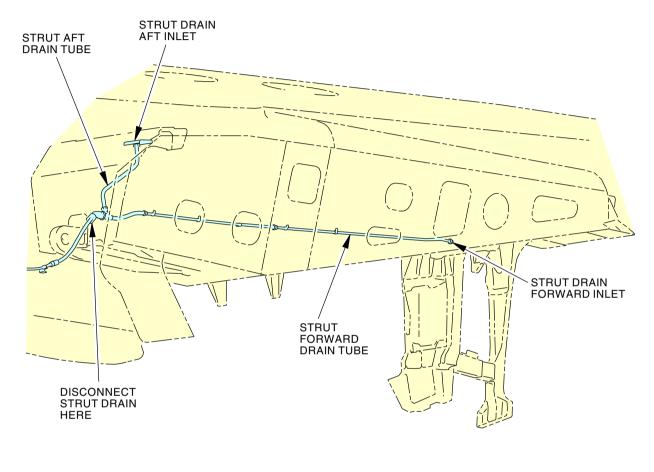


Strut Drain Clean Figure 201/54-55-01-990-804-001 (Sheet 2 of 3)

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Strut Drain Clean Figure 201/54-55-01-990-804-001 (Sheet 3 of 3)

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TASK 54-55-01-100-802-001

3. Aft Fairing Drain Clean

(Figure 201)

A. General

- (1) Do this task for the aft fairing drain tube when it is possible there is blockage.
- (2) The aft fairing drain has one inlet, and one outlet.

B. References

Reference	Title
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)

C. Tools/Equipment

Reference	Description
STD-653	Platform - Engine and Strut Access
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG

D. Consumable Materials

Reference	Description	Specification
G01505	Lockwire - Safety And Lock	NASM20995

E. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

F. Access Panels

Number	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

G. Prepare to Clean the Aft Fairing Drain

SUBTASK 54-55-01-040-013-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-55-01-480-005-00⁻

(2) Put the engine and strut access platform, STD-653 in position.

SUBTASK 54-55-01-010-017-001

(3) Open the applicable aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

H. Aft Fairing Drain Tube Clean

SUBTASK 54-55-01-210-005-001

(1) Use (Figure 201) to find the drain tube that you will check.

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SUBTASK 54-55-01-160-013-001

- (2) To check for blockage in the aft fairing drain tube, do these steps:
 - (a) Put a cloth on the drain inlet to collect all unwanted materials.
 - (b) Use an 0-50 psig dry filtered regulated air source, STD-1082 to supply 30-40 psig air pressure to the aft fairing drain outlet (NSTA 432).
 - (c) Make sure there is airflow through the drain tube from the drain outlet to the drain inlet.
 - (d) Remove the air pressure.
 - (e) Remove the cloth.

SUBTASK 54-55-01-160-014-001

- (3) If there is no airflow, do these steps to remove the blockage:
 - (a) Remove the applicable drain tube.
 - (b) Remove the blockage with a piece of lockwire, G01505.
 - (c) Install the drain tube that you removed.
- I. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-160-015-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Make sure that the work area is clean and remove all tools and other items.

SUBTASK 54-55-01-410-012-001

(2) Close these aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434DL	Left Aft Access Door, Left Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-55-01-080-005-001

(3) Remove the engine and strut access platform, STD-653.

SUBTASK 54-55-01-440-011-001

(4) Do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

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STRUT DRAINS - INSPECTION/CHECK

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) A leak check of the strut forward vapor barrier.
 - (2) A leak check of the strut upper spar.
 - (3) A leak check of the strut lower spar.
 - (4) A leak check of the strut aft vapor barrier.
 - (5) A leak check of the aft fairing.
- C. You can use these tasks to do a test for these problems:
 - (1) A leak in the strut structure.
 - (2) A leak in the strut drains.
 - (3) A blockage in the strut drains.
- D. You can do these leak checks independently after you do maintenance on areas of the strut.
- E. If you do more than one leak check, you can keep the access panels open until you complete the last task on that strut.
- F. All of the nacelle station (NSTA) numbers shown in (Figure 601) are approximate.

TASK 54-55-01-200-807-001

2. Leak Check of the Strut Forward Vapor Barrier

(Figure 601)

A. General

- (1) This task gives the instructions on how to do a leak check of the strut forward vapor barrier and the strut forward engine mount.
- (2) You can use this task to check for a blockage in the strut forward drain and the strut aft drain.

B. References

Reference	Title
20-10-09-300-801	Tube Repair (P/B 801)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-000-802-001	Fan Cowl Support Beam Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-52-01-400-802-001	Fan Cowl Support Beam Fairings Installation (P/B 401)
54-53-01-000-802-001	Strut Access Doors Removal (P/B 401)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)
54-55-01-100-801-001	Strut Drain Clean (P/B 201)
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)

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C. Tools/Equipment

Reference	Description
STD-1081	Flashlight - Explosion Proof
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1154	Container - 5 Gallon (19 Liter)
STD-1155	Funnel - Long Neck
STD-1156	Hose - 5 Foot

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
431BT	PDOS Pump Access Door
431CL	Forward Access Fairing, Left Strut
431CR	Forward Access Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432BL	Left Access Door, Left Strut
441BT	PDOS Pump Access Door
441CL	Forward Access Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
442BL	Left Access Door, Right Strut
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Prepare for the Leak Check

SUBTASK 54-55-01-040-014-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-55-01-010-018-001

- (2) Open the strut access doors, panels, and fairings as follows:
 - (a) Remove the applicable fan cowl support beam fairings:

(TASK 54-52-01-000-802-001)

<u>Number</u>	Name/Location
431BT	PDOS Pump Access Door
441BT	PDOS Pump Access Door

(b) Remove the applicable forward fairings:

(TASK 54-52-01-000-801-001)

<u>Number</u>	Name/Location
431CL	Forward Access Fairing, Left Strut
431CR	Forward Access Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut

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(Continued)

<u>Number</u>	Name/Location
441CL	Forward Access Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut

(c) Remove the applicable strut access doors:

(TASK 54-53-01-000-802-001)

<u>Number</u>	Name/Location
432BL	Left Access Door, Left Strut
442BL	Left Access Door, Right Strut

(d) Remove the applicable wing leading edge panels:

(TASK 57-41-10-000-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-55-01-100-020-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

- (3) Remove all unwanted materials (spilled sealant, fasteners, tie wires, etc.) from the strut forward upper spar and the strut forward lower spar.
 - (a) Make sure there are no blockages of the drain holes in the upper spar forward of the aft vapor barrier (NSTA 333).
 - (b) Make sure there is no blockage of the drain hole in the (NSTA 230) bulkhead.

G. Leak Check of the Strut Forward Vapor Barrier

SUBTASK 54-55-01-200-022-001

(1) Put an empty 5 gallon (19 liter) container, STD-1154 below the aft fairing drain outlet (NSTA 443) to collect the water.

SUBTASK 54-55-01-200-023-001

- (2) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the aft side of the strut forward vapor barrier (NSTA 194) as follows:
 - (a) Apply 381 to 387 ounces of water in 2.5 to 3.5 minutes.
 - NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 3 minutes.
 - (b) Make sure you fully wet all systems penetrations through the aft side of the strut forward vapor barrier (NSTA 194).
 - (c) Make sure you fully wet all seams and seals on the aft side of the strut forward vapor barrier (NSTA 194).

SUBTASK 54-55-01-200-024-001

(3) Make sure you see no water leaks as follows:

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- (a) With a explosion proof flashlight, STD-1081 make sure that no leakage occurs at the systems penetrations through the forward side of the strut forward vapor barrier (NSTA 194).
- (b) Make sure that no leakage occurs at the seams and seals through the forward side of the strut forward vapor barrier (NSTA 194).
- (c) Make sure there is no puddling of water on the strut forward upper spar.
 - NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.
- (d) After 3 minutes, make sure that a minimum of 354 ounces of water collects in the container.

SUBTASK 54-55-01-200-025-001

(4) Empty the 5 gallon (19 liter) container, STD-1154 and put it below the aft fairing drain outlet (NSTA 443) to collect the water again.

SUBTASK 54-55-01-200-026-001

- (5) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the aft side of the strut forward engine mount (NSTA 186) as follows:
 - (a) Get access to the aft side of the strut forward engine mount (NSTA 186) through the strut access door 432BL or 442BL on the left side of the strut.
 - (b) Apply 381 to 387 ounces of water in 2.5 to 3.5 minutes.
 - NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 3 minutes.
 - (c) Make sure you fully wet all systems penetrations through the aft side of the strut forward engine mount (NSTA 186).
 - (d) Make sure you fully wet all seams and seals on the aft side of the strut forward engine mount (NSTA 186).

SUBTASK 54-55-01-200-027-001

- (6) Make sure you see no water leaks as follows:
 - (a) With a explosion proof flashlight, STD-1081 make sure that no leakage occurs at the systems penetrations through the forward side of the strut forward engine mount (NSTA 186).
 - (b) Make sure that no leakage occurs at the seams and seals through the forward side of the strut forward engine mount (NSTA 186).
 - (c) Make sure there is no puddling of water on the strut forward lower spar.
 - NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.
 - (d) After 3 minutes, make sure that a minimum of 354 ounces of water collects in the container.

SUBTASK 54-55-01-360-013-001

- (7) If you found water leaks during this check, do these steps:
 - (a) If the leak is from a tube, do this task: Tube Repair, TASK 20-10-09-300-801.
 - (b) If the leak is from a seal, do this task: Fillet Seal Application, TASK 51-31-01-390-804.
 - (c) After you repair the leak, do the leak check again.

SUBTASK 54-55-01-360-014-001

(8) If you do not collect the correct quantity of water, and you do not find a leak, do these steps:

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- (a) To remove the blockage in a drain tube, do this task: Strut Drain Clean, TASK 54-55-01-100-801-001.
- (b) After you repair the blockage in the tube, do the leak check again until you collect the correct quantity of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-100-021-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Remove all unwanted materials from the strut compartments.

SUBTASK 54-55-01-100-022-001

(2) Let the inside of the strut dry before you close the strut access doors, panels, and fairings.

SUBTASK 54-55-01-410-013-001

- (3) If you will do no more leak checks at this time, do these steps to close the strut access doors, panels, and fairings:
 - (a) Install the wing leading edge panels:

(TASK 57-41-10-400-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

(b)

Install these strut access doors

(TASK 54-53-01-400-802-001)

<u>Number</u>	Name/Location
432BL	Left Access Door, Left Strut
442BL	Left Access Door, Right Strut

(c) Install the forward fairings:

(TASK 54-52-01-400-801-001)

<u>Number</u>	Name/Location
431CL	Forward Access Fairing, Left Strut
431CR	Forward Access Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
441CL	Forward Access Fairing, Right Strut
441CR	Forward Access Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut

(d) Install the fan cowl support beam fairings:

(TASK 54-52-01-400-802-001)

<u>Number</u>	Name/Location
431BT	PDOS Pump Access Door
441BT	PDOS Pump Access Door

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SI	IRTΔ	SK	54-	55-0	1-44	0-01	2-00	1

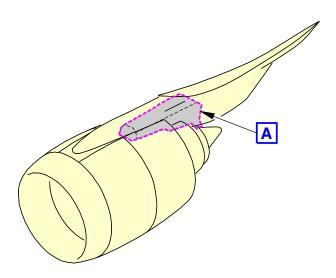
(4) If you will do no more maintenance operations, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

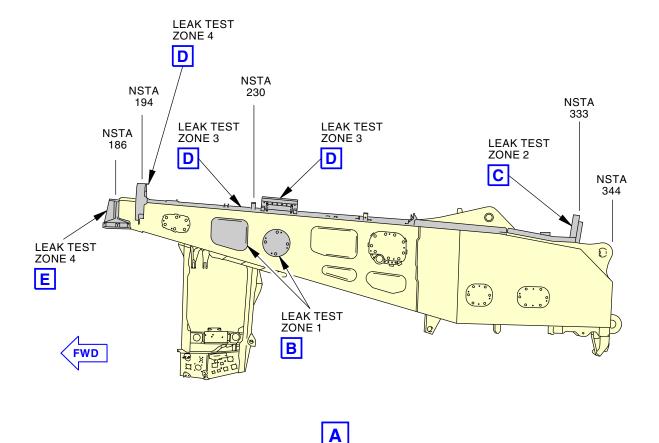
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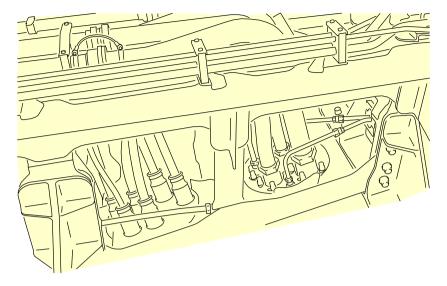
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Strut Drain Inspection Figure 601/54-55-01-990-803-001 (Sheet 1 of 3)

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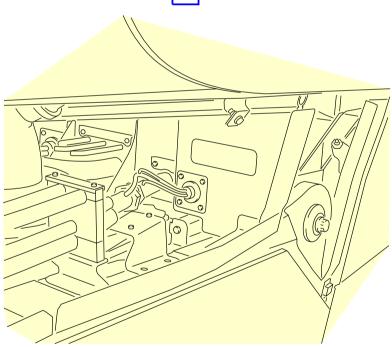






(VIEW FROM RIGHT SIDE OF STRUT) LEAK TEST ZONE 1







LEAK TEST ZONE 2



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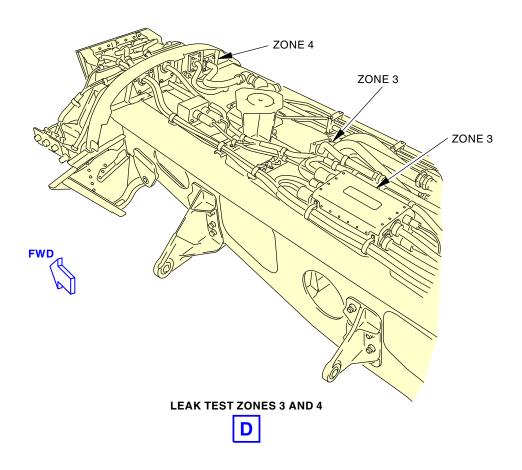
Strut Drain Inspection Figure 601/54-55-01-990-803-001 (Sheet 2 of 3)

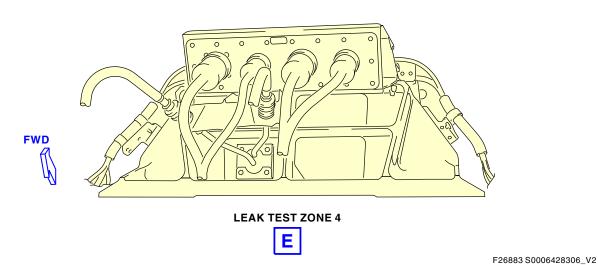
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Strut Drain Inspection Figure 601/54-55-01-990-803-001 (Sheet 3 of 3)

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TASK 54-55-01-200-840-001

3. Leak Check of the Left Strut Upper Spar

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives the instructions on how to do a leak check of the strut upper spar systems penetrations.

B. References

Reference	Title
20-10-09-300-801	Tube Repair (P/B 801)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-53-01-000-802-001	Strut Access Doors Removal (P/B 401)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)
54-55-01-100-801-001	Strut Drain Clean (P/B 201)
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1081	Flashlight - Explosion Proof
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1155	Funnel - Long Neck
STD-1156	Hose - 5 Foot

D. Location Zones

Zone	Area
410	PowerPlant, Left
430	Subzone 430 - Left Nacelle Strut

E. Access Panels

Number	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut
432DR	Right Access Door, Left Strut
432EL	Right Access Door, Left Strut
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Prepare for the Leak Check

SUBTASK 54-55-01-040-059-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

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SUBTASK 54-55-01-010-074-001

- (2) Open the strut access doors and fairings as follows:
 - (a) Remove the applicable forward fairings:

(Forward Fairings Removal, TASK 54-52-01-000-801-001)

<u>Number</u>	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut

(b) Remove the applicable strut access doors:

(Strut Access Doors Removal, TASK 54-53-01-000-802-001)

<u>Number</u>	Name/Location
432DR	Right Access Door, Left Strut
432EL	Right Access Door, Left Strut

(c) Remove the applicable wing leading edge panel:

(Wing Leading Edge Panel Removal, TASK 57-41-10-000-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-55-01-100-134-001



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

- (3) Remove all unwanted materials (spilled sealant, fasteners, tie wires, etc.) from the strut upper spar.
 - (a) Make sure there are no blockages of the drain holes in the upper spar forward of the aft vapor barrier (NSTA 333).

G. Leak Check of the Strut Upper Spar

SUBTASK 54-55-01-200-149-001

(1) Put an empty long neck funnel, STD-1155 below the aft fairing drain outlet (NSTA 333) to collect the water.

SUBTASK 54-55-01-200-150-001

- (2) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the strut forward upper spar as follows:
 - (a) Apply 381 to 387 ounces of water in 2.5 to 3.5 minutes.
 - NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 3 minutes.
 - (b) Make sure you fully wet all system tube penetrations through the forward upper spar just aft of the fall arrest fitting frame (NSTA 213).

SUBTASK 54-55-01-200-151-001

(3) Make sure you see no water leaks as follows:

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- (a) With a explosion proof flashlight, STD-1081 look through the strut access door 432DR to make sure that no leakage occurs at the systems penetrations through the forward upper spar.
 - NOTE: If you use an inspection mirror, it can be easier to look for leaks.
- (b) Make sure there is no puddling of water on the strut upper spar.
 - NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.
- (c) After 3 minutes, make sure that a minimum of 354 ounces of water collects in the container.

SUBTASK 54-55-01-200-152-001

(4) Empty the long neck funnel, STD-1155 and put it below the aft fairing drain outlet (NSTA 443) to collect the water again.

SUBTASK 54-55-01-200-153-001

- (5) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the upper spar wiring disconnect box as follows:
 - (a) Apply 254 to 258 ounces of water in 1.5 to 2.5 minutes.
 - NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 2 minutes.
 - (b) Make sure you fully wet all wire bundles and seals.
 - (c) Make sure you fully wet the forward face, aft face, and top of the disconnect box.

SUBTASK 54-55-01-200-154-001

- (6) Make sure you see no water leaks as follows:
 - (a) With a explosion proof flashlight, STD-1081 look through the strut access door 432EL to make sure that no leakage occurs at the system penetrations through the forward upper spar.
 - NOTE: If you use an inspection mirror, it can be easier to look for leaks.
 - (b) Make sure there is no puddling of water on the strut upper spar.
 - NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.
 - (c) After 2 minutes, make sure that a minimum of 236 ounces of water collects in the container.

SUBTASK 54-55-01-360-069-001

- (7) If you found water leaks during this check, do these steps:
 - (a) If the leak is from a tube, do this task: Tube Repair, TASK 20-10-09-300-801.
 - (b) If the leak is from a seal, do this task: Fillet Seal Application, TASK 51-31-01-390-804.
 - (c) After you repair the leak, do the leak check again.

SUBTASK 54-55-01-360-070-001

- (8) If you do not collect the correct quantity of water, and you do not find a leak, do these steps:
 - (a) To remove blockage in a drain tube, do this task: Strut Drain Clean, TASK 54-55-01-100-801-001.
 - (b) After you repair the blockage in the tube, do the leak check again until you collect the correct quantity of water.

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H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-100-135-001



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Remove all unwanted materials from the strut compartments.

SUBTASK 54-55-01-100-136-001

(2) Let the inside of the strut dry before you close the strut access doors, panels, and fairings.

SUBTASK 54-55-01-410-071-001

- (3) If you will do no more leak checks at this time, do these steps to close the strut access doors, panels, and fairings.
 - (a) Install this strut access door:

(Wing Leading Edge Panel Installation, TASK 57-41-10-400-801)

<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel

(b) Install these strut access doors:

(Strut Access Doors Installation, TASK 54-53-01-400-802-001)

<u>Number</u>	Name/Location
432DR	Right Access Door, Left Strut
432EL	Right Access Door, Left Strut

(c) Install these forward fairings:

(Forward Fairings Installation, TASK 54-52-01-400-801-001)

<u>Number</u>	Name/Location
431DT	No. 2 Forward Fairing, Left Strut
431ET	No. 3 Forward Fairing, Left Strut
432AL	Left Forward Side Fairing, Left Strut
432AR	Right Forward Side Fairing, Left Strut

SUBTASK 54-55-01-440-056-001

(4) If you will do no more maintenance operations, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-55-01-200-841-001

4. Leak Check of the Right Strut Upper Spar

(Figure 601)

<u>NOTE</u>: This procedure is a scheduled maintenance task.

A. General

(1) This task gives the instructions on how to do a leak check of the strut upper spar systems penetrations.

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B. References

Reference	Title
20-10-09-300-801	Tube Repair (P/B 801)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-53-01-000-802-001	Strut Access Doors Removal (P/B 401)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)
54-55-01-100-801-001	Strut Drain Clean (P/B 201)
57-41-10-000-801	Wing Leading Edge Panel Removal (P/B 401)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)
To als/Equipment	

C. Tools/Equipment

Reference	Description
STD-1081	Flashlight - Explosion Proof
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1154	Container - 5 Gallon (19 Liter)
STD-1155	Funnel - Long Neck
STD-1156	Hose - 5 Foot

D. Location Zones

Zone	Area
420	PowerPlant, Right
440	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Prepare for the Leak Check

SUBTASK 54-55-01-040-060-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-55-01-010-075-001

- (2) Open the strut access doors and fairings as follows:
 - (a) Remove the applicable forward fairings:

(Forward Fairings Removal, TASK 54-52-01-000-801-001)

<u>Number</u>	<u>Name/Location</u>
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut

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(Continued)

442AL Left Forward Side Fairing, Right Strut442AR Right Forward Side Fairing, Right Strut

(b) Remove the applicable strut access doors:

(Strut Access Doors Removal, TASK 54-53-01-000-802-001)

NumberName/Location442DRRight Access Door, Right Strut442ELLeft Access Door, Right Strut

(c) Remove the applicable wing leading edge panel:

(Wing Leading Edge Panel Removal, TASK 57-41-10-000-801)

Number Name/Location

613BT Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-55-01-100-137-001



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

- (3) Remove all unwanted materials (spilled sealant, fasteners, tie wires, etc.) from the strut upper spar.
 - (a) Make sure there are no blockages of the drain holes in the upper spar forward of the aft vapor barrier (NSTA 333).

G. Leak Check of the Strut Upper Spar

SUBTASK 54-55-01-200-155-001

(1) Put an empty 5 gallon (19 liter) container, STD-1154 below the aft fairing drain outlet (NSTA 333) to collect the water.

SUBTASK 54-55-01-200-156-001

- (2) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the strut forward upper spar as follows:
 - (a) Apply 381 to 387 ounces of water in 2.5 to 3.5 minutes.
 - NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 3 minutes.
 - (b) Make sure you fully wet all system tube penetrations through the forward upper spar just aft of the fall arrest fitting frame (NSTA 213).

SUBTASK 54-55-01-200-157-001

- (3) Make sure you see no water leaks as follows:
 - (a) With a explosion proof flashlight, STD-1081 look through the strut access door 432DR to make sure that no leakage occurs at the systems penetrations through the forward upper spar.

NOTE: If you use an inspection mirror, it can be easier to look for leaks.

(b) Make sure there is no puddling of water on the strut upper spar.

NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.

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(c) After 3 minutes, make sure that a minimum of 354 ounces of water collects in the container.

SUBTASK 54-55-01-200-158-001

(4) Empty the long neck funnel, STD-1155 and put it below the aft fairing drain outlet (NSTA 443) to collect the water again.

SUBTASK 54-55-01-200-159-001

- (5) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the upper spar wiring disconnect box as follows:
 - (a) Apply 254 to 258 ounces of water in 1.5 to 2.5 minutes.NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 2 minutes.
 - (b) Make sure you fully wet all wire bundles and seals.
 - (c) Make sure you fully wet the forward face, aft face, and top of the disconnect box.

SUBTASK 54-55-01-200-160-001

- (6) Make sure you see no water leaks as follows:
 - (a) With a explosion proof flashlight, STD-1081 look through the strut access door 432EL to make sure that no leakage occurs at the system penetrations through the forward upper spar.
 - NOTE: If you use an inspection mirror, it can be easier to look for leaks.
 - (b) Make sure there is no puddling of water on the strut upper spar.
 - NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.
 - (c) After 2 minutes, make sure that a minimum of 236 ounces of water collects in the container.

SUBTASK 54-55-01-360-071-001

- (7) If you found water leaks during this check, do these steps:
 - (a) If the leak is from a tube, do this task: Tube Repair, TASK 20-10-09-300-801.
 - (b) If the leak is from a seal, do this task: Fillet Seal Application, TASK 51-31-01-390-804.
 - (c) After you repair the leak, do the leak check again.

SUBTASK 54-55-01-360-072-001

- (8) If you do not collect the correct quantity of water, and you do not find a leak, do these steps:
 - (a) To remove blockage in a drain tube, do this task: Strut Drain Clean, TASK 54-55-01-100-801-001.
 - (b) After you repair the blockage in the tube, do the leak check again until you collect the correct quantity of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-100-138-001



MAKE SURE THAT YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Remove all unwanted materials from the strut compartments.

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SUBTASK 54-55-01-100-139-001

(2) Let the inside of the strut dry before you close the strut access doors, panels, and fairings.

SUBTASK 54-55-01-410-072-001

- (3) If you will do no more leak checks at this time, do these steps to close the strut access doors, panels, and fairings.
 - (a) Install this strut access door:

(Wing Leading Edge Panel Installation, TASK 57-41-10-400-801)

<u>Number</u>	Name/Location
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

(b) Install these strut access doors:

(Strut Access Doors Installation, TASK 54-53-01-400-802-001)

<u>Number</u>	Name/Location
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut

(c) Install these forward fairings:

(Forward Fairings Installation, TASK 54-52-01-400-801-001)

<u>Number</u>	Name/Location
441DT	No. 2 Forward Fairing, Right Strut
441ET	No. 3 Forward Fairing, Right Strut
442AL	Left Forward Side Fairing, Right Strut
442AR	Right Forward Side Fairing, Right Strut

SUBTASK 54-55-01-440-057-001

(4) If you will do no more maintenance operations, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-55-01-200-809-001

5. Leak Check of the Strut Lower Spar

(Figure 601)

A. General

(1) This task gives the instructions on how to do a leak check of the strut lower spar plumbing penetrations.

B. References

Reference	Title
20-10-09-300-801	Tube Repair (P/B 801)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-01-000-801-001	Forward Fairings Removal (P/B 401)
54-52-01-400-801-001	Forward Fairings Installation (P/B 401)
54-53-01-000-802-001	Strut Access Doors Removal (P/B 401)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)
54-55-01-100-801-001	Strut Drain Clean (P/B 201)

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(Continued)

Reference	Title
71-11-04-010-814-H00	Open the Fan Cowl Panel (Selection) (P/B 201)
71-11-04-410-814-H00	Close the Fan Cowl Panel (Selection) (P/B 201)
78-31-00-010-816-H00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-410-816-H00	Close the Thrust Reverser (Selection) (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1081	Flashlight - Explosion Proof
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1154	Container - 5 Gallon (19 Liter)
STD-1155	Funnel - Long Neck
STD-1156	Hose - 5 Foot

D. Location Zones

Zone	Area	
410	PowerPlant, Left	
420	PowerPlant, Right	
430	Subzone 430 - Left Nacelle Strut	
440	Subzone 440 - Right Nacelle Strut	

E. Access Panels

Number	Name/Location
414AR	Right Fan Cowl Panel, Left Engine
416AR	Right Thrust Reverser, Left Engine
424AR	Right Fan Cowl Panel, Right Engine
426AR	Right Thrust Reverser, Right Engine
432CL	Left Aft Side Fairing, Left Strut
432CR	Right Aft Side Fairing, Left Strut
432DR	Right Access Door, Left Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut

F. Prepare for the Leak Check

SUBTASK 54-55-01-040-016-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-55-01-010-020-001

- (2) Open the access doors, panels, and fairings as follows:
 - (a) Open the applicable fan cowl panels:

(TASK 71-11-04-010-814-H00)

<u>Number</u>	Name/Location
414AR	Right Fan Cowl Panel, Left Engine
424AR	Right Fan Cowl Panel, Right Engine

(b) Open the applicable thrust reversers:

(TASK 78-31-00-010-816-H00)

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Number Name/Location

416AR Right Thrust Reverser, Left Engine426AR Right Thrust Reverser, Right Engine

(c) Remove the forward fairings:

(TASK 54-52-01-000-801-001)

Number Name/Location

432CL Left Aft Side Fairing, Left Strut432CR Right Aft Side Fairing, Left Strut

(d) Remove the applicable strut access doors:

(TASK 54-53-01-000-802-001)

<u>Number</u>	Name/Location
432DR	Right Access Door, Left Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut

SUBTASK 54-55-01-100-026-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

- (3) Remove all unwanted materials (spilled sealant, fasteners, tie wires, etc.) from the strut lower spar.
 - (a) Make sure there is no blockage of the drain hole in the (NSTA 230) bulkhead.

G. Leak Check of the Strut Lower Spar

SUBTASK 54-55-01-200-034-001

(1) Put an empty 5 gallon (19 liter) container, STD-1154 below the aft fairing drain outlet (NSTA 443) to collect the water.

SUBTASK 54-55-01-200-035-001

- (2) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the strut lower spar as follows:
 - (a) Apply the water through the strut access door 432DR or 442DR.
 - (b) Apply 381 to 387 ounces of water in 2.5 to 3.5 minutes.
 - NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 3 minutes.
 - (c) Make sure you fully wet all of the tube penetrations through the lower spar.
 - (d) Make sure you fully wet the forward side of the NSTA 230 bulkhead.

SUBTASK 54-55-01-200-036-001

- (3) Make sure you see no water leaks as follows:
 - (a) Make sure that no leakage occurs at the tube penetrations through the strut lower spar.
 - (b) With a explosion proof flashlight, STD-1081 look through strut access door 432EL or 442EL to make sure that no leakage occurs through the aft side of the NSTA 230 bulkhead.

NOTE: If you use an inspection mirror, it can be easier to look for leaks.

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- (c) Make sure you see no leaks at the strut drain tube connections.
- (d) Make sure there is no puddling of water on the strut lower spar.
 - NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.
- (e) After 3 minutes, make sure that a minimum of 354 ounces of water collects in the container.

SUBTASK 54-55-01-360-017-001

- If you found water leaks during this check, do these steps:
 - (a) If the leak is from a tube, do this task: Tube Repair, TASK 20-10-09-300-801.
 - (b) If the leak is from a seal, do this task: Fillet Seal Application, TASK 51-31-01-390-804.
 - (c) After you repair the leak, do the leak check again.

SUBTASK 54-55-01-160-016-001

- If you do not collect the correct quantity of water, and you do not find a leak, do these steps:
 - To remove the blockage in the drain tube, do this task: Strut Drain Clean, TASK 54-55-01-100-801-001.
 - After you repair the blockage in the tube, do the leak check again until you collect the correct quantity of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-100-027-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS. YOU CAN CAUSE DAMAGE TO THE STRUT.

Remove all unwanted materials from the strut compartments. (1)

SUBTASK 54-55-01-100-028-001

(2) Let the inside of the strut dry before you close the strut access doors, panels, and fairings.

SUBTASK 54-55-01-410-015-001

- If you will do no more leak checks at this time, do these steps to close the strut access doors, panels, and fairings:
 - (a) Install these strut access doors:

(TASK 54-53-01-400-802-001)

<u>Number</u>	Name/Location
432DR	Right Access Door, Left Strut
442DR	Right Access Door, Right Strut
442EL	Left Access Door, Right Strut

(b) Install the forward fairings:

(TASK 54-52-01-400-801-001)

<u>Number</u>	Name/Location
432CL	Left Aft Side Fairing, Left Strut
432CR	Right Aft Side Fairing, Left Strut

(c) Close the thrust reverser panels:

(TASK 78-31-00-410-816-H00)

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<u>Number</u>	Name/Location
416AR	Right Thrust Reverser, Left Engine
426AR	Right Thrust Reverser, Right Engine

(d) Close the fan cowl panels:

(TASK 71-11-04-410-814-H00)

<u>Number</u>	Name/Location
414AR	Right Fan Cowl Panel, Left Engine
424AR	Right Fan Cowl Panel, Right Engine

SUBTASK 54-55-01-440-014-001

(4) If you will do no more maintenance operations, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



TASK 54-55-01-200-810-001

6. Leak Check of the Strut Aft Vapor Barrier

(Figure 601)

A. General

(1) This task gives the instructions on how to do a leak check of the strut aft vapor barrier and aft upper spar.

B. References

Reference	Title
20-10-09-300-801	Tube Repair (P/B 801)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-03-000-801	Underwing Fairing Removal (P/B 401)
54-52-03-400-801	Underwing Fairing Installation (P/B 401)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)
54-53-01-400-802-001	Strut Access Doors Installation (P/B 401)
54-55-01-100-801-001	Strut Drain Clean (P/B 201)
57-41-10-400-801	Wing Leading Edge Panel Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1154	Container - 5 Gallon (19 Liter)
STD-1155	Funnel - Long Neck
STD-1156	Hose - 5 Foot

D. Location Zones

Zone	Area
410	PowerPlant, Left
420	PowerPlant, Right
430	Subzone 430 - Left Nacelle Strut
440	Subzone 440 - Right Nacelle Strut

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E. Access Panels

Number	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
433DL	Left Aft Mount Access Panel, Left Strut
433DR	Right Pressure Relief Door, Left Strut
434CL	Left Forward Access Door, Left Strut Aft Fairing
441FR	Outboard Underwing Fairing, Right Strut
443DL	Left Aft Mount Access Panel, Right Strut
443DR	Right Pressure Relief Door, Right Strut
444CR	Right Forward Access Door, Right Strut Aft Fairing
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

F. Prepare for the Leak Check

SUBTASK 54-55-01-040-017-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

SUBTASK 54-55-01-010-021-001

- (2) Open the strut access doors, panels, and fairings as follows:
 - (a) Remove the applicable underwing fairings:

(TASK 54-52-03-000-801)

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
441FR	Outboard Underwing Fairing, Right Strut

(b) Open the applicable aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

G. Leak Check of the Strut Aft Vapor Barrier

SUBTASK 54-55-01-200-037-001

(1) Put an empty 5 gallon (19 liter) container, STD-1154 below the aft fairing drain outlet (NSTA 443) to collect the water.

SUBTASK 54-55-01-200-038-001

- (2) With a long neck funnel, STD-1155 and 5 foot hose, STD-1156 apply water from a water source (0-60 PSIG), STD-1088 to the forward side of the strut aft vapor barrier as follows:
 - (a) Apply 508 to 516 ounces of water in 3.5 to 4.5 minutes.

NOTE: This is approximately 128 fluid ounces (1 gallon) per minute for 4 minutes.

SUBTASK 54-55-01-200-039-001

- (3) Make sure you see no water leaks as follows:
 - (a) Make sure you see no leaks at the drain tube connections.
 - (b) After 4 minutes, make sure that a minimum of 472 ounces of water collects in the container.

SUBTASK 54-55-01-360-018-001

(4) If you found water leaks during this check, do these steps:

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- (a) If the leak is from a tube, do this task: Tube Repair, TASK 20-10-09-300-801.
- (b) After you repair the leak, do the leak check again.

SUBTASK 54-55-01-360-019-001

- (5) If you do not collect the correct quantity of water, and you do not find a leak, do these steps:
 - (a) To remove the blockage in the drain tube, do this task: Strut Drain Clean, TASK 54-55-01-100-801-001.
 - (b) After you repair the blockage in the tube, do the leak check again until you collect the correct quantity of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-100-030-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Remove all unwanted materials from the strut compartments.

SUBTASK 54-55-01-100-031-001

(2) Let the inside of the strut dry before you close the strut access doors, panels, and fairings.

SUBTASK 54-55-01-410-016-001

- (3) If you will do no more leak checks at this time, do these steps to close the strut access doors, panels, and fairings:
 - (a) Close these aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing

(b) Close the strut pressure relief doors:

<u>Number</u>	Name/Location
433DR	Right Pressure Relief Door, Left Strut
443DR	Right Pressure Relief Door, Right Strut

(c) Install these strut access doors

(TASK 54-53-01-400-802-001)

<u>number</u>	Name/Location
433DL	Left Aft Mount Access Panel, Left Strut
443DL	Left Aft Mount Access Panel, Right Strut

(d) Install the underwing fairings:

(TASK 54-52-03-400-801)

<u>Number</u>	Name/Location
431FL	Outboard Underwing Fairing, Left Strut
441FR	Outboard Underwing Fairing, Right Strut

(e) Install the wing leading edge panels:

(TASK 57-41-10-400-801)

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<u>Number</u>	Name/Location
513BT	Upper Nacelle Strut Interface (Gap Cover) Panel
613BT	Upper Nacelle Strut Interface (Gap Cover) Panel

SUBTASK 54-55-01-440-015-001

(4) If you will do no more maintenance operations, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.

——— END OF TASK ———

TASK 54-55-01-200-811-001

7. Leak Check of the Aft Fairing

(Figure 602)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task gives the instructions on how to do a leak check of the aft fairing.
- (2) You can use this task to check for a blockage in the aft fairing drain tube.

B. References

Reference	Title
20-10-09-300-801	Tube Repair (P/B 801)
51-31-01-390-804	Fillet Seal Application (P/B 201)
54-51-01-040-802-002	Prepare the Strut for Maintenance Operations (P/B 201)
54-51-01-440-802-002	Put the Strut Back to its Usual Condition (P/B 201)
54-52-05-800-801	Aft Fairing Access Doors Operation (P/B 201)
54-55-01-100-802-001	Aft Fairing Drain Clean (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1158	Container - 20 Gallon (76 Liter)

D. Location Zones

Z	one	Area
4	10	PowerPlant, Left
42	20	PowerPlant, Right
43	30	Subzone 430 - Left Nacelle Strut
44	40	Subzone 440 - Right Nacelle Strut

E. Access Panels

Number	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

F. Prepare for the Leak Check

SUBTASK 54-55-01-040-018-001

(1) Do this task: Prepare the Strut for Maintenance Operations, TASK 54-51-01-040-802-002.

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SUBTASK 54-55-01-010-022-001

(2) Open the applicable aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-55-01-100-032-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

- (3) Remove all unwanted materials (spilled sealant, fasteners, tie wires, etc.) from the inside of the aft fairing.
 - (a) Put a plug in the aft fairing drain inlet on the inside of the aft fairing.

G. Leak Check of the Aft Fairing

SUBTASK 54-55-01-200-040-001

(1) Put an empty 20 gallon (76 liter) container, STD-1158 below each aft fairing drain outlet (NSTA 443) to collect the water.

SUBTASK 54-55-01-200-041-001

- (2) With a 20 gallon (76 liter) container, STD-1158 apply water from a water source (0-60 PSIG), STD-1088 to the lower web of the aft fairing as follows:
 - (a) Pour 17.0 gallons of water into the aft fairing.
 - NOTE: Measure the water carefully. You will measure the water again later when it drains out.
 - (b) Make sure the water level is a minimum of 3.5 inches above the lower web when measured at the deepest location.
 - (c) Let the water stay in the aft fairing for a minimum of 15 minutes.

SUBTASK 54-55-01-200-042-001

- (3) Make sure you see no water leaks as follows:
 - (a) Make sure that no leakage occurs through the aft fairing heat shield.
 - 1) Remove the plug in the aft fairing drain inlet from the inside of the aft fairing.
 - 2) Let the water drain out.
 - (b) After 15 minutes, make sure that a minimum of 16.8 gallons of water collects in the container.
 - (c) Make sure there is no puddling of water in the aft fairing.

NOTE: Puddling is defined as 0.5 fluid ounces of water in a continuous pool.

SUBTASK 54-55-01-360-020-001

- (4) If you found water leaks during this check, do these steps:
 - (a) If the leak is from a tube, do this task: Tube Repair, TASK 20-10-09-300-801.

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- (b) If the leak is from a seal, do this task: Fillet Seal Application, TASK 51-31-01-390-804.
- (c) After you repair the leak, do the leak check again.

SUBTASK 54-55-01-360-021-001

- (5) If you do not collect the correct quantity of water, and you do not find a leak, do these steps:
 - (a) To remove the blockage in an aft fairing drain tube, do this task: Aft Fairing Drain Clean, TASK 54-55-01-100-802-001.
 - (b) After you remove the blockage in the tube, do the leak check again until you collect the correct quantity of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 54-55-01-100-033-001



MAKE SURE YOU KEEP THE STRUT AREA CLEAN. LOOSE TOOLS AND UNWANTED MATERIALS IN THE STRUT COMPARTMENTS CAN PREVENT THE REMOVAL OF FLUIDS THROUGH THE STRUT DRAINS. IF YOU DO NOT REMOVE THE UNWANTED MATERIALS, YOU CAN CAUSE DAMAGE TO THE STRUT.

(1) Remove all unwanted materials from the strut compartments.

SUBTASK 54-55-01-100-034-001

(2) Let the inside of the aft fairing dry before you close the access doors.

SUBTASK 54-55-01-410-017-001

(3) If you will do no more leak checks at this time, close the aft fairing access doors:

(TASK 54-52-05-800-801)

<u>Number</u>	Name/Location
434CL	Left Forward Access Door, Left Strut Aft Fairing
434DL	Left Aft Access Door, Left Strut Aft Fairing
444CR	Right Forward Access Door, Right Strut Aft Fairing
444DR	Right Aft Access Door, Right Strut Aft Fairing

SUBTASK 54-55-01-440-016-001

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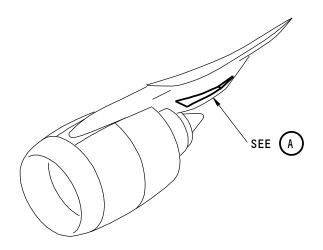
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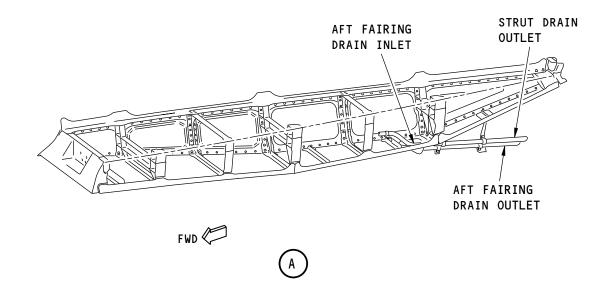
(4) If you will do no more maintenance operations, do this task: Put the Strut Back to its Usual Condition, TASK 54-51-01-440-802-002.



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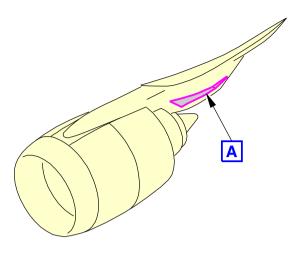
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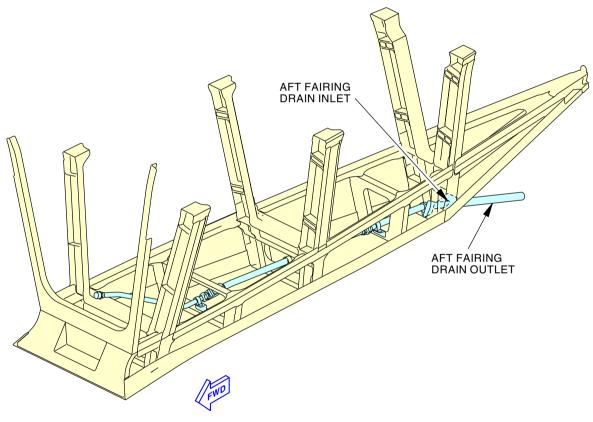
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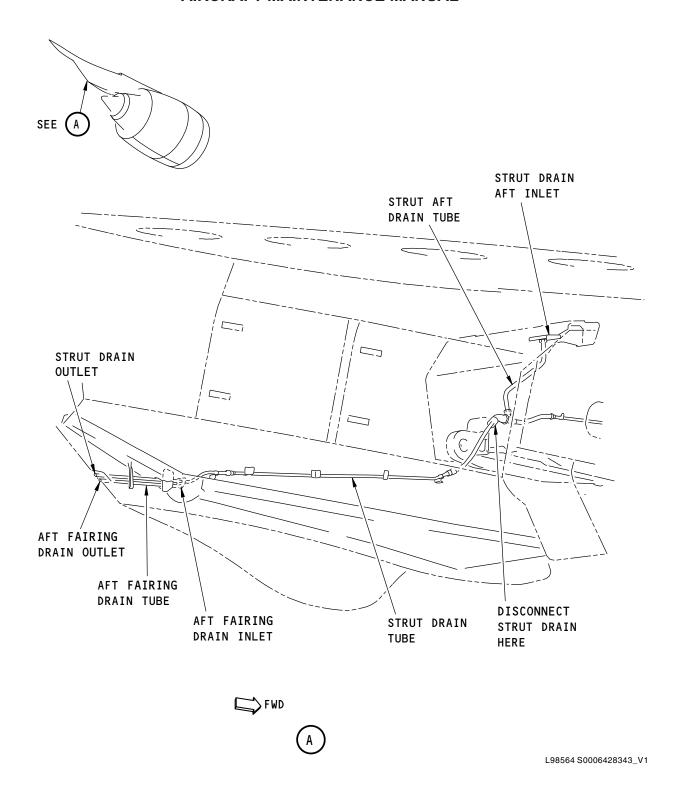
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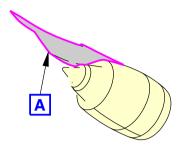
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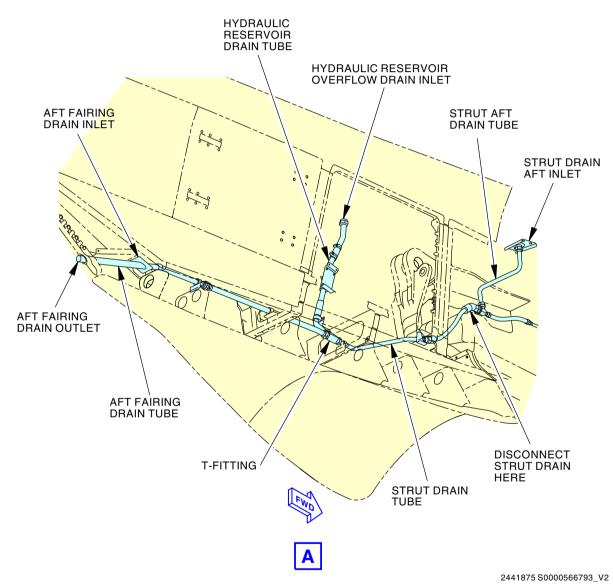
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Aft Fairing Drain Inspection Figure 602/54-55-01-990-809-001 (Sheet 4 of 4)

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