

CHAPTER

38

WATER/WASTE



**777-200/300
AIRCRAFT MAINTENANCE MANUAL**

**CHAPTER 38
WATER/WASTE**

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
38-EFFECTIVE PAGES			38-10-00 (cont)			38-10-02		
1 thru 8	SEP 05/2018		209	May 05/2018		201	May 05/2018	
38-CONTENTS			210	May 05/2018		202	May 05/2018	
1	May 05/2018		211	May 05/2018		203	May 05/2018	
2	Jan 05/2016		212	May 05/2018		204	Sep 05/2016	
3	Jan 05/2016		213	May 05/2018		205	Sep 05/2016	
4	Jan 05/2016		214	May 05/2018		206	May 05/2018	
5	Jul 25/2018		215	May 05/2018		207	May 05/2018	
6	Jan 05/2017		216	May 05/2018		208	BLANK	
7	May 05/2017		217	May 05/2018		38-10-02		
8	Jan 05/2016		218	May 05/2018		401	May 05/2015	
9	Jan 05/2016		38-10-00			402	Jan 05/2015	
10	Jan 05/2016		701	May 05/2015		403	Jan 05/2015	
11	Jan 05/2017		702	Sep 05/2017		404	Sep 05/2016	
12	Jan 05/2018		703	Sep 05/2017		405	Sep 05/2016	
13	Jul 25/2018		704	Sep 05/2016		406	Sep 05/2015	
14	Sep 05/2017		705	Sep 05/2016		407	May 05/2015	
15	Jul 25/2018		706	Jan 05/2018		408	May 05/2015	
16	Jan 05/2017		707	Jan 05/2018		409	May 05/2015	
17	Jan 05/2017		708	May 05/2015		410	Jan 05/2015	
18	Jan 05/2017		709	Jan 05/2018		38-10-03		
19	Jan 05/2017		710	BLANK		401	May 05/2015	
20	BLANK		38-10-01			402	Jan 05/2015	
38-00-00			201	Jan 05/2015		403	Sep 05/2016	
901	Jan 05/2015		202	Jul 25/2018		404	Sep 05/2016	
902	Sep 05/2017		203	Jul 25/2018		405	May 05/2015	
903	Jan 05/2015		204	Jul 25/2018		406	May 05/2015	
904	BLANK		205	Jul 25/2018		407	May 05/2015	
38-10-00			206	Jul 25/2018		408	BLANK	
201	Jan 05/2016		207	Jul 25/2018		38-10-04		
202	Sep 05/2017		208	Jul 25/2018		401	May 05/2015	
203	Jan 05/2016		209	Jul 25/2018		402	May 05/2015	
204	Sep 05/2017		210	Jul 25/2018		403	Sep 05/2016	
205	Sep 05/2017		211	Jul 25/2018		404	Sep 05/2016	
206	Sep 05/2017		212	Jul 25/2018		405	May 05/2015	
207	May 05/2018		213	Jul 25/2018		406	Sep 05/2017	
208	May 05/2018		214	Jul 25/2018		407	Sep 05/2017	

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38-10-04 (cont)			38-11-01 Config 2 (cont)			38-11-04 Config 2 (cont)		
408	BLANK		417	Sep 05/2016		411	Jan 05/2018	
38-10-05			418	Sep 05/2016		412	May 05/2017	
401	May 05/2015		419	Sep 05/2016		413	Jan 05/2018	
402	Jan 05/2015		420	Sep 05/2016		414	May 05/2017	
403	Sep 05/2016		421	Sep 05/2015		415	May 05/2017	
404	May 05/2015		422	May 05/2015		416	Jan 05/2018	
405	May 05/2015		423	May 05/2015		417	Jan 05/2018	
406	Sep 05/2017		424	May 05/2015		418	Jan 05/2018	
38-11-01 Config 2			425	May 05/2015		38-11-04 Config 2		
201	Jan 05/2015		426	BLANK		501	May 05/2015	
202	Jan 05/2015		38-11-02			502	Jan 05/2015	
203	Jan 05/2015		201	Jan 05/2015		503	Jan 05/2015	
204	Sep 05/2016		202	Jan 05/2015		504	Sep 05/2015	
205	Sep 05/2016		203	Jan 05/2015		505	May 05/2015	
206	Sep 05/2016		204	Sep 05/2017		506	May 05/2015	
207	Jan 05/2015		205	Sep 05/2017		507	May 05/2015	
208	Jan 05/2015		206	Jan 05/2015		508	May 05/2015	
209	Jan 05/2015		207	Jan 05/2015		509	May 05/2015	
210	Jan 05/2015		208	Jan 05/2015		510	Sep 05/2016	
38-11-01 Config 2			209	Sep 05/2017		511	Sep 05/2016	
401	May 05/2015		210	Jan 05/2015		512	Sep 05/2016	
402	May 05/2015		211	Sep 05/2017		513	Sep 05/2016	
403	May 05/2015		212	Jan 05/2015		514	Sep 05/2016	
404	Sep 05/2016		213	Sep 05/2016		515	Sep 05/2016	
405	Sep 05/2016		214	Sep 05/2016		516	BLANK	
406	Sep 05/2016		38-11-04 Config 2			38-11-07		
407	Sep 05/2016		401	May 05/2015		R 201	Sep 05/2018	
408	Sep 05/2016		402	Jan 05/2018		202	May 05/2015	
409	Sep 05/2015		403	Sep 05/2016		203	Sep 05/2016	
410	May 05/2015		404	Sep 05/2016		204	BLANK	
411	May 05/2015		405	Sep 05/2016		38-11-07 Config 2		
412	Jan 05/2015		406	Sep 05/2016		401	May 05/2015	
413	May 05/2015		407	Sep 05/2016		402	Jan 05/2015	
414	May 05/2015		408	Sep 05/2016		403	Jan 05/2015	
415	Sep 05/2017		409	Jan 05/2018		404	May 05/2015	
416	Sep 05/2016		410	Jan 05/2018		405	Jan 05/2015	

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38-11-07 Config 2 (cont)			38-11-09 Config 2 (cont)			38-11-10 (cont)		
406	BLANK		210	Jan 05/2015		420	Sep 05/2017	
38-11-08			211	Jan 05/2015		421	Sep 05/2017	
201	Jul 25/2018		212	BLANK		422	Sep 05/2016	
202	Jul 25/2018		38-11-09 Config 3			423	May 05/2017	
203	Sep 05/2016		201	Sep 05/2017		424	May 05/2017	
204	Sep 05/2016		202	Sep 05/2017		425	May 05/2017	
205	Sep 05/2016		203	Sep 05/2017		426	Sep 05/2015	
206	Jul 25/2018		204	Jan 05/2015		427	May 05/2017	
207	Jul 25/2018		205	Jan 05/2015		428	May 05/2017	
208	Jul 25/2018		206	Jan 05/2015		429	Sep 05/2017	
209	Jul 25/2018		207	Jan 05/2015		430	May 05/2017	
210	Jul 25/2018		208	May 05/2015		431	May 05/2017	
211	Jul 25/2018		209	Jan 05/2015		432	Sep 05/2017	
212	Jul 25/2018		210	Jan 05/2015		433	May 05/2017	
213	Jul 25/2018		211	Jan 05/2015		434	May 05/2017	
214	Jul 25/2018		212	BLANK		435	Sep 05/2017	
215	Sep 05/2016		38-11-10			436	May 05/2017	
216	Jan 05/2015		401	Jan 05/2015		38-11-10		
217	Jul 25/2018		402	Sep 05/2017		501	Jan 05/2015	
218	Jan 05/2015		403	Sep 05/2017		502	Jan 05/2015	
219	Sep 05/2016		404	Jan 05/2015		503	Jan 05/2015	
220	Sep 05/2016		405	Jan 05/2015		504	Jan 05/2015	
221	Jan 05/2015		406	May 05/2017		505	Jan 05/2015	
222	Jul 25/2018		407	Sep 05/2017		506	Jan 05/2015	
223	Jan 05/2015		408	Sep 05/2017		507	Sep 05/2017	
224	Jan 05/2015		409	Sep 05/2017		508	Sep 05/2017	
38-11-09 Config 2			410	Sep 05/2017		509	Jan 05/2015	
201	Jan 05/2015		411	Sep 05/2016		510	Sep 05/2017	
202	Jan 05/2015		412	Sep 05/2016		511	Sep 05/2015	
203	Jan 05/2015		413	Sep 05/2015		512	May 05/2015	
204	Jan 05/2015		414	Sep 05/2017		513	May 05/2015	
205	Jan 05/2015		415	Sep 05/2017		514	BLANK	
206	Jan 05/2015		416	Sep 05/2016		38-11-12		
207	Jan 05/2015		417	Sep 05/2016		401	Jan 05/2015	
208	Jan 05/2015		418	Sep 05/2015		402	Sep 05/2017	
209	Jan 05/2015		419	Sep 05/2017		403	Sep 05/2017	

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38-11-12 (cont)			38-11-15 (cont)			38-14-02		
404	May 05/2016		204	Jan 05/2015		401	May 05/2015	
405	Sep 05/2017		38-13-01			402	Sep 05/2015	
406	Sep 05/2017		401	Jul 25/2018		403	Jan 05/2015	
38-11-13			402	Sep 05/2017		404	Sep 05/2016	
401	May 05/2015		403	Sep 05/2017		38-14-05		
402	Jan 05/2015		404	Jul 25/2018		401	May 05/2015	
403	Jan 05/2015		405	Jul 25/2018		402	Sep 05/2016	
404	Sep 05/2016		406	Sep 05/2016		403	Sep 05/2016	
405	Sep 05/2016		407	Sep 05/2016		404	Jan 05/2015	
406	Sep 05/2016		408	BLANK		405	Sep 05/2017	
407	May 05/2015		38-14-00			406	BLANK	
408	Jan 05/2015		201	May 05/2015		38-14-05		
409	May 05/2015		202	May 05/2015		501	Sep 05/2017	
410	May 05/2015		203	Sep 05/2017		502	Sep 05/2017	
R 411	Sep 05/2018		204	May 05/2015		38-14-06		
412	May 05/2015		205	May 05/2015		401	May 05/2015	
38-11-14			206	Sep 05/2017		402	May 05/2015	
201	May 05/2015		207	Sep 05/2017		403	Sep 05/2016	
202	May 05/2015		208	May 05/2015		404	Sep 05/2017	
203	Jan 05/2015		209	Sep 05/2017		405	Jan 05/2015	
204	BLANK		210	May 05/2015		406	BLANK	
38-11-14			211	May 05/2015		38-14-06		
401	May 05/2015		212	Sep 05/2017		501	Sep 05/2017	
402	Jan 05/2015		213	May 05/2015		502	May 05/2015	
403	Sep 05/2016		214	May 05/2015		38-30-00		
404	Sep 05/2016		215	Sep 05/2017		201	Jan 05/2015	
405	Sep 05/2016		216	May 05/2015		202	Jan 05/2015	
406	Jan 05/2015		217	May 05/2015		203	Jan 05/2015	
407	Jan 05/2015		218	Sep 05/2017		204	Jan 05/2015	
408	Jan 05/2015		38-14-01			205	Jan 05/2015	
R 409	Sep 05/2018		401	Jan 05/2015		206	Jan 05/2015	
410	Jan 05/2015		402	Sep 05/2015		207	Sep 05/2016	
38-11-15			403	May 05/2015		208	Sep 05/2016	
201	May 05/2015		404	May 05/2015		209	Sep 05/2016	
202	May 05/2015		405	May 05/2015		210	Sep 05/2016	
203	Jan 05/2015		406	Sep 05/2016		211	Sep 05/2016	

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38-30-00 (cont)			38-31-00 (cont)			38-31-02 (cont)		
212	Sep 05/2016		707	Jan 05/2018		411	Jan 05/2018	
213	Sep 05/2016		708	BLANK		412	Jan 05/2018	
214	Sep 05/2016		38-31-01			413	Jan 05/2018	
215	Sep 05/2016		401	Sep 05/2015		414	Jan 05/2018	
216	Sep 05/2016		402	Sep 05/2015		415	Jan 05/2018	
217	Sep 05/2016		403	Sep 05/2017		416	Jan 05/2018	
218	Sep 05/2016		404	Sep 05/2017		417	Jan 05/2018	
38-31-00			405	Sep 05/2015		418	Jan 05/2018	
201	Jan 05/2015		406	Sep 05/2015		419	Jan 05/2018	
202	Jan 05/2015		407	Sep 05/2015		420	Jan 05/2018	
203	Jan 05/2015		408	Sep 05/2016		421	Jan 05/2018	
204	Jan 05/2015		409	Sep 05/2016		422	Jan 05/2018	
205	Sep 05/2015		410	Sep 05/2016		423	Jan 05/2018	
206	Jan 05/2015		411	Jan 05/2018		424	Jan 05/2018	
207	Sep 05/2015		412	Jan 05/2018		425	Jan 05/2018	
208	Jan 05/2015		413	Jan 05/2018		426	Jan 05/2018	
209	Sep 05/2016		414	Jan 05/2018		38-32-00		
210	Sep 05/2016		415	Jan 05/2018		201	Jul 25/2018	
211	Sep 05/2016		416	Jan 05/2018		202	Jul 25/2018	
212	Sep 05/2016		417	Jan 05/2018		203	Jul 25/2018	
213	Sep 05/2016		418	Jan 05/2018		204	Jul 25/2018	
214	Sep 05/2016		419	Jan 05/2018		205	Jul 25/2018	
215	Sep 05/2016		420	Jan 05/2018		206	Jul 25/2018	
216	Sep 05/2016		421	Jan 05/2018		207	Jul 25/2018	
217	Sep 05/2016		422	Jan 05/2018		208	Jul 25/2018	
218	BLANK		38-31-02			209	Jul 25/2018	
38-31-00			401	Jan 05/2015		210	Jul 25/2018	
501	May 05/2015		402	Sep 05/2017		211	Jul 25/2018	
502	Sep 05/2017		403	Sep 05/2017		212	Jul 25/2018	
38-31-00			404	Jan 05/2015		213	Jul 25/2018	
701	Sep 05/2017		405	Sep 05/2017		214	Jul 25/2018	
702	Sep 05/2017		406	Sep 05/2017		215	Jul 25/2018	
703	Jan 05/2018		407	Jan 05/2018		216	Jul 25/2018	
704	Jan 05/2018		408	Jan 05/2018		217	Jul 25/2018	
705	Jan 05/2018		409	Jan 05/2018		218	Jul 25/2018	
706	Jan 05/2018		410	Jan 05/2018		219	Jul 25/2018	

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38-32-00 (cont)			38-32-00 (cont)			38-32-00 (cont)		
220	Jul 25/2018		512	Sep 05/2017		731	Sep 05/2017	
221	Jul 25/2018		513	Sep 05/2017		732	Sep 05/2017	
222	Jul 25/2018		514	Sep 05/2017		733	May 05/2018	
223	Jul 25/2018		515	May 05/2015		734	Sep 05/2017	
224	Jul 25/2018		516	Sep 05/2016		735	Sep 05/2017	
225	Jul 25/2018		38-32-00			736	Sep 05/2017	
226	Jul 25/2018		701	Jan 05/2015		737	Sep 05/2017	
227	Jul 25/2018		702	May 05/2018		738	Sep 05/2017	
228	Jul 25/2018		703	May 05/2018		739	Sep 05/2017	
229	Jul 25/2018		704	May 05/2018		740	Sep 05/2017	
230	Jul 25/2018		705	Sep 05/2017		741	Sep 05/2017	
231	Jul 25/2018		706	Jul 25/2018		742	May 05/2018	
232	Jul 25/2018		707	Jul 25/2018		743	Sep 05/2017	
233	Jul 25/2018		708	Sep 05/2017		744	May 05/2018	
234	Jul 25/2018		709	Sep 05/2017		745	Sep 05/2017	
235	Jul 25/2018		710	Sep 05/2017		746	Sep 05/2017	
236	Jul 25/2018		711	Sep 05/2017		747	Sep 05/2017	
38-32-00			712	Sep 05/2017		748	Sep 05/2017	
401	Jan 05/2015		713	Sep 05/2017		749	Sep 05/2017	
402	Jan 05/2015		714	Sep 05/2017		750	Sep 05/2017	
403	Sep 05/2016		715	Sep 05/2017		751	May 05/2018	
404	May 05/2015		716	Jul 25/2018		752	May 05/2018	
405	Jan 05/2015		717	Jul 25/2018		753	Sep 05/2017	
406	Jan 05/2015		718	May 05/2018		754	Sep 05/2017	
38-32-00			719	May 05/2018		755	Sep 05/2017	
501	May 05/2015		720	May 05/2018		756	Sep 05/2017	
502	Sep 05/2017		721	May 05/2018		757	Sep 05/2017	
503	Sep 05/2017		722	May 05/2018		758	Sep 05/2017	
504	Jan 05/2015		723	May 05/2018		38-32-01 Config 1		
505	Sep 05/2016		724	Sep 05/2017		401	Jul 25/2018	
506	Sep 05/2016		725	Sep 05/2017		402	Jul 25/2018	
507	Sep 05/2016		726	Sep 05/2017		403	Sep 05/2017	
508	Sep 05/2016		727	Sep 05/2017		404	Sep 05/2017	
509	Jan 05/2015		728	Sep 05/2017		405	Sep 05/2016	
510	May 05/2015		729	Jul 25/2018		406	Sep 05/2016	
511	May 05/2015		730	Jul 25/2018		407	Jul 25/2018	

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38-32-01 Config 1 (cont)			38-32-03			38-32-06		
408	Jul 25/2018		401	Sep 05/2017		401	May 05/2015	
409	Jul 25/2018		402	Sep 05/2017		402	Sep 05/2017	
410	Jul 25/2018		403	May 05/2017		403	Sep 05/2016	
411	Jul 25/2018		404	May 05/2017		404	Sep 05/2016	
412	Jul 25/2018		405	May 05/2017		405	Sep 05/2017	
413	Jul 25/2018		406	Sep 05/2017		406	Sep 05/2017	
414	Jul 25/2018		407	May 05/2017		407	Sep 05/2017	
415	Jul 25/2018		408	May 05/2017		408	Sep 05/2017	
416	Jul 25/2018		409	May 05/2017		409	Sep 05/2017	
417	Jul 25/2018		410	Sep 05/2017		410	Sep 05/2016	
418	Jul 25/2018		411	Sep 05/2016		38-32-07		
419	Jul 25/2018		412	Sep 05/2016		401	Jan 05/2015	
420	Jul 25/2018		413	Sep 05/2016		402	Sep 05/2017	
421	Jul 25/2018		414	Sep 05/2016		403	Sep 05/2017	
422	Jul 25/2018		415	Jan 05/2015		404	Sep 05/2016	
423	Jul 25/2018		416	Sep 05/2017		38-32-11		
424	Jul 25/2018		417	Sep 05/2016		201	Sep 05/2017	
425	Jul 25/2018		418	Sep 05/2016		202	Sep 05/2017	
426	Jul 25/2018		419	Sep 05/2017		203	Sep 05/2017	
427	Jul 25/2018		420	Sep 05/2017		204	Sep 05/2017	
428	Jul 25/2018		38-32-03			R 205	Sep 05/2018	
429	Jul 25/2018		501	May 05/2015		206	Sep 05/2017	
430	Jul 25/2018		502	Jan 05/2015		207	Sep 05/2017	
431	Jul 25/2018		503	Jan 05/2015		208	Sep 05/2017	
432	Jul 25/2018		504	Jan 05/2015		209	Sep 05/2017	
433	Jul 25/2018		505	Sep 05/2017		210	May 05/2018	
434	Jul 25/2018		506	Sep 05/2016		211	May 05/2018	
38-32-02			507	Sep 05/2016		212	Sep 05/2017	
201	May 05/2015		508	Sep 05/2016		213	May 05/2018	
202	Sep 05/2017		38-32-04			214	May 05/2018	
203	Sep 05/2017		401	Jan 05/2015		215	May 05/2018	
204	Sep 05/2017		402	Jan 05/2015		216	Sep 05/2017	
205	Sep 05/2017		403	Jan 05/2015		217	May 05/2017	
206	Sep 05/2016		404	Sep 05/2016		218	May 05/2017	
						219	May 05/2017	
						220	BLANK	

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38-32-12			38-33-00			38-33-03		
401	Sep 05/2017		501	May 05/2015		201	May 05/2015	
402	Sep 05/2015		502	Sep 05/2017		202	Sep 05/2017	
403	Jan 05/2015		503	Sep 05/2017		203	Sep 05/2016	
404	Sep 05/2017		504	Sep 05/2017		204	Sep 05/2017	
405	Sep 05/2016		505	Sep 05/2017		205	Sep 05/2017	
406	Sep 05/2016		506	May 05/2015		206	BLANK	
38-32-14			507	May 05/2015				
401	Sep 05/2017		508	BLANK				
402	Sep 05/2017		38-33-01					
403	Sep 05/2017		401	Jan 05/2015				
404	Sep 05/2017		402	Sep 05/2017				
405	Sep 05/2016		403	Sep 05/2017				
406	Sep 05/2016		404	Sep 05/2017				
38-32-17			405	Sep 05/2016				
201	Sep 05/2017		406	BLANK				
202	Sep 05/2017		38-33-01					
203	Sep 05/2017		701	May 05/2015				
204	Sep 05/2017		702	Sep 05/2017				
205	Jan 05/2015		703	Sep 05/2017				
206	Sep 05/2016		704	BLANK				
207	Sep 05/2016		38-33-02					
208	Sep 05/2016		401	Jan 05/2015				
38-32-18			402	Sep 05/2017				
201	Sep 05/2017		403	Sep 05/2017				
202	Sep 05/2017		404	Sep 05/2017				
203	Jul 25/2018		405	Sep 05/2017				
204	Jul 25/2018		406	Sep 05/2016				
205	Jan 05/2015		407	Sep 05/2016				
206	Sep 05/2016		408	BLANK				
207	Sep 05/2016		38-33-02					
208	BLANK		701	May 05/2015				
38-32-51			702	Sep 05/2017				
401	Jan 05/2015		703	Sep 05/2017				
402	Jan 05/2015		704	BLANK				
403	Jan 05/2015							
404	Sep 05/2016							

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<u>SUBJECT</u>	<u>CHAPTER SECTION SUBJECT</u>	<u>CONF</u>	<u>PAGE</u>	<u>EFFECT</u>
<u>WATER/WASTE SYSTEM - DDG MAINTENANCE PROCEDURES</u>	38-00-00		901	ARO ALL
MMEL 38-10-01 (DDG) Preparation - Water System Components Inoperative TASK 38-00-00-040-801			901	ARO ALL
MMEL 38-10-01 (DDG) Restoration - Water System Components TASK 38-00-00-440-801			901	ARO ALL
MMEL 38-30-01 (DDG) Preparation - Waste System Components Inoperative TASK 38-00-00-040-802			902	ARO ALL
MMEL 38-30-01 (DDG) Restoration - Waste System Components TASK 38-00-00-440-802			902	ARO ALL
<u>POTABLE WATER SYSTEM - MAINTENANCE PRACTICES</u>	38-10-00		201	ARO ALL
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Flush Control Assembly Installation TASK 38-32-01-400-804-001		1	414	ARO ALL
Manual Shutoff Valve Removal TASK 38-32-01-000-804-001		1	415	ARO ALL
Manual Shutoff Valve Installation TASK 38-32-01-400-805-001		1	419	ARO ALL
Flush Valve Removal TASK 38-32-01-000-805-001		1	421	ARO ALL
Flush Valve Installation TASK 38-32-01-400-806-001		1	422	ARO ALL
Antisiphon Valve Removal TASK 38-32-01-000-808-001		1	424	ARO ALL
Antisiphon Valve Installation TASK 38-32-01-400-802-001		1	428	ARO ALL
Rinse Valve Removal TASK 38-32-01-000-802-001		1	429	ARO ALL
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<u>LIQUID SEPARATOR - MAINTENANCE PRACTICES</u>	<u>38-32-02</u>		201	ARO ALL
Liquid Separator Removal TASK 38-32-02-000-801			201	ARO ALL
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Liquid Separator and Liquid Separator Filter Cleaning TASK 38-32-02-100-801			204	ARO ALL

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Waste Tank Rinse Fitting Assembly Installation TASK 38-32-14-400-801			402	ARO ALL
<u>WASTE TANK RINSE NOZZLE - MAINTENANCE PRACTICES</u>	38-32-17		201	ARO ALL
Waste Tank Rinse Nozzle Removal TASK 38-32-17-000-801			201	ARO ALL
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<u>VACUUM BLOWER BAROMETRIC SWITCH - REMOVAL/INSTALLATION</u>	38-32-51		401	ARO ALL
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<u>WASTE TANK QUANTITY INDICATION - ADJUSTMENT/TEST</u>	38-33-00		501	ARO ALL
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WATER/WASTE SYSTEM - DDG MAINTENANCE PROCEDURES

1. **General**

- A. This procedure has the maintenance tasks for the Master Minimum Equipment List (MMEL) maintenance requirements as shown in the Dispatch Deviations Guide (DDG). These tasks prepare the airplane for flight with certain systems/components inoperative.
- B. This procedure also has the tasks that put the airplane back to its usual condition.
- C. These are the tasks for the components in the water/waste system:
 - (1) MMEL 38-10-01 (DDG) Preparation - Water System Inoperative
 - (2) MMEL 30-10-01 (DDG) Restoration - Water System
 - (3) MMEL 38-30-01 DDG Preparation - Waste System Inoperative
 - (4) MMEL 38-30-01 DDG Restoration - Waste System

TASK 38-00-00-040-801

2. **MMEL 38-10-01 (DDG) Preparation - Water System Components Inoperative**

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the water system inoperative.

B. Water System Components

SUBTASK 38-00-00-040-001

- (1) Deactivate or isolate inoperative components.
- (2) Do these tasks for the applicable inoperative components:

NOTE: Due to the wide variety of galley, lavatory, and drinking fountain installations and various component failure possibilities, operators must develop procedures tailored to their specific installations.

SUBTASK 38-00-00-200-001

- (3) Verify that the associated system components do not have any leaks.

C. Potable Water Systems - System Not Used

SUBTASK 38-00-00-680-001

- (1) Drain the system

SUBTASK 38-00-00-610-001

- (2) Establish procedures to ensure the potable water system is not serviced.

———— **END OF TASK** ————

TASK 38-00-00-440-801

3. **MMEL 38-10-01 (DDG) Restoration - Water System Components**

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the water system restored.

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B. Water System Components

SUBTASK 38-00-00-440-002

- (1) Reactivate applicable water system components.

NOTE: Due to the wide variety of galley, lavatory, and drinking fountain installations and various component failure possibilities, operators must develop procedures tailored to their specific installations.

————— END OF TASK —————

TASK 38-00-00-040-802

4. M MEL 38-30-01 (DDG) Preparation - Waste System Components Inoperative

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the waste system inoperative.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)

C. Components Deactivated

SUBTASK 38-00-00-040-002

- (1) Deactivate or isolate inoperative components.
- (2) Verify associated system components do not have leaks.

NOTE: Due to the wide variety of galley, lavatory, and drinking fountain installations and various component failure possibilities, operators must develop procedures tailored to their specific installations.

D. Lavatory Not Used

SUBTASK 38-00-00-040-003

- (1) Deactivate or isolate inoperative components.

SUBTASK 38-00-00-680-002

- (2) If required, drain the associated waste tank. Do not add the precharge chemical to the associated waste tank. Refer to Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-00-00-410-001

- (3) Close, lock and placard the associated lavatory door.

NOTE: These provisions are not intended to prohibit inspections by crew members.

————— END OF TASK —————

TASK 38-00-00-440-802

5. M MEL 38-30-01 (DDG) Restoration - Waste System Components

A. General

- (1) This task gives the maintenance steps which prepare the airplane for flight with the waste system restored.

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B. Waste System Components

SUBTASK 38-00-00-440-001

- (1) Do these tasks for the applicable components:

NOTE: Due to the wide variety of galley, lavatory, and drinking fountain installations and various component failure possibilities, operators must develop procedures tailored to their specific installations.

———— **END OF TASK** ————

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POTABLE WATER SYSTEM - MAINTENANCE PRACTICES

1. **General**

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) Potable water system deactivation.
 - (2) Potable water system activation.
 - (3) Pressurize the potable water system.
 - (4) Clean the potable water system with a disinfectant.
 - (5) A test for leakage of the potable water system.
 - (6) Depressurize the potable water system.
- C. It is necessary to flush and then use a disinfectant in the water system when you have these conditions:
 - (1) Contamination in the water system
 - (2) After repairs on the water system

TASK 38-10-00-040-801

2. **Potable Water System - Deactivation**

(Figure 201)

A. **General**

- (1) This task will deactivate the Potable Water System.

B. **References**

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)

C. **Location Zones**

Zone	Area
123	Area Below Forward Cargo Compartment, Left
166	Area Aft of Bulk Cargo Compartment, Right
200	Upper Half of Fuselage
230	Subzone 230 - Section 43

D. **Access Panels**

Number	Name/Location
117AL	Main Equipment Center Access Door

E. **Procedure**

SUBTASK 38-10-00-860-128

- (1) Release pressure from the potable water system, do this task: Potable Water System - Depressurization, TASK 38-10-00-860-801

SUBTASK 38-10-00-610-023

- (2) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

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SUBTASK 38-10-00-010-016

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
117AL	Main Equipment Center Access Door

SUBTASK 38-10-00-860-130



WARNING

BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C38401	LAV WTR HTR 1
B	8	C38403	LAV WTR HTR 2
D	7	C38407	LAV WTR HTR 7

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	24	C38406	LAV WTR HTR 6
D	25	C38404	LAV WTR HTR 5
D	26	C38402	LAV WTR HTR 4
D	27	C38400	LAV WTR HTR 3
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

F. Potable Water System - Tryout

SUBTASK 38-10-00-700-001

- (1) At the AFT ATTENDANT PANEL:
- (a) Make sure the WATER SYSTEM switch is in the ON position.
- (2) At any Lavatory or Galley:
- (a) Turn the water faucet to the ON position.
- 1) Make sure no water flows out.
- 2) Turn the water faucet to the OFF position.
- 3) Set the WATER SYSTEM switch to the OFF position.

————— END OF TASK —————

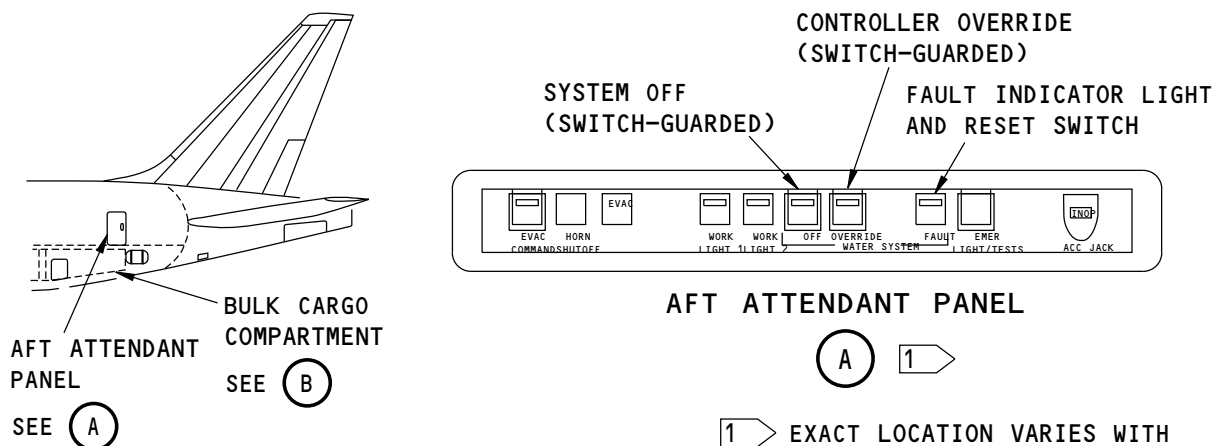
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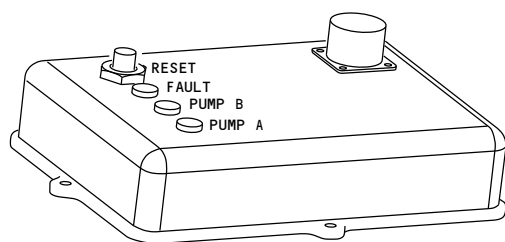
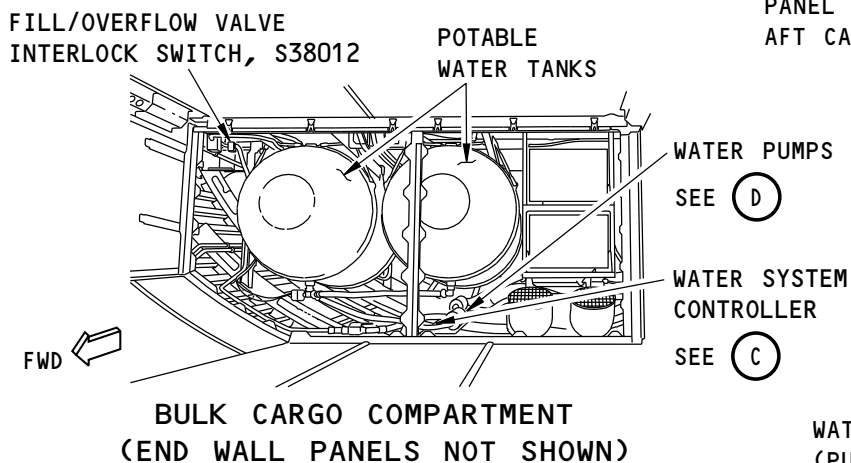
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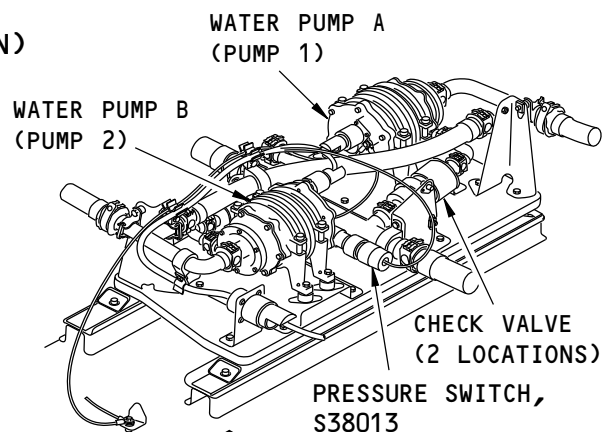


1 EXACT LOCATION VARIES WITH CABIN INTERIOR OPTIONS. PANEL IS LOCATED NEAR THE AFT CABIN ENTRY DOOR.



WATER SYSTEM CONTROLLER

(C)



WATER PUMPS

(D)

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Potable Water System
Figure 201/38-10-00-990-805

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TASK 38-10-00-440-801

3. **Potable Water System - Activation**

(Figure 201)

A. General

(1) This task will activate the Potable Water System.

B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)

C. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left
166	Area Aft of Bulk Cargo Compartment, Right
200	Upper Half of Fuselage
230	Subzone 230 - Section 43

D. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

E. Procedure

SUBTASK 38-10-00-860-131



WARNING

BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Left Power Management Panel, P110

Row	Col	Number	Name
A	8	C38401	LAV WTR HTR 1
B	8	C38403	LAV WTR HTR 2
D	7	C38407	LAV WTR HTR 7

Right Power Management Panel, P210

Row	Col	Number	Name
D	24	C38406	LAV WTR HTR 6
D	25	C38404	LAV WTR HTR 5
D	26	C38402	LAV WTR HTR 4

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	27	C38400	LAV WTR HTR 3
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-00-410-022

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117AL	Main Equipment Center Access Door

SUBTASK 38-10-00-610-022

- (3) Do this task to fill the potable water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-00-860-132

- (4) Pressurize the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-10-00-790-014

- (5) Make sure there are no water leaks; if necessary, do this task: Potable Water System - Leak Test, TASK 38-10-00-790-801.

————— END OF TASK —————

TASK 38-10-00-863-801

4. Potable Water System - Pressurization

A. References

<u>Reference</u>	<u>Title</u>
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Access Panels

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door
154AR	Aft Potable Water Service Door

C. Prepare to do the task

SUBTASK 38-10-00-861-001

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

NOTE: Electrical power is necessary to pressurize the potable water system.

SUBTASK 38-10-00-613-001

- (2) If the potable water tanks do not have water in them, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810 .

SUBTASK 38-10-00-865-003

- (3) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND

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Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

D. Pressurize the Potable Water System

SUBTASK 38-10-00-860-036

- (1) At this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

make sure that the Tank Fill Valve and the Aft Drain valve handles are in the closed position.

- (2) At this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

make sure that the Quantity Preselect switch is selected to the OFF/RESET position.

- (3) At this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

make sure the forward drain valve is closed.

SUBTASK 38-10-00-410-013

- (4) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door
154AR	Aft Potable Water Service Door

SUBTASK 38-10-00-860-037

- (5) Make sure that the water system "OFF" switch, on the aft attendants switch panel, is not off.

NOTE: The water system OFF switch light comes on when the water system is off.

————— **END OF TASK** —————

TASK 38-10-00-600-801

5. Potable Water System - Disinfectant

NOTE: This procedure is a scheduled maintenance task.

A. General

This procedure is a scheduled maintenance task.

The intent of this task is to provide a solution of disinfectant to the potable water system that achieves a concentration of 100 ppm (parts per million). When preparing the disinfectant solution, the stabilized chlorine dioxide (Purogene) and the citric acid are both measured by volume (fluid ounces or liters).

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As an alternate to chemical disinfection, the potable water system may be disinfected by any ozone disinfection process that provides an ozone concentration of up to 3.5 PPM (parts per million). The ozone disinfection must be conducted per the ozone equipment/cart supplier's instructions. Long term exposure to ozone may result in the degradation of elastomeric components (O-rings) in the potable water system.

B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)

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-1141	Equipment - Potable Water Servicing Part #: SPW-500PL Supplier: 32526 Part #: TWS-402 Supplier: 44185 Part #: WSP-900 Supplier: 6L481 Part #: WTM-900 Supplier: 6L481 Opt Part #: 2303 Supplier: 00365 Opt Part #: ACE-1520 Supplier: 6L481 Opt Part #: ACE-488-350 Supplier: 6L481 Opt Part #: ACE-499-350 Supplier: 6L481 Opt Part #: DEV-499 Supplier: 6L481

D. Consumable Materials

Reference	Description	Specification
B00637	Acid, Citric	A-A-59147
B01033	Cleaner - Disinfectant - Lysol	
B50246	Cleaner - Glyco-San Potable Water System Cleaner	AMS 1550B
G00022	Compound - Chlorine Dioxide For Water Purification - Purogene or Oxine	
G50318	Metallic Wool - Steel	

E. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

F. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

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G. Prepare to Disinfect the Potable Water System

SUBTASK 38-10-00-680-001



WARNING

DRAIN, OR USE THE POTABLE WATER SYSTEM A MINIMUM OF ONE TIME EACH THREE DAYS. IF YOU DO NOT DRAIN, OR USE THE WATER SYSTEM FREQUENTLY, BACTERIA CAN GROW IN THE WATER. IF YOU DRINK WATER WITH BACTERIA IN IT, ILLNESS CAN OCCUR.

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-10-00-020-002

- (2) Remove and discard the filter canisters (if installed) from the water system in the galleys, refer to the galley manufacturers instructions.

NOTE: Make sure that the top of the housing is in its position without the filter canister installed.

SUBTASK 38-10-00-020-003

- (3) Disconnect the coffee maker (if installed) and any other potable water using devices from the water system in the galleys (including water boilers).

H. Disinfect the Potable Water System

SUBTASK 38-10-00-610-001

- (1) To fill the potable water system approximately half full with water, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-00-670-001

- (2) Make a disinfectant as follows:

NOTE: The disinfectant mixtures will provide the full system with a solution of chlorine dioxide at 100 parts per million.

- (a) Recommended disinfectant:

- 1) Chlorine dioxide (stabilized 2%) Purogene or Oxine compound, G00022 and citric acid (crystal, powder or liquid) acid, B00637.



WARNING

DO NOT BREATHE CHLORINE DIOXIDE GAS. PUT ON A RESPIRATOR, AND GOGGLES. WHEN THE TWO CHEMICALS MIX, THEY MAKE CHLORINE DIOXIDE GAS. CHLORINE DIOXIDE GAS CAN CAUSE INJURIES TO PERSONNEL IF THEY BREATHE IT.

- (b) Mix these quantities of chlorine dioxide Purogene or Oxine compound, G00022 with citric acid, B00637 in a clean, closed plastic container: 230.4 fl-oz (6.81 l) chlorine dioxide, 28.8 fl-oz (0.85 l) citric acid (crystal or powder) or 46.08 fl-oz (1.36 l) citric acid 50% (liquid).
- (c) Use a clean instrument to mix the solution fully.
- (d) Stop for 5 minutes.
- (e) Add water to make approximately 5 gal (19 l) of solution.

SUBTASK 38-10-00-010-007

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
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SUBTASK 38-10-00-670-015

- (4) Clean and disinfect the aerator assembly as follows:

NOTE: Optional to remove and install new aerator assembly. Refer to applicable vendor CMM.

- (a) Plug the sink.
- (b) Remove the aerator assembly from the faucet assembly.
- (c) Soak the aerator assembly in Lysol cleaner, B01033 or Glyco-San potable water system cleaner, B50246 for 30 minutes.
- (d) Scrub the aerator assembly with steel wool, G50318 or equivalent.
- (e) Flush the aerator assembly with clean water.
- (f) Reinstall the aerator assembly to the faucet assembly.
- (g) Unplug the sink.

SUBTASK 38-10-00-670-005

- (5) Add the disinfectant to the water service potable water servicing equipment, COM-1141 for the potable water system.

NOTE: The filter cartridge must not be installed in the water service equipment.

SUBTASK 38-10-00-670-002

- (6) Add the disinfectant to the potable water system through the water fill connection at the water service panel.

SUBTASK 38-10-00-610-002

- (7) To add water to the potable water system until the water tanks are full, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-00-860-001

- (8) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-10-00-860-002

- (9) Open the forward-most lavatory faucets (hot and cold) and the galley faucets in the potable water system and let flow for 10 minutes.

NOTE: Let the water flow until the disinfectant flows from each faucet. The disinfectant may be noticeable by its slight yellow color.

SUBTASK 38-10-00-860-033

- (10) Open each of the other lavatory faucets (hot and cold) and the galley faucets.

NOTE: Let the water flow until the disinfectant flows from each faucet. The disinfectant may be noticeable by its slight yellow color

SUBTASK 38-10-00-860-003

- (11) After the disinfectant flows from the faucet, close the faucet.

SUBTASK 38-10-00-170-001

- (12) Flush each toilet a minimum of two times with a 15 second delay between flushes, or until chlorinated water appears.

SUBTASK 38-10-00-610-004

- (13) To fill the remainder of the potable water system with water until it is full, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

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SUBTASK 38-10-00-670-003



WARNING

KEEP THE DISINFECTANT IN THE WATER FOR A MINIMUM OF ONE HOUR. LESS TIME WILL NOT KILL ALL OF THE BACTERIA. BACTERIA CAN CAUSE ILLNESS.

- (14) Keep the disinfectant in the potable water between one and two hours.

SUBTASK 38-10-00-680-002



CAUTION

DO NOT KEEP THE DISINFECTANT IN THE SYSTEM LONGER THAN TWO HOURS. CORROSION CAN OCCUR AFTER TWO HOURS AND CAUSE DAMAGE TO THE SYSTEM.

- (15) After one hour, do these steps:
- (a) Open each of the galley faucets to let the water in the galley supply lines drain.
 - (b) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.
 - (c) Close each of the galley faucets.

SUBTASK 38-10-00-860-004

- (16) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-00-860-005

- (17) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-10-00-860-006

- (18) Open each of the lavatory faucets and the galley faucets until water without the disinfectant flows through each for 15 seconds.

SUBTASK 38-10-00-170-002

- (19) Flush each toilet a minimum of two times with a 15 second delay between flushes, or until the water without the disinfectant appears.

SUBTASK 38-10-00-680-004

- (20) If you have water with bad taste, smell, or color, then do these steps.
- (a) Drain the potable water system.
 - (b) Do these steps to flush the potable water system again:
 - 1) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.
 - 2) Open the lavatory and galley faucets, until water without the disinfectant flows from each. Then keep the faucets open for an additional one minute.
 - a) Close the faucets.
 - 3) Flush each toilet a minimum of two times with a 15 second delay between flushes, or until the water without the disinfectant appears.
 - 4) If it is necessary, do these steps again to remove all the bad taste and bad smell from the water.

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SUBTASK 38-10-00-860-050

- (1) Turn and then push the handle to close the preselect fill/overflow valve.

SUBTASK 38-10-00-410-010

- (2) Install new filter canisters in the galley water filters (if installed). Refer to the galley manufacturers instructions.

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SUBTASK 38-10-00-420-011

- (3) Connect the galley coffee makers or water units that were disconnected (including water boilers).

SUBTASK 38-10-00-790-007

- (4) Make sure that there are no leaks in the filter canisters (if installed) or galley water units.

SUBTASK 38-10-00-710-001

- (5) If there is too much carbon sediment found downstream, examine galley filter for correct operation (if installed).

SUBTASK 38-10-00-410-001

- (6) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

————— **END OF TASK** —————

TASK 38-10-00-790-801

6. Potable Water System - Leak Test

A. General

- (1) Use this procedure to make sure the potable water system and the drain lines (for the gray water) do not have a leak.

B. References

<u>Reference</u>	<u>Title</u>
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-11-14-990-802	Figure: VENT VALVE - POTABLE WATER TANKS - REMOVAL / INSTALLATION (P/B 401)

C. Tools/Equipment

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

<u>Reference</u>	<u>Description</u>
SPL-1951	Plug - Waste Water Drain Mast Part #: C38001-29 Supplier: 81205 Opt Part #: C38001-23 Supplier: 81205
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG
STD-1091	Gauge - Air Pressure, 0-100 PSIG (0-690 KPa)

D. Location Zones

<u>Zone</u>	<u>Area</u>
166	Area Aft of Bulk Cargo Compartment, Right
200	Upper Half of Fuselage

E. Access Panels

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

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F. Potable Water System - Leakage Test

(Figure 202)

SUBTASK 38-10-00-860-039

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-10-00-865-004

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-00-010-010

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-00-010-011

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-10-00-860-073

- (5) Push the drain valve handles to close the forward and aft system drain valves at the forward and aft service panels.

SUBTASK 38-10-00-860-074

- (6) Make sure the water supply shutoff valves are open at each lavatory.

SUBTASK 38-10-00-860-075

- (7) Make sure that the drain valve for each lavatory is in the OPEN TO DRAIN position.

NOTE: The drain valve is found below the sink in the lavatory. Disabled, and some first class, lavatories have two drain valves each.

- (a) For the self-close type drain valve, make sure that the lavatory drain valve is held open manually for about one and a half minutes when placing it in the OPEN TO DRAIN position.

SUBTASK 38-10-00-860-040

- (8) Move the tank vent valve manual lever to align with the "POS 1" mark on the valve body (Figure 38-11-14-990-802).

NOTE: This is the fill/overflow position.

SUBTASK 38-10-00-860-041

- (9) Disconnect the pump bypass hose from the top of the tank, and install a plug in the hose.

Make sure you plug the pump bypass hose. If you do not plug the bypass hose, water will flow from the hose when you pressurize the tanks.

SUBTASK 38-10-00-480-007

- (10) Connect the pressure gauge (0-100 PSIG) (0-690 KPa), STD-1091 and air hose (Figure 202 (Sheet 2)) to the tank fitting.

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SUBTASK 38-10-00-780-014

- (11) Connect a 0-50 psig dry filtered regulated air source, STD-1082 to the pressure gauge hose (Figure 202 (Sheet 2)).

SUBTASK 38-10-00-610-009

- (12) Do this task, as necessary, to fill the water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-00-780-015

- (13) Pressurize the potable water system to 50 psig.

SUBTASK 38-10-00-780-016

- (14) Open the faucets in each lavatory and galley and let the water flow for 2 minutes.

NOTE: Keep the pressure at 50 psig (in the potable water system).

SUBTASK 38-10-00-780-008

- (15) Close all the water faucets.

SUBTASK 38-10-00-780-009

- (16) Keep the pressure at 50 psig for at least 5 minutes.

SUBTASK 38-10-00-790-009

- (17) Make sure there are no air or water leaks in these locations:
 - (a) At the water tanks.
 - (b) At the water fill connection, on the water service panel
 - (c) At the water drain connections, on the airplane skin.
 - (d) In the water tubes that supply water to the lavatories and galleys.
 - (e) At the lavatory drain valves and lines.

SUBTASK 38-10-00-860-076

- (18) Close the water supply shutoff valves at each lavatory.

SUBTASK 38-10-00-860-077

- (19) Pull the drain valve handles to open the forward and aft system drain valves at the forward and aft service panels.

SUBTASK 38-10-00-860-078

- (20) Allow water to fully drain.

SUBTASK 38-10-00-860-079

- (21) Push the drain valve handles to close the forward and aft system drain valves at the forward and aft service panels.

SUBTASK 38-10-00-860-080

- (22) Close the drain valves for each lavatory.

SUBTASK 38-10-00-860-081

- (23) Open the water supply shutoff valves at each lavatory.

SUBTASK 38-10-00-860-043

- (24) Move the tank vent valve manual lever to align with the "POS 2" mark on the valve body (Figure 38-11-14-990-802).

NOTE: This is the normal flight position.

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SUBTASK 38-10-00-080-006

- (25) Disconnect the 0-50 psig dry filtered regulated air source, STD-1082, and release the pressure from the pressure gauge (0-100 PSIG) (0-690 KPa), STD-1091 and air hose (Figure 202 (Sheet 2)). Disconnect the pressure gauge hose from the tank fitting.

SUBTASK 38-10-00-860-044

- (26) Remove the plug from the pump bypass hose, and connect the pump bypass hose to the water tank fitting.

SUBTASK 38-10-00-865-005

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

G. Forward Gray Water System - Leakage Test

SUBTASK 38-10-00-480-002

- (1) Install the waste water drain mast plug, SPL-1951 or drain mast plug waste water drain mast plug, SPL-1951 to seal the forward drain mast.

SUBTASK 38-10-00-860-013

- (2) Put water in the sink in the forward galley until the drain line is full of water.

NOTE: The drain line is full of water when water stays in the sink for five minutes.

SUBTASK 38-10-00-790-002

- (3) Make sure that the drain lines connected to the forward drain mast have no leaks.

SUBTASK 38-10-00-080-001

- (4) Remove the equipment from the forward drain mast to let the water drain.

H. Aft Gray Water System - Leakage Test

SUBTASK 38-10-00-480-003

- (1) Install the waste water drain mast plug, SPL-1951 or drain mast plug waste water drain mast plug, SPL-1951 to seal the aft drain mast.

SUBTASK 38-10-00-860-014

- (2) Put water in the sink in the aft galley until the drain line is full of water.

NOTE: The drain line is full of water when water stays in the sink for five minutes.

SUBTASK 38-10-00-790-003

- (3) Make sure that the drain lines connected to the aft drain mast have no leaks.

SUBTASK 38-10-00-080-002

- (4) Remove the equipment from the aft drain mast to let the water drain.

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I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-10-00-410-002



WARNING

OBEY THE INSTRUCTIONS IN THE PROCEDURE TO INSTALL THE CARGO LINING. THE INCORRECT INSTALLATION OF THE CARGO LINING CAN LET THE FIRE EXTINGUISHING AGENT OR SMOKE OUT OF THE CARGO COMPARTMENT DURING A FIRE.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-10-00-410-003

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

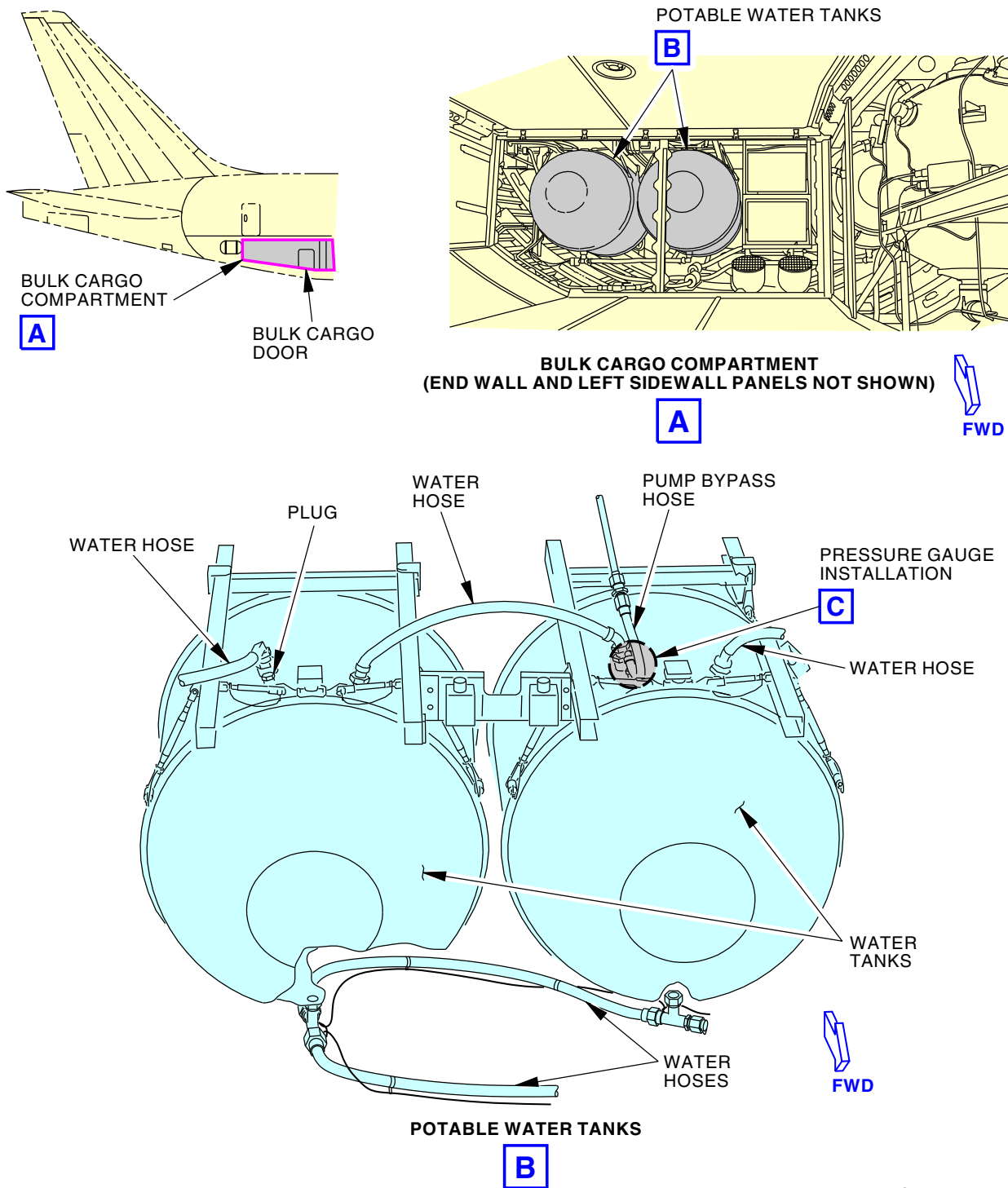
————— **END OF TASK** —————

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**Potable Water System Leak Test
Figure 202/38-10-00-990-801 (Sheet 1 of 2)**

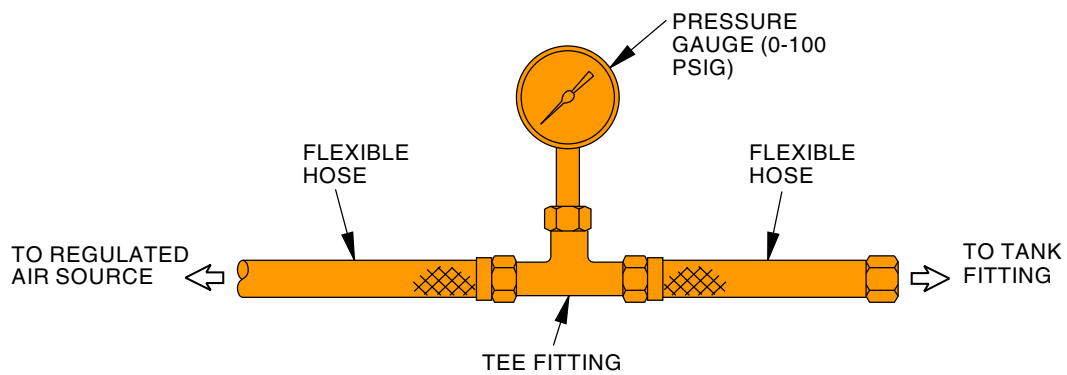
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PRESSURE GAUGE INSTALLATION

C

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Potable Water System Leak Test
Figure 202/38-10-00-990-801 (Sheet 2 of 2)

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TASK 38-10-00-860-801

7. Potable Water System - Depressurization

A. General

- (1) This task is to depressurize the potable water system.

B. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)

C. Depressurize the Potable Water System

SUBTASK 38-10-00-860-116

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-00-680-013

- (2) If work is to be accomplished in areas that may have residual water in the system, do this task Potable Water System - Drain, TASK 12-14-01-616-802.

————— END OF TASK —————

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POTABLE WATER SYSTEM - CLEANING MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) Manually clean the potable water tank.

TASK 38-10-00-100-801

2. Manually Clean the Potable Water Tank

(Figure 701)

A. General

- (1) This procedure is to manually clean the potable water tank. This should only be used when the disinfecting procedure is not effective. The normal process for maintenance of the water system is, (TASK 38-10-00-600-801).

B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

C. Tools/Equipment

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

Reference	Description
COM-4909	Rotation Tool - potable water tank Part #: 2MIT1A264-0281-1 Supplier: 1TGN3
STD-123	Brush - Soft Bristle

D. Consumable Materials

Reference	Description	Specification
B50026	Soap - Clear Liquid Dishwashing	

E. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

F. Prepare to Clean the Water Tank

SUBTASK 38-10-00-680-005

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-10-00-020-006

- (2) To remove the Station 2062 End Wall, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-10-00-010-006

- (3) Do these steps to gain access to the inside of the water tank:

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DEPRESSURIZE WATER TANK BEFORE YOU REMOVE THE TANK END CAP. IF THE TANK END CAP IS REMOVED PRIOR TO TANK DEPRESSURIZATION, THE TANK END CAP CAN INJURE MAINTENANCE PERSONNEL.

- (a) Remove the insulation on the end of the water tank.
- (b) Put the rotation tool, COM-4909 in its position on the end cap(s) and then remove the end-cap(s).
- (c) Pull the end-caps from the tank.

G. Clean the inside of the water tank

SUBTASK 38-10-00-110-001

- (1) Do these steps to clean the inside of the water tank.
 - (a) Mix 1 gal (4 l) of water and 3 fl-oz (89 ml) of soap, B50026 in a 2 gal (8 l) plastic container.
 - (b) Put the mixture into the water tank.
 - (c) Clean the inside of the tank and end caps with a long handled, soft bristle brush, STD-123.
 - (d) If the water tank has been removed, manually drain the tank into a 5 gal (19 l) plastic container.
 - (e) If the water tank has not been removed, do this task: Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-10-00-680-007

- (2) Do these steps to flush the inside of the water tank.
 - (a) Flush the inside of the tank with water.
 - (b) If the water tank has been removed, manually drain the tank into a 5 gal (19 l) plastic container.
 - (c) If the water tank has not been removed, do this task: Potable Water System - Drain, TASK 12-14-01-616-802.
 - (d) Do the flush and drain steps above three times.
 - (e) Wash the tank end caps with clean water.

SUBTASK 38-10-00-420-007

- (3) Do these steps to install the end caps on the water tank.
 - (a) Make sure the O-ring is not dislodged, pinched or damaged during assembly.
 - (b) Put the rotation tool, COM-4909 in its position on the end cap(s) and install in the tank so that the spherical surface is inside the tank.
 - (c) Tighten the endcap(s) to 700 $\pm$ 100 in-lb (79 $\pm$ 11 N·m).
 - (d) To install the lockwire, do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-10-00-420-008

- (4) Make sure the drain valve is closed.

SUBTASK 38-10-00-110-002

- (5) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

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SUBTASK 38-10-00-680-008

- (6) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-00-840-002

- (7) To restore pressure to the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-10-00-790-006

- (8) Examine all the connections for leakage.
(a) Make sure there is no leakage.

SUBTASK 38-10-00-420-009

- (9) Install the insulation cover on the water tank.

SUBTASK 38-10-00-420-010

- (10) To install Station 2062 End Wall, do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

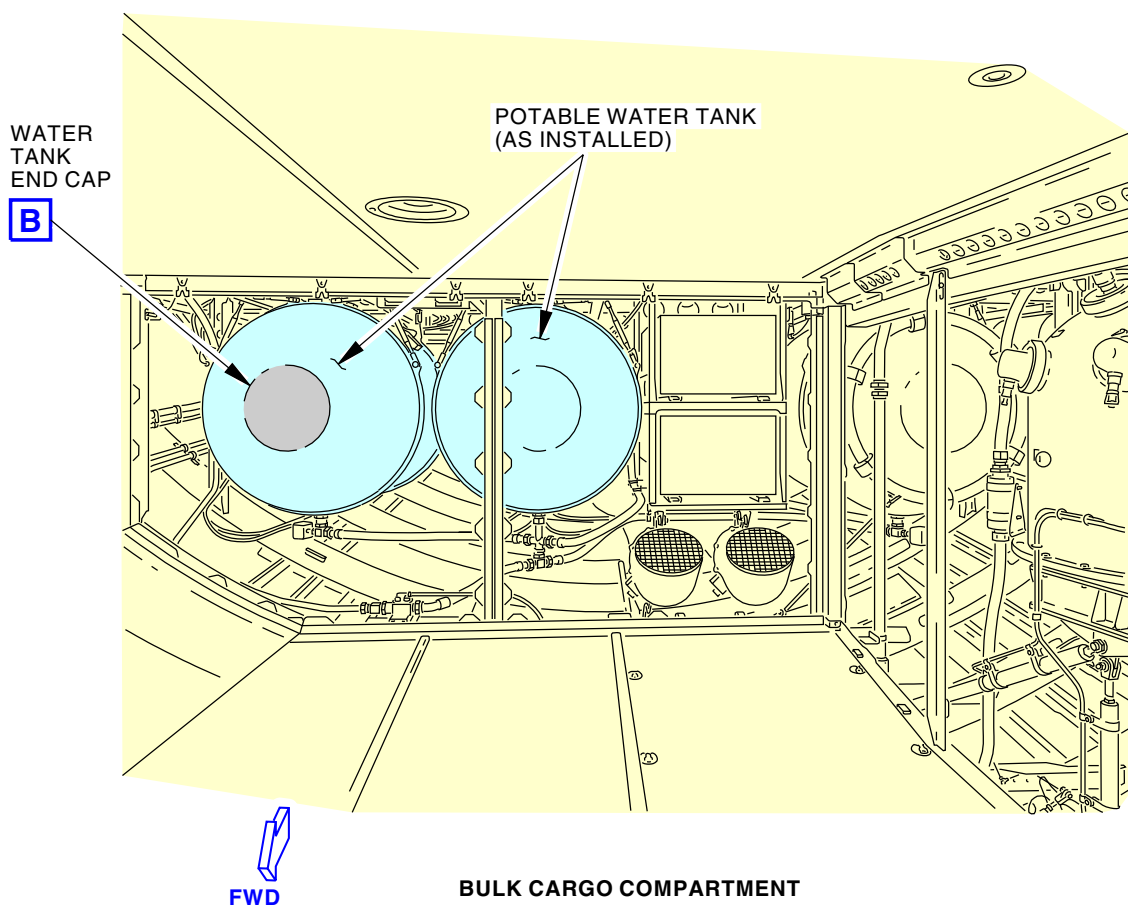
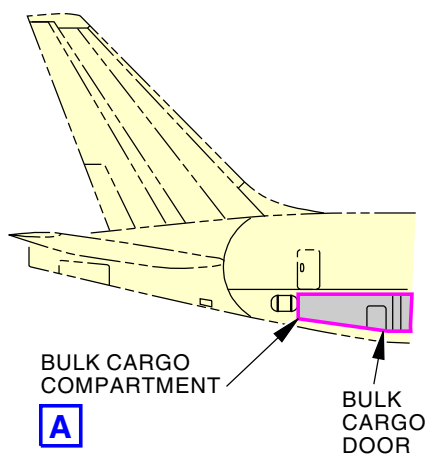
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L43403 S0006422332_V2

Water Tank Cleaning
Figure 701/38-10-00-990-804 (Sheet 1 of 2)

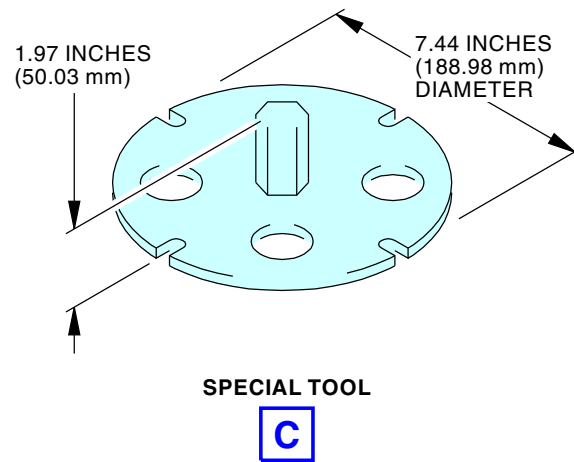
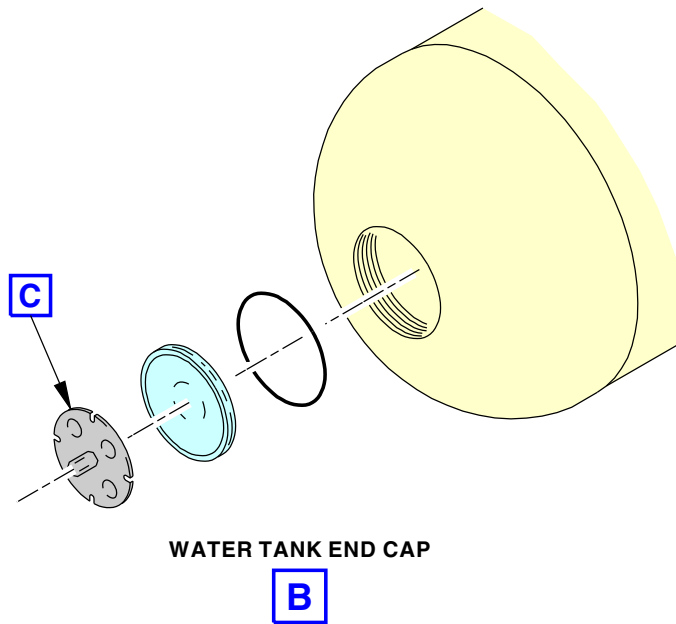
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L44133 S0006422335_V3

Water Tank Cleaning
Figure 701/38-10-00-990-804 (Sheet 2 of 2)

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TASK 38-10-00-100-802

3. Descale Cleaning of the Potable Water System

A. General

- (1) The intent of this task is to provide a descale cleaning solution to the potable water system. Glyco-San is an aggressive cleaner and disinfectant, for use when mineral scale is present. Boeing does not recommend general or frequent use as a disinfectant.
- (2) Initial soak is recommended when descale cleaning has not been performed in over 360 days.
- (3) Periodic soak is recommended when descale cleaning is performed every 180 to 360 days.
- (4) It may take several flush steps to completely remove the cleaner from the system.

B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

C. Tools/Equipment

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

Reference	Description
COM-1141	Equipment - Potable Water Servicing Part #: SPW-500PL Supplier: 32526 Part #: TWS-402 Supplier: 44185 Part #: WSP-900 Supplier: 6L481 Part #: WTM-900 Supplier: 6L481 Opt Part #: 2303 Supplier: 00365 Opt Part #: ACE-1520 Supplier: 6L481 Opt Part #: ACE-488-350 Supplier: 6L481 Opt Part #: ACE-499-350 Supplier: 6L481 Opt Part #: DEV-499 Supplier: 6L481

D. Consumable Materials

Reference	Description	Specification
B50246	Cleaner - Glyco-San Potable Water System Cleaner	AMS 1550B

E. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

F. Prepare to Descale the Potable Water System

SUBTASK 38-10-00-680-010

 WARNING	DRAIN, OR USE THE POTABLE WATER SYSTEM A MINIMUM OF ONE TIME EACH THREE DAYS. IF YOU DO NOT DRAIN, OR USE THE WATER SYSTEM FREQUENTLY, BACTERIA CAN GROW IN THE WATER. IF YOU DRINK WATER WITH BACTERIA IN IT, ILLNESS CAN OCCUR.

- (1) Drain the water tanks. This is the task: Potable Water System - Drain, TASK 12-14-01-616-802

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SUBTASK 38-10-00-020-012

- (2) To remove the filter canisters (if installed) from the water system in the galleys, refer to the galley manufacturers instructions.

NOTE: Make sure the top of the housing is in its position without the filter canister installed.

G. Descale the Potable Water System

SUBTASK 38-10-00-110-003

- (1) Make the cleaning solution as follows:
 - (a) Mix 90 gal (341 l) of Glyco-San potable water system cleaner, B50246 with 270 gal (1022 l) of water for all tanks.

SUBTASK 38-10-00-010-015

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-10-00-140-003

- (3) Add the cleaning solution to the potable water servicing equipment, COM-1141 for the potable water system.

NOTE: The filter cartridge must not be installed in the water service equipment.

SUBTASK 38-10-00-140-004

- (4) Add the cleaning solution to the potable water system:
 - (a) To fill the tanks do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-00-860-087

- (5) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-10-00-860-088

- (6) Let the potable water flow for one (1) minute or until the cleaning solution is visible, do this step:

NOTE: The cleaning solution may be noticeable by its slight yellow and foamy appearance.

- (a) Open all the lavatory faucets (hot and cold), galley faucets, water boiler valves, and coffee maker valves (as equipped) in the potable water system.

SUBTASK 38-10-00-860-091

- (7) After one (1) minute of water flow or if the cleaning solution is visible, do this step:
 - (a) Close each faucet and valve.

SUBTASK 38-10-00-170-004

- (8) Flush each toilet at least twice with a 15 second delay between flushes or until cleaning solution appears.

NOTE: The cleaning solution may be noticeable by its slight yellow and foamy appearance.

SUBTASK 38-10-00-110-004

- (9) For initial soak, let the cleaning solution soak for a minimum of 6 hours

NOTE: Initial soak is recommended when descale cleaning has not been performed in over 360 days.

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SUBTASK 38-10-00-110-005

- (10) For periodic soak, let the cleaning solution soak for a minimum of 4 hours.

NOTE: Periodic soak is recommended when descale cleaning is performed every 180 to 360 days.

SUBTASK 38-10-00-680-011

- (11) After the soak is complete, do these steps:
- (a) Open each of the galley faucets, water boiler valves, and coffee maker valves (as equipped) to let the water in the galley supply lines, water boilers, and coffee makers drain.
 - (b) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802
 - (c) Close each of the galley faucets, water boiler valves, and coffee maker valves (as equipped).

SUBTASK 38-10-00-860-092

- (12) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-00-860-093

- (13) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801

SUBTASK 38-10-00-860-094

- (14) Let the potable water flow for one (1) minute or until the cleaning solution is no longer visible, do this step:

NOTE: The cleaning solution may be noticeable by its slight yellow and foamy appearance.

- (a) Open each lavatory faucet, galley faucet, water boiler valve, and coffee maker valve.

SUBTASK 38-10-00-860-096

- (15) After one (1) minute of water flow or if the cleaning solution is no longer visible, do this step:

- (a) Close the faucets, galley water boiler valves, and coffee maker valves.

SUBTASK 38-10-00-170-006

- (16) Flush each toilet at least twice with a 15 second delay between flushes or until water without the cleaning solution appears.

NOTE: The cleaning solution may be noticeable by its slight yellow and foamy appearance.

SUBTASK 38-10-00-680-012

- (17) Flush the potable water system again, do this task: Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-10-00-860-098

- (18) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-00-860-099

- (19) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801

SUBTASK 38-10-00-860-100

- (20) Let the potable water flow for one (1) minute, do this step:

- (a) Open each lavatory faucet, galley faucet, water boiler valve, and coffee maker valve (as equipped).

SUBTASK 38-10-00-860-102

- (21) After one (1) minute of water flow, do this step :

- (a) Close the faucets, galley water boiler valves, and coffee maker valves.

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SUBTASK 38-10-00-170-007

(22) Flush each toilet at least twice with a 15 second delay between flushes.

SUBTASK 38-10-00-670-014

(23) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

———— **END OF TASK** ————

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POTABLE WATER SYSTEM (RECONFIGURATION) - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) A removal of a cap in the potable water system.
 - (2) An installation of a cap for the potable water system.
 - (3) A removal of a hose in the potable water system.
 - (4) An installation of a hose for the potable water system.
- B. This procedure gives the primary configuration items that are necessary to change the passenger compartment configuration. This procedure is only for the basic configuration of the potable water system. For the accurate configuration of your airplane, it is necessary for you to refer to the approved configuration data.
- C. This procedure has these illustrations:
- (1) (Figure 201) shows all of the locations of the lavatories and galleys.
 - (2) (Figure 202) shows the primary routing of the tubes for the potable water system.
 - (3) (Figure 203) shows the details of the potable water system.

TASK 38-10-01-910-801

2. Potable Water System - Cap Removal (Reconfiguration)

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Potable Water System - Cap Removal

SUBTASK 38-10-01-680-001

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-10-01-020-001

- (2) Remove the cap from the water system component.

————— **END OF TASK** —————

TASK 38-10-01-910-802

3. Potable Water System - Cap Installation (Reconfiguration)

(Figure 201)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-790-801	Potable Water System - Leak Test (P/B 201)

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B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Potable Water System - Cap Installation

SUBTASK 38-10-01-640-001

(1) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packing.

SUBTASK 38-10-01-420-001

(2) Install the packing on the water system component.

SUBTASK 38-10-01-420-002

(3) Install the cap for the water system component.

SUBTASK 38-10-01-420-011

(4) Install the coupling on the cap.

SUBTASK 38-10-01-670-001

(5) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-10-01-610-001

(6) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-01-790-001

(7) Do this task: Potable Water System - Leak Test, TASK 38-10-00-790-801.

————— **END OF TASK** —————

TASK 38-10-01-910-803

4. Potable Water System - Hose Removal (Reconfiguration)

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Potable Water System - Hose Removal

SUBTASK 38-10-01-680-002

(1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-10-01-020-002

(2) Disconnect the hose from the water supply system.

SUBTASK 38-10-01-020-003

(3) Disconnect the hose from the water system component.

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SUBTASK 38-10-01-020-004

- (4) Remove the straps from the clamps that attach the hose to the structure.

NOTE: If the hose is in a conduit, do not remove the conduit. Remove the hose from the conduit.

SUBTASK 38-10-01-020-005

- (5) Remove the hose.

SUBTASK 38-10-01-420-003

- (6) If it is not necessary to use this connection, do this task: Potable Water System - Cap Installation (Reconfiguration), TASK 38-10-01-910-802.

————— **END OF TASK** —————

TASK 38-10-01-910-804

5. Potable Water System - Hose Installation (Reconfiguration)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-790-801	Potable Water System - Leak Test (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Potable Water System - Hose Installation

SUBTASK 38-10-01-020-006

- (1) If the connection has a cap, do this task: Potable Water System - Cap Removal (Reconfiguration), TASK 38-10-01-910-801.

SUBTASK 38-10-01-640-002

- (2) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packings.

SUBTASK 38-10-01-420-004

- (3) Install the packings.

SUBTASK 38-10-01-420-005

- (4) Install the coupler to connect the hose to the water supply system.

SUBTASK 38-10-01-420-006

- (5) Install the coupler to connect the hose to the water system component.

SUBTASK 38-10-01-420-007

- (6) Install the straps for the clamps that attach the hose to the structure.

SUBTASK 38-10-01-670-002

- (7) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

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SUBTASK 38-10-01-610-002

(8) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-01-790-002

(9) Do this task: Potable Water System - Leak Test, TASK 38-10-00-790-801.

———— **END OF TASK** ————

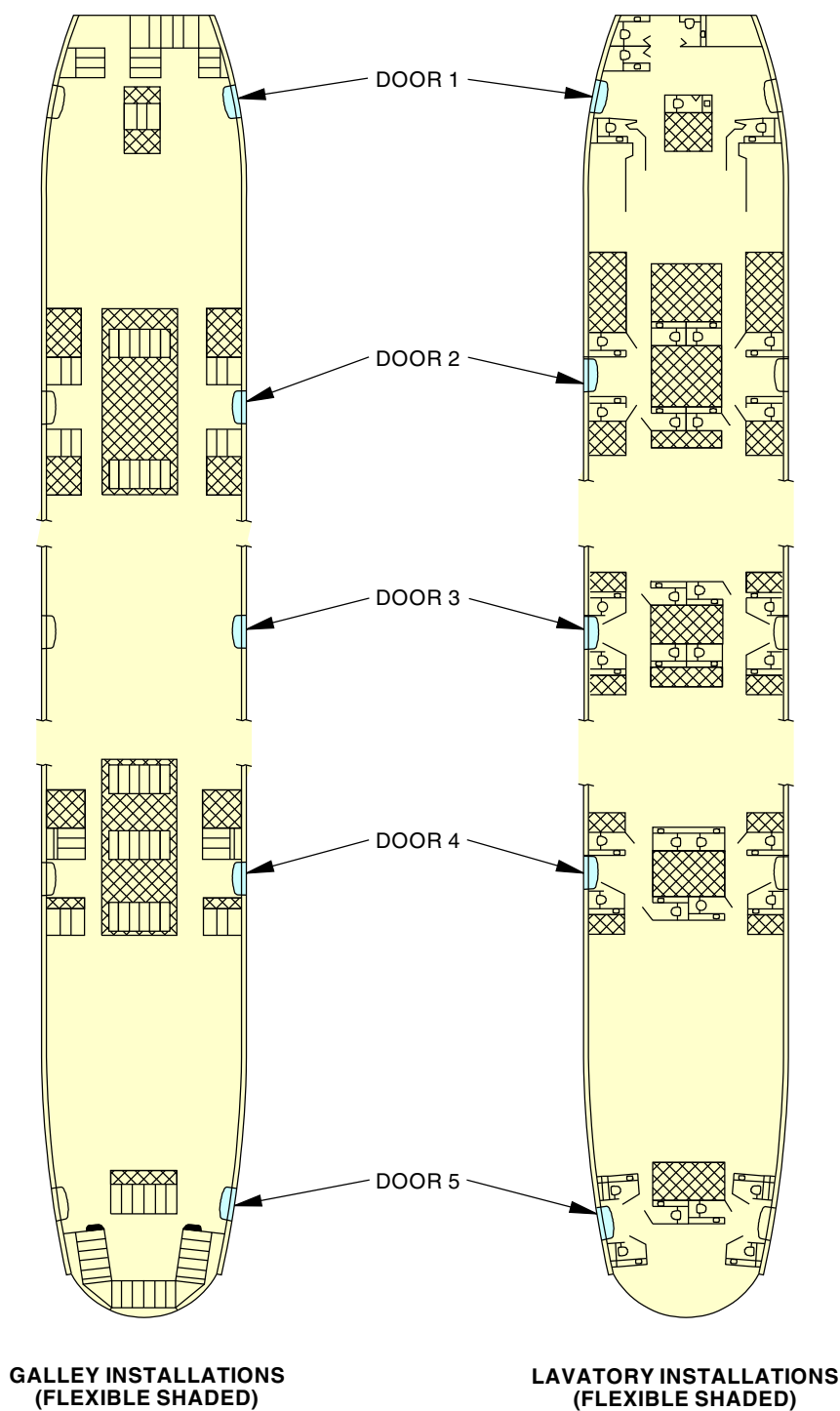
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L20811 S0006422343_V2

Potable Water System - Location
Figure 201/38-10-01-990-801

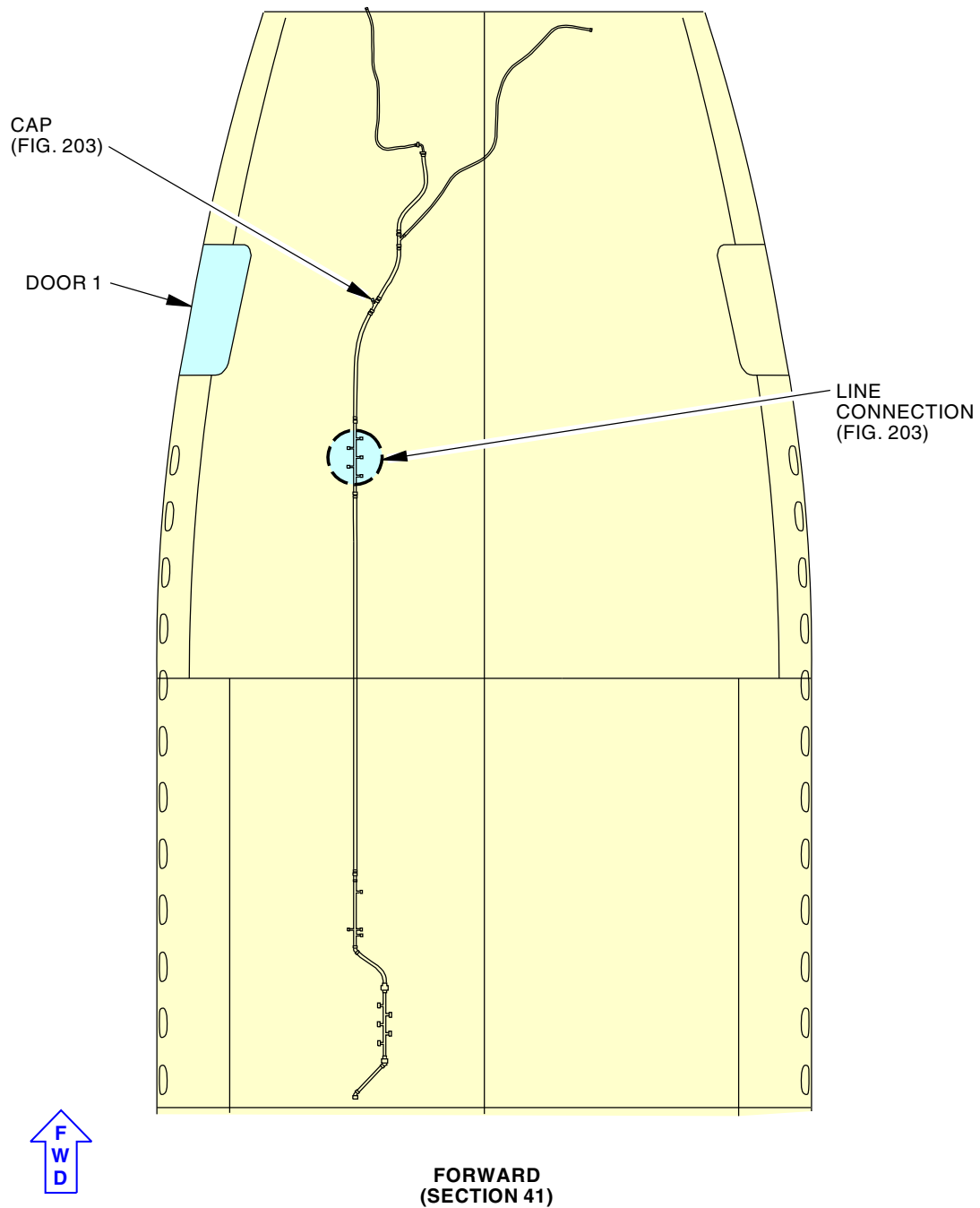
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N01906 S0006422382_V2

Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 1 of 7)

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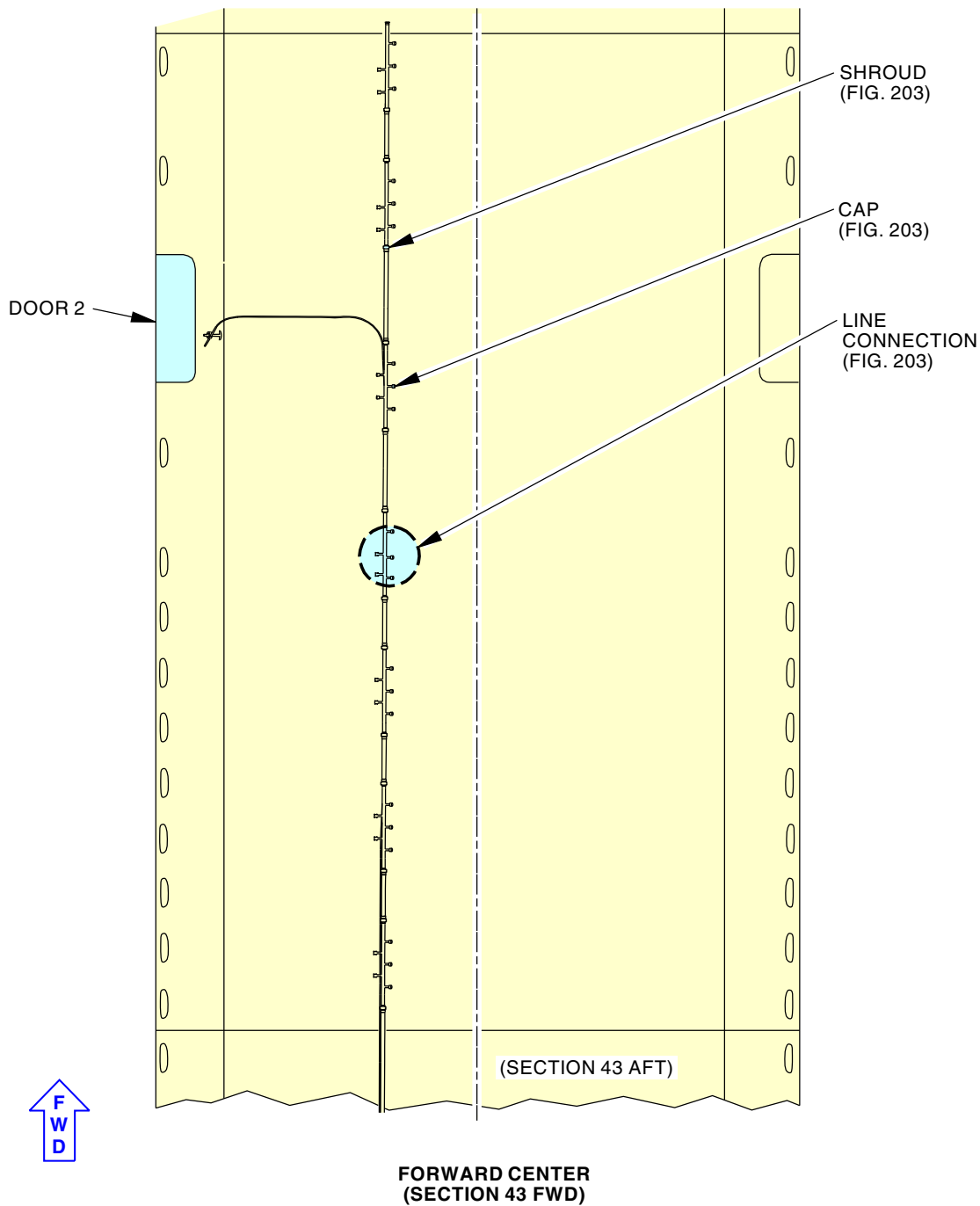
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N01931 S0006422383_V3

Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 2 of 7)

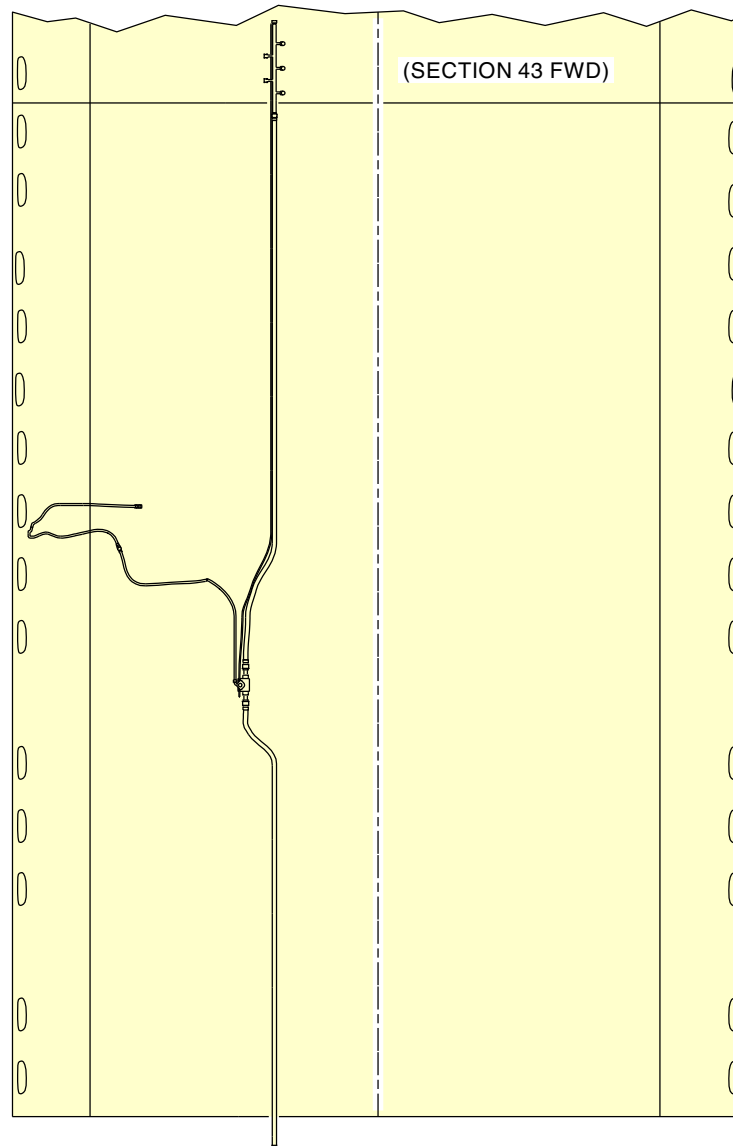
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**FORWARD CENTER
(SECTION 43 AFT)**

N01959 S0006422384_V3

Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 3 of 7)

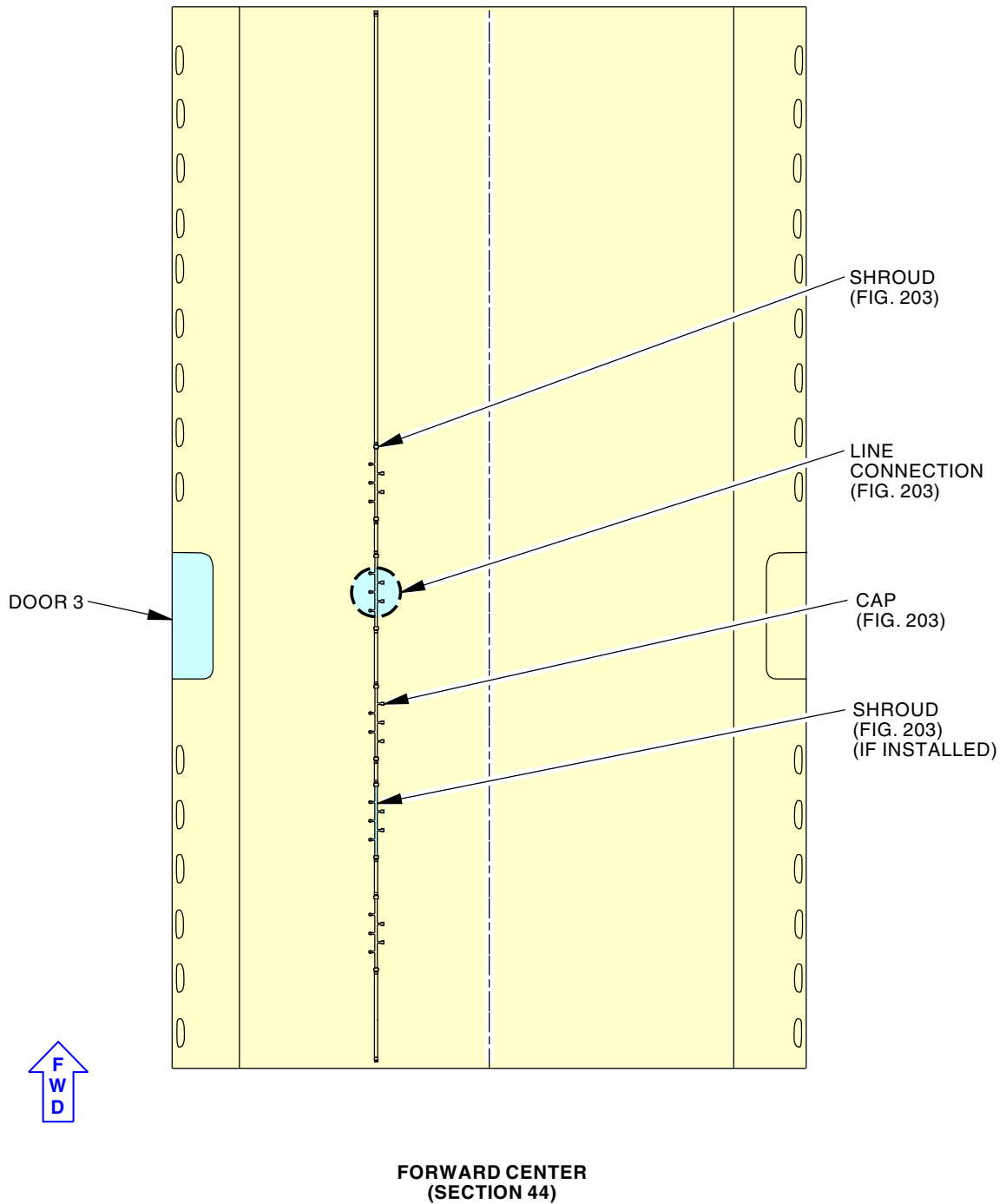
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N01988 S0006422385_V3

Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 4 of 7)

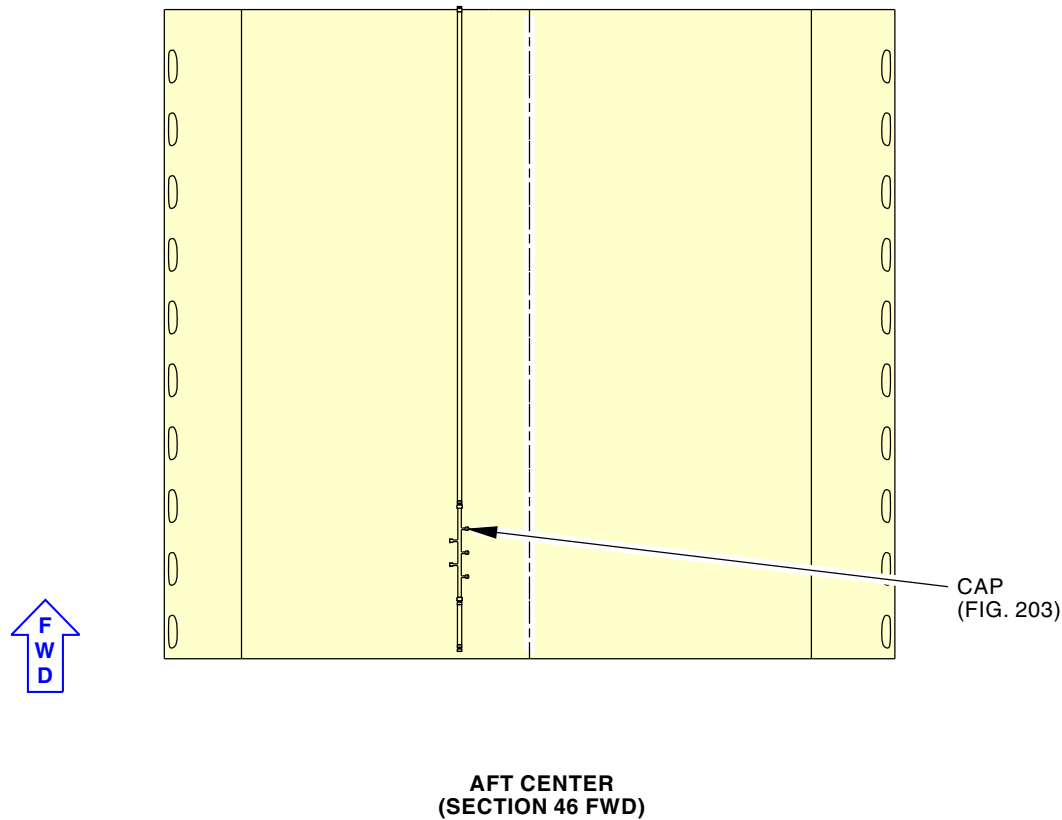
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N01994 S0006422386_V3

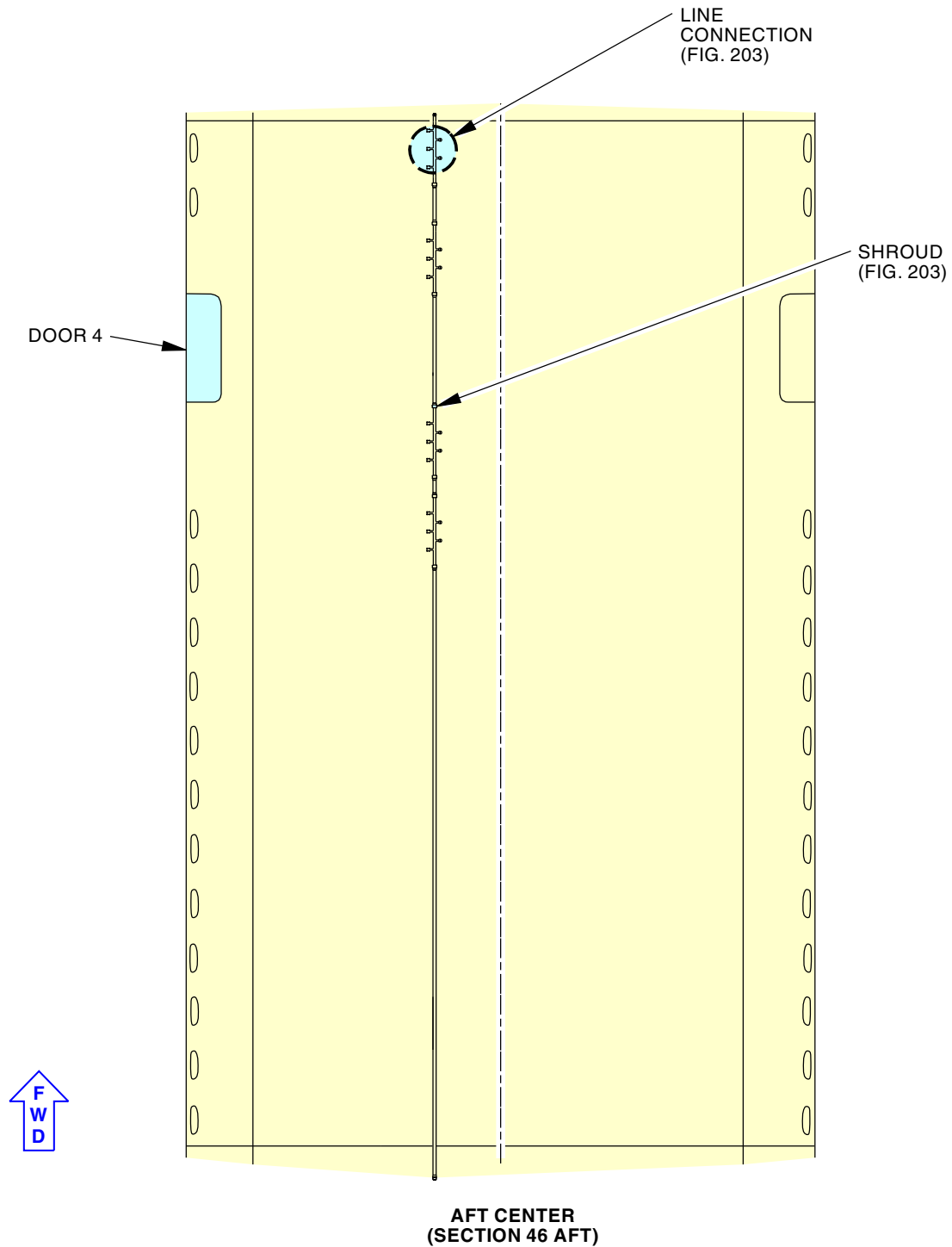
Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 5 of 7)

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N02004 S0006422387_V3

Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 6 of 7)

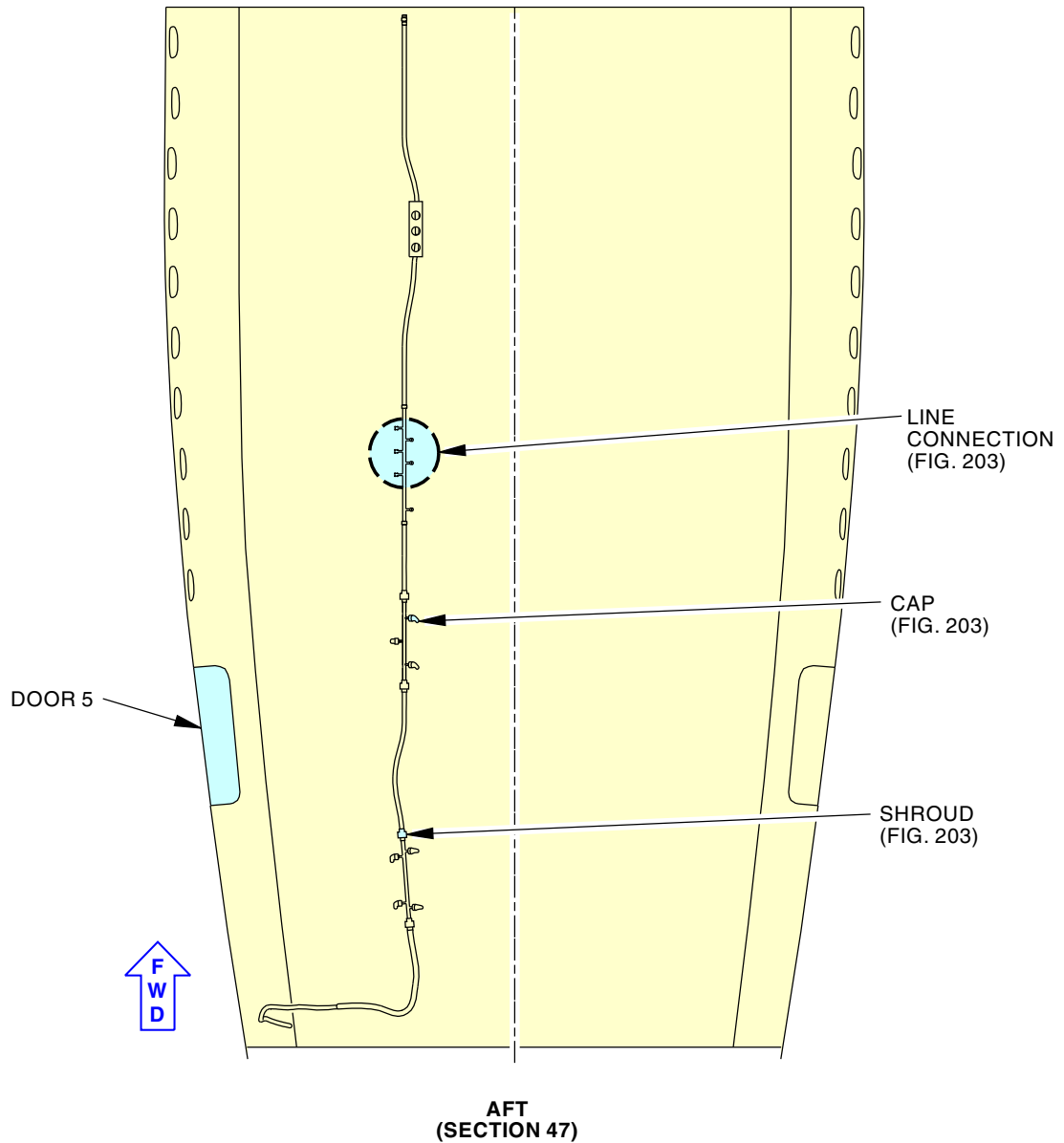
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N02010 S0006422388_V3

Potable Water System - Primary Routing
Figure 202/38-10-01-990-802 (Sheet 7 of 7)

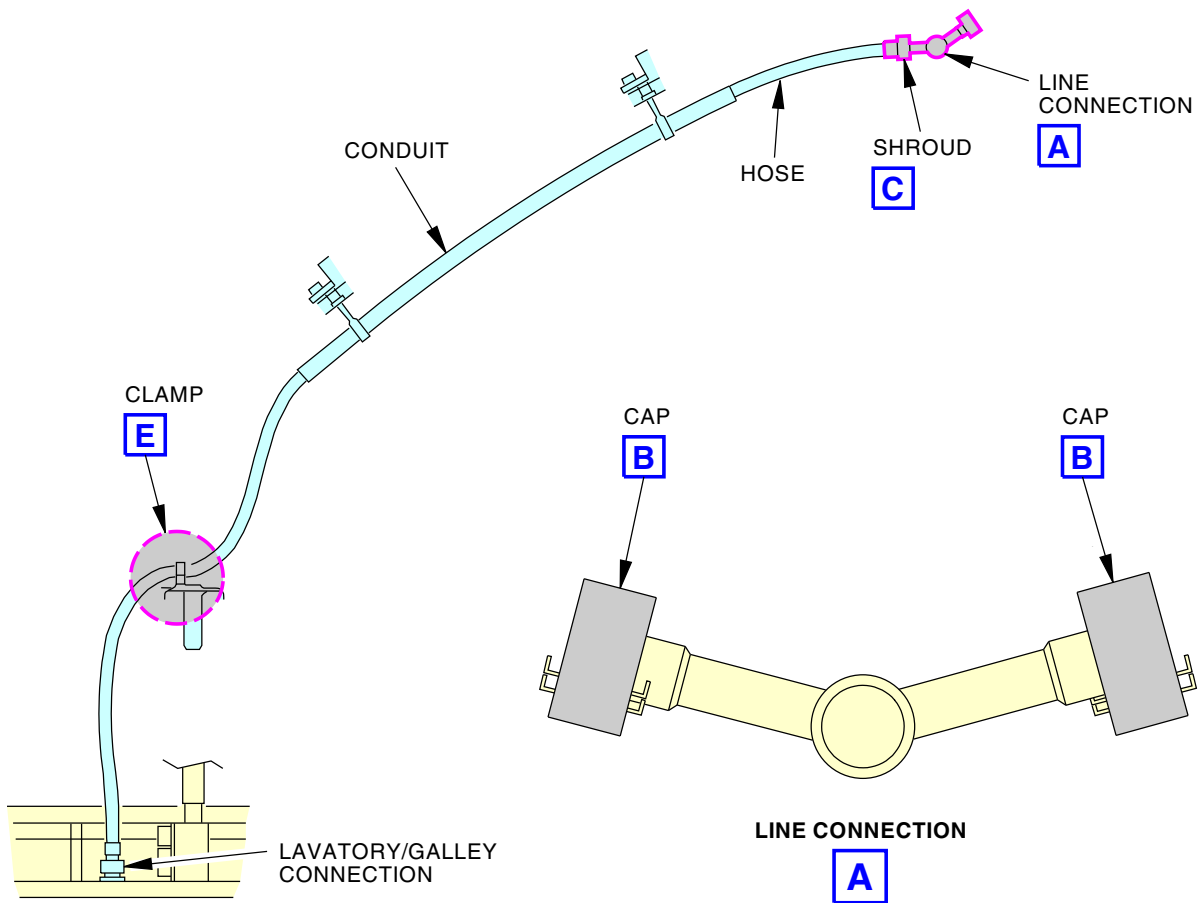
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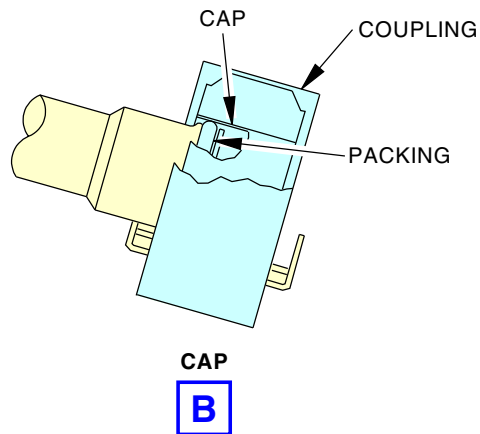
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**HOSE INSTALLATION
(EXAMPLE)**



E40486 S0006422389_V2

Potable Water System - Details
Figure 203/38-10-01-990-803 (Sheet 1 of 2)

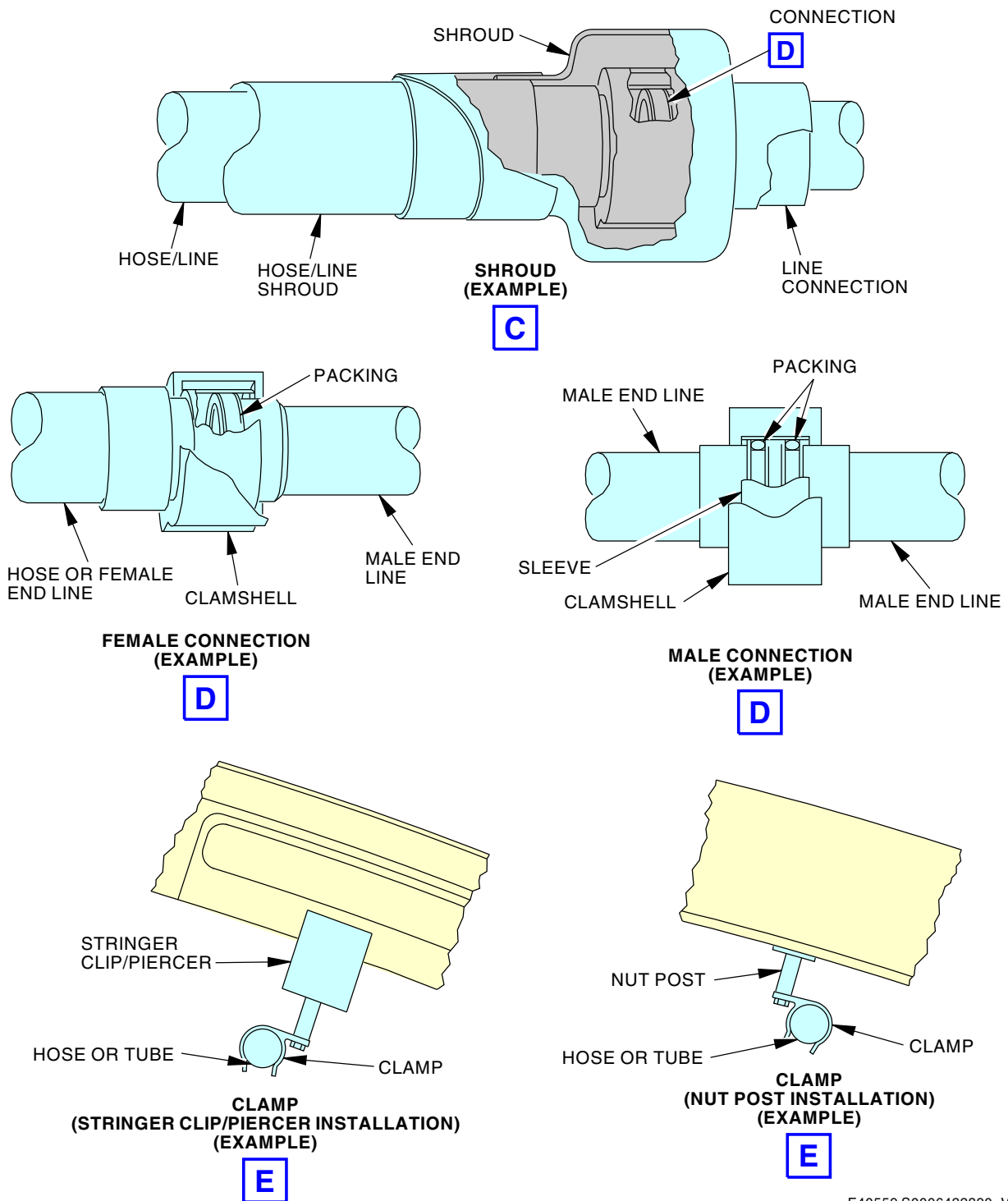
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**Potable Water System - Details
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POTABLE WATER PUMPS - MAINTENANCE PRACTICES

1. General

- A. This procedure can be used to modify the water pump system to operate using only one pump. The leaking or non functional pump is removed and the system is changed to allow the remaining pump to operate as pump 1 (primary).

TASK 38-10-02-040-801

2. Water Pump Deactivation

Figure 201

NOTE: The water pumps are referred to as pump 1 and pump 2. The aft most pump is pump 1.

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
38-10-02-000-802	Potable Water Pump Removal (P/B 401)
38-10-02-400-802	Potable Water Pump Installation (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
COM-5695	Cap - Drain Line Part #: LC200-08C Supplier: 24984
COM-15699	Cap - Drain Line Part #: LC200-12C Supplier: 24984
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Deactivate Pump 1

SUBTASK 38-10-02-020-013

- (1) Do this task to remove both pumps: Potable Water Pump Removal, TASK 38-10-02-000-802.

SUBTASK 38-10-02-000-001

- (2) Disconnect the clamp, sleeve and packings that connect the inlet fitting (FT1607) to the pump.

SUBTASK 38-10-02-480-001

- (3) Install a drain line cap, COM-15699 to the inlet fitting with the clamp, sleeve and packings.

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SUBTASK 38-10-02-020-014

- (4) Disconnect the clamp, sleeve and packings that connect the outlet fitting (FT1606) to the pump and check valve.

SUBTASK 38-10-02-020-015

- (5) Remove the outlet fitting and retain.

SUBTASK 38-10-02-420-009

- (6) Install a drain line cap, COM-5695 to the check valve with the clamp, sleeve and packings.

SUBTASK 38-10-02-420-010

- (7) Cap and stow both electrical connectors for pump 1.

SUBTASK 38-10-02-420-011

- (8) Do this task to install pump 2 into the pump 1 position: Potable Water Pump Installation, TASK 38-10-02-400-802. Do not perform the task operational check or restoration steps.

F. Deactivate Pump 2

SUBTASK 38-10-02-020-016

- (1) Do this task to remove pump 2: Potable Water Pump Removal, TASK 38-10-02-000-802.

SUBTASK 38-10-02-020-017

- (2) Disconnect the clamp, sleeve and packings that connect the inlet fitting (FT1607) to the pump.

SUBTASK 38-10-02-400-001

- (3) Install a drain line cap, COM-15699 to the inlet fitting with the clamp, sleeve and packings.

SUBTASK 38-10-02-020-018

- (4) Disconnect the clamp, sleeve and packings that connect the outlet fitting (FT1606) to the pump and check valve.

SUBTASK 38-10-02-020-019

- (5) Remove the outlet fitting and retain.

SUBTASK 38-10-02-480-002

- (6) Install a drain line cap, COM-5695 to the check valve with the clamp, sleeve and packings.

SUBTASK 38-10-02-480-003

- (7) Cap and stow both electrical connectors for pump 2.

G. Potable Water Pumps Operational Check

SUBTASK 38-10-02-860-009

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

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SUBTASK 38-10-02-860-010

- (2) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

NOTE: Make sure all of the circuit breakers are closed. The system design will permit pump operation on the ground with some circuit breakers open but the pump will not operate in air mode with circuit breakers open.

NOTE: C38311 water system pump 2 will remain open.

SUBTASK 38-10-02-610-003

- (3) Do this task to fill the potable water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-10-02-610-004

- (4) Do this task to pressurize the potable water system: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-10-02-710-018

- (5) Press the Water System Override switch at the aft attendant panel so the light illuminates.

NOTE: This action bypasses controller logic and activates Pump 1.

SUBTASK 38-10-02-790-001

- (6) Make sure there are no leaks from the pump line or connections.

SUBTASK 38-10-02-710-019

- (7) Open a lavatory or galley faucet and make sure the water flow is satisfactory. Shut the faucet off.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-10-02-410-004

- (1) To install the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-10-02-080-001

- (2) Remove the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-02-410-005

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-02-860-011

- (4) Remove the electrical power, if it is no longer necessary. Do the task Remove Electrical Power, TASK 24-22-00-860-806.

————— END OF TASK —————

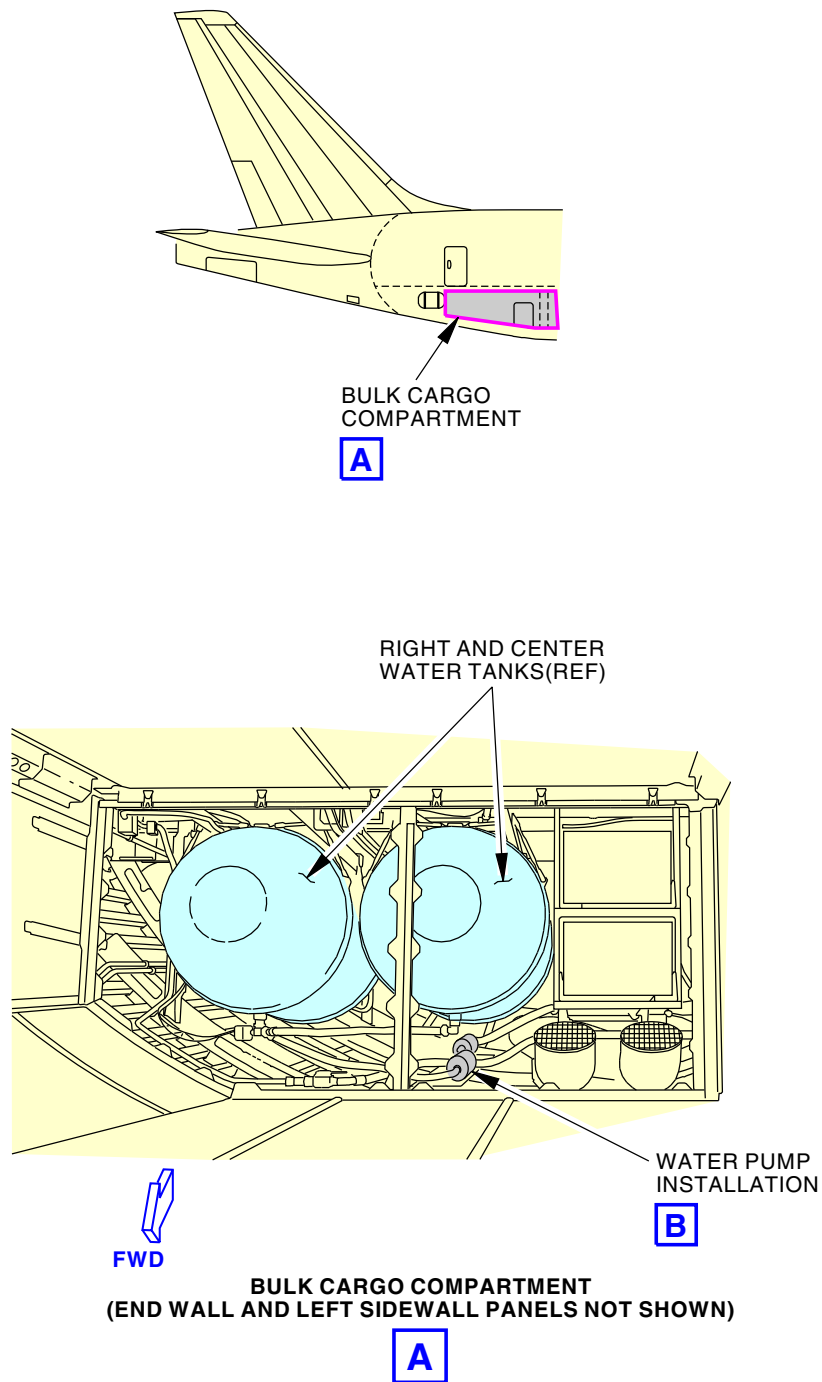
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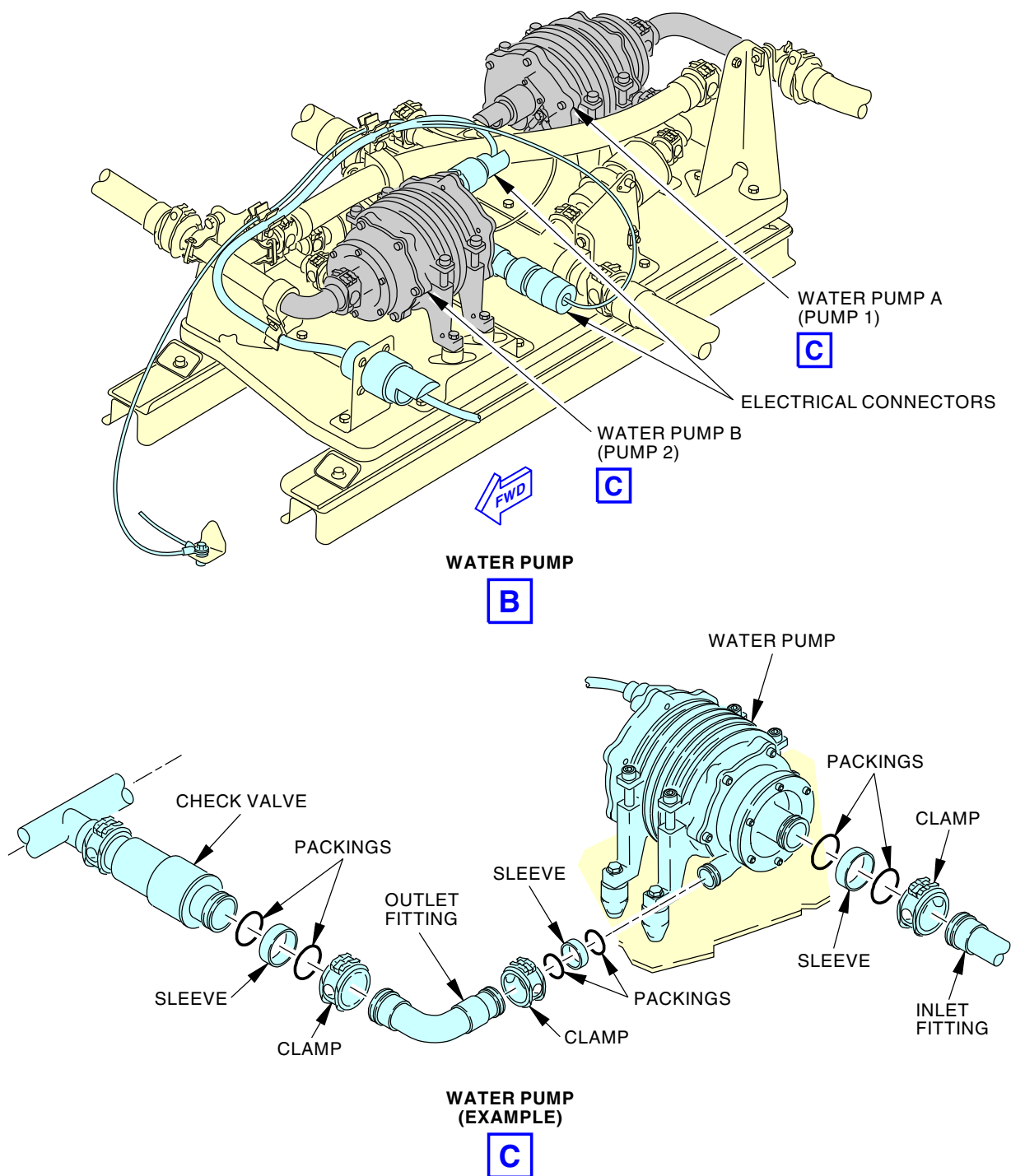
Water Pump Deactivation
Figure 201/38-10-02-990-805 (Sheet 1 of 2)

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Water Pump Deactivation
Figure 201/38-10-02-990-805 (Sheet 2 of 2)

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TASK 38-10-02-440-801

3. Water Pump Reactivation

Figure 201

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-02-400-802	Potable Water Pump Installation (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
COM-5695	Cap - Drain Line Part #: LC200-08C Supplier: 24984
COM-15699	Cap - Drain Line Part #: LC200-12C Supplier: 24984
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Reactivation

SUBTASK 38-10-02-680-001

- (1) Do this task to drain the potable water system tanks, and the aft water distribution system: Potable Water System - Drain, TASK 12-14-01-616-802.

NOTE: It is not necessary to do the steps for draining the galleys, lavatories, or the FWD potable water distribution system. You need only to drain the water tanks, and the aft potable water distribution system.

SUBTASK 38-10-02-860-012

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-02-010-016

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-02-480-004

- (4) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-02-010-017

- (5) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

E. Reactivate Pump

SUBTASK 38-10-02-080-002

- (1) Remove the clamp, sleeve, packings and drain line cap, COM-15699 from the inlet fitting (FT1607).

SUBTASK 38-10-02-080-003

- (2) Remove the clamp, sleeve, packings and drain line cap, COM-5695 from the check valve.

SUBTASK 38-10-02-420-012

- (3) Install the outlet fitting (FT1606) to the check valve with the clamp, sleeve and packings.

SUBTASK 38-10-02-080-004

- (4) Remove the cap from the pump 2 electrical connectors.

SUBTASK 38-10-02-420-013

- (5) Do this task to install pump 2 Potable Water Pump Installation, TASK 38-10-02-400-802.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-10-02-420-014

- (1) To install the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-10-02-080-005

- (2) Remove the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-02-410-006

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-02-860-013

- (4) Remove the electrical power, if it is no longer necessary. Do the task Remove Electrical Power, TASK 24-22-00-860-806.

————— END OF TASK —————

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POTABLE WATER PUMPS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the potable water pump.
- (2) An installation of the potable water pump.

TASK 38-10-02-000-802

2. Potable Water Pump Removal

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
38-11-15-100-801	Bypass Restrictor - Cleaning (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-149	Cap and Plug - NAS834

C. Consumable Materials

Reference	Description	Specification
G50138	Cloth - Soft Cotton	

D. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the removal

SUBTASK 38-10-02-616-002

- (1) Do this task to drain the potable water system tanks, and the aft water distribution system: Potable Water System - Drain, TASK 12-14-01-616-802.

NOTE: It is not necessary to do the steps for draining the galleys, lavatories, or the FWD potable water distribution system. You need only to drain the water tanks, and the aft potable water distribution system.

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SUBTASK 38-10-02-860-004

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-02-010-006

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-02-490-004

- (4) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-02-010-007

- (5) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

G. Remove the Water Pump

NOTE: The Water Pumps are referred to as Pump A (Pump 1) and Pump B (Pump 2). The aft most pump is Pump A (Pump 1).

SUBTASK 38-10-02-030-001

- (1) Place the soft cotton cloth, G50138, or absorbent rags, under and around the water pump to absorb any water that may spill when you disconnect the water lines.

SUBTASK 38-10-02-020-020

- (2) Disconnect the electrical connector [1] and ground wire [18] from the pump.

SUBTASK 38-10-02-020-021

- (3) Remove the bolts [6] and washers [7] attaching the pump to the mounting plate [3].

SUBTASK 38-10-02-020-022

- (4) Remove the clamps [16] attaching the inlet and outlet connections on the water pump.

SUBTASK 38-10-02-020-023

- (5) Remove the sleeve [17] and packings [15, 21] from each connection and disconnect the hoses. Discard the packings.

SUBTASK 38-10-02-020-004

- (6) Remove the pump.

SUBTASK 38-10-02-020-024

- (7) Place clean protective cap and plug, STD-149 over the open hoses, to prevent foreign object entry, and contamination, of the potable water system. Place clean caps over the water pump inlet and outlet ports to prevent foreign object entry, and contamination, of the water pump.

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SUBTASK 38-10-02-020-025

- (8) Remove the cloths or rags from under and around the pump, and remove any water that has spilled onto the aircraft structure.

SUBTASK 38-10-02-211-001

- (9) Examine the water pumps for mineral deposits or scale build up.

SUBTASK 38-10-02-100-001

- (10) If the water pumps contain mineral deposits or scale build up, do this task: Bypass Restrictor - Cleaning, TASK 38-11-15-100-801.

H. Remove the Water Pumps and Mounting Plate Assembly

SUBTASK 38-10-02-020-005

- (1) Do these steps to remove the water pumps, the mounting plate [3] and the attached parts as one assembly.

SUBTASK 38-10-02-020-026

- (2) Place the soft cotton cloth, G50138, or absorbent rags, under and around the water pump to absorb any water that may spill when you disconnect the water lines.

SUBTASK 38-10-02-020-027

- (3) Disconnect the electrical connectors [1] from the two water pumps.

SUBTASK 38-10-02-020-028

- (4) Disconnect the electrical connector [4] from the pressure switch S8013 [5].
 - (a) Remove the electrical wire harness [14] from the clamps.

SUBTASK 38-10-02-020-029

- (5) Disconnect the clamshell coupler clamps, and remove the sleeves and packings, from all the water tank hose connections at the water pump installation.

SUBTASK 38-10-02-020-030

- (6) Remove the two screws that attach the bracket [8] bracket to the mounting plate [3], and remove the bracket.

SUBTASK 38-10-02-020-031

- (7) Remove the two forward screws [12] that attach the two rails [13] to the airplane structure.

SUBTASK 38-10-02-020-032

- (8) Remove the screw [9] and washer [10], and disconnect the bonding jumper [11].

SUBTASK 38-10-02-020-033

- (9) Remove the two pumps, the mounting plate [3], and the attached parts as one assembly, by sliding the assembly forward and then lifting up..

SUBTASK 38-10-02-020-034

- (10) Place clean protective cap and plug, STD-149 over the open hoses, to prevent foreign object entry and contamination, of the potable water system.

SUBTASK 38-10-02-020-035

- (11) Remove the cloths or rags from under and around the pump, and remove any water that has spilled onto the aircraft structure.

————— END OF TASK —————

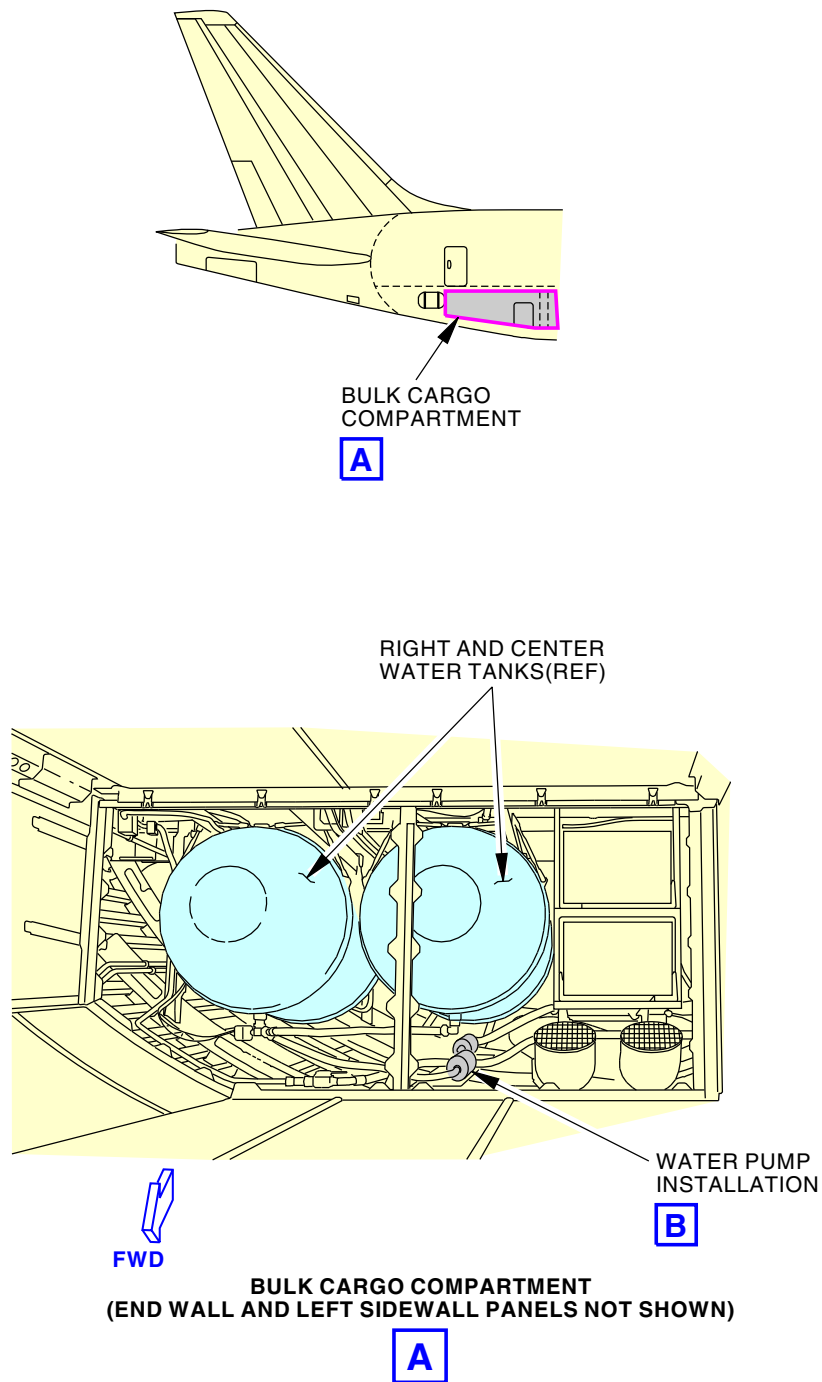
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WATER PUMPS - REMOVAL/INSTALLATION
Figure 401/38-10-02-990-802 (Sheet 1 of 2)

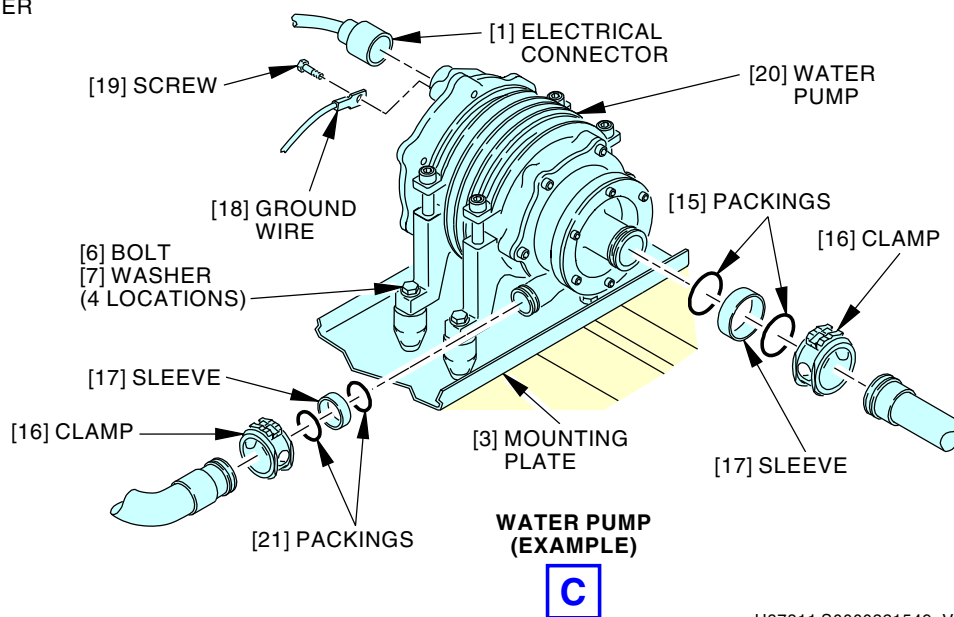
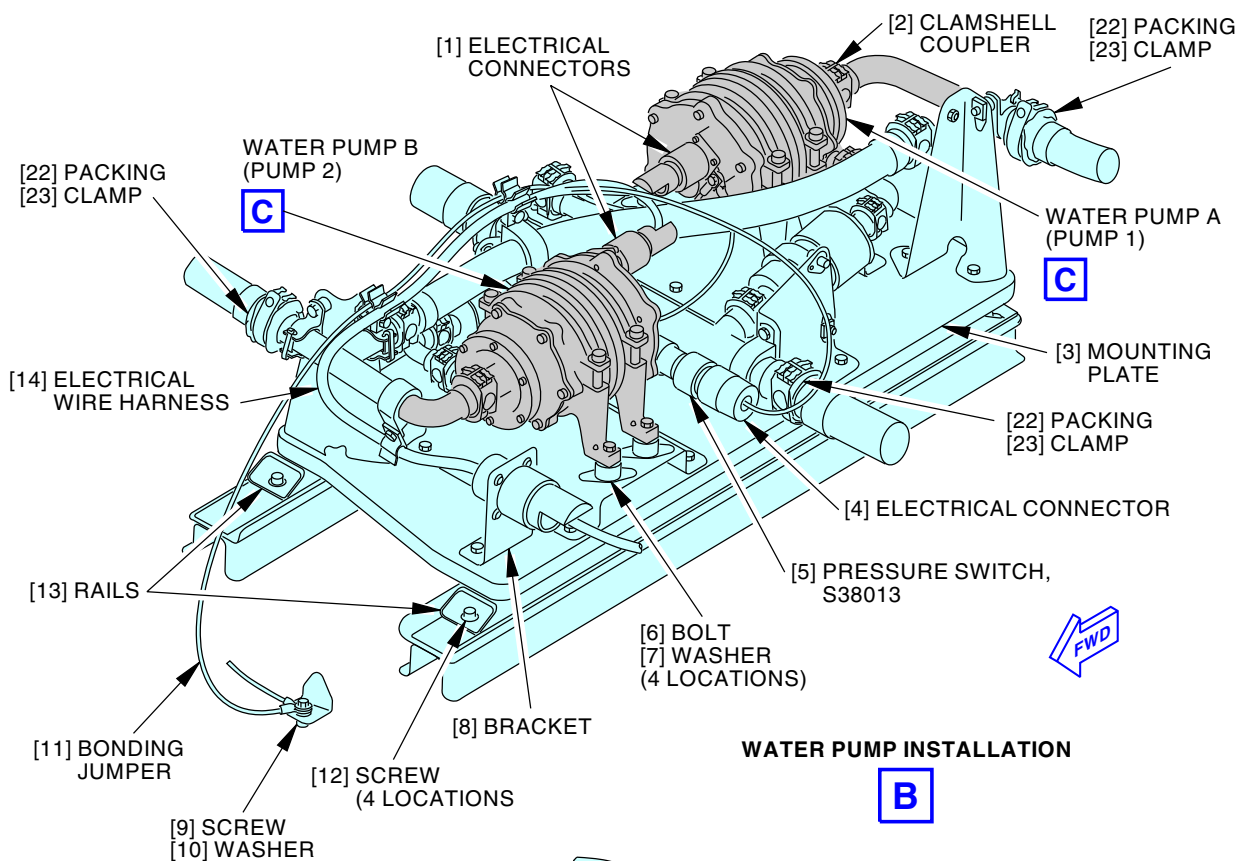
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WATER PUMPS - REMOVAL/INSTALLATION Figure 401/38-10-02-990-802 (Sheet 2 of 2)

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TASK 38-10-02-400-802

3. Potable Water Pump Installation

(Standard Torque Values, TASK 20-11-00-910-801)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
20-10-22-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
20-11-00-910-801	Standard Torque Values (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
32-09-00-040-801	Air Mode Simulation - Preparation (P/B 201)
32-09-00-440-801	Air Mode Simulation - Restoration (P/B 201)
32-09-00-860-801	Air/Ground Mode Simulation (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
15	Packing	38-10-02-01-160	ARO ALL
		38-10-04-01-030	ARO ALL
		38-10-05-01-025	ARO ALL
20	Water pump	38-10-02-01-190	ARO ALL
21	Packing	38-10-02-01-155	ARO ALL
		38-10-04-01-030	ARO ALL
		38-10-05-01-025	ARO ALL
22	Packing	38-10-02-01-160	ARO ALL

E. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

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F. Access Panels

Number	Name/Location
825	Bulk Cargo Door

G. Prepare for the Task.

SUBTASK 38-10-02-860-005

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-02-010-008

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-10-02-490-005

- (3) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-02-010-009

- (4) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

H. Install the Water Pump

SUBTASK 38-10-02-420-002

- (1) Position the water pump [20] on the mounting plate [3]. Install the bolts [6] and washers [7] that attach the water pump to the mounting plate. Tighten the bolts.

SUBTASK 38-10-02-030-002

- (2) Remove the caps from the water hoses, and clean the connections.

SUBTASK 38-10-02-640-001

- (3) Lubricate the new packings [15] and new packings [21] with the Molykote 111 Compound, D00189. Then install the new packings [15] and new packings [21] to the hose and pump fittings.

SUBTASK 38-10-02-430-055

- (4) Place the hoses in their positions at the pump inlet and outlet fittings, then install the clamshell coupler sleeves [17] and clamps [16] to the connections.
- (a) Make sure that each clamshell coupler clamp [16] is fully closed and each latch is fully engaged.

SUBTASK 38-10-02-120-001

- (5) Clean the ground wire [18] terminal end, and the mating water pump connection, for electrical bonding (Hand Clean Metal Surfaces with Abrasives, TASK 20-10-22-120-801).

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SUBTASK 38-10-02-430-001

- (6) Install the ground wire [18] to the water pump and tighten the screw [19] to 18 in-lb (2 N·m) - 25 in-lb (3 N·m) torque.
 - (a) Apply sealant, A00247 over the screw [19] and ground wire [18] terminal.

SUBTASK 38-10-02-430-002

- (7) Install the electrical connector [1] connector to the water pump. Make sure the electrical connector is fully seated and latched.

SUBTASK 38-10-02-710-003

- (8) Do the operational check of the applicable water pump(s).

I. Install the Water Pumps and Mounting Plate Assembly

SUBTASK 38-10-02-430-003

- (1) Put the Water Pumps and Mounting Plate Assembly in its position on the airplane structure. Align the screw holes in the rails [13] with the corresponding holes in the structure.

SUBTASK 38-10-02-430-004

- (2) Install and tighten the four screws [12] that attach the rails to the airplane structure.

SUBTASK 38-10-02-430-005

- (3) Put the electrical harness bracket [8] in its position on the mounting plate [3]. Install the two bolts [6] and two washers [7], and tighten the bolts.

SUBTASK 38-10-02-430-006

- (4) Install the electrical harness in its clamps (Figure 401 (Sheet 2))

SUBTASK 38-10-02-030-003

- (5) Remove the caps from the water hoses, and clean the connections.

SUBTASK 38-10-02-640-002

- (6) Lubricate the new packings [22] packings with the Molykote 111 Compound, D00189. Then install the new packings at each hose fitting.

SUBTASK 38-10-02-430-056

- (7) Place the hoses in their installed positions at the pump and mounting plate assembly connections.
 - (a) Install the clamshell coupler clamps [23] to the connections.
 - (b) Make sure that each clamp is fully closed, and each latch is fully engaged.

SUBTASK 38-10-02-120-002

- (8) Clean the bonding jumper [11] terminal end, and the mating airplane terminal connection, for electrical bonding (Hand Clean Metal Surfaces with Abrasives, TASK 20-10-22-120-801).

SUBTASK 38-10-02-430-007

- (9) Put the bonding jumper [11] in its position on the airplane structure. Install the screw [9] and washer [10], and tighten the screw.
 - (a) Apply the sealant, A00247 to the bonding jumpers [11], the screw [9], and the washer [10].

SUBTASK 38-10-02-430-008

- (10) Connect the two electrical connectors [1] to the water pumps. Make sure the electrical connector is fully seated and latched

SUBTASK 38-10-02-430-009

- (11) Connect the electrical connector [4] to the pressure switch S8013 [5]. Make sure the electrical connector is fully seated and latched

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SUBTASK 38-10-02-710-008

- (12) Do the operational check of the water pumps.

J. Potable Water Pumps Operational Check

SUBTASK 38-10-02-865-003

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-02-865-004

- (2) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

NOTE: Make sure all of the circuit breakers are closed. The system design will permit pump operation on the ground with some CBs open but the pump will not operate in air mode with CBs open.

SUBTASK 38-10-02-861-001

- (3) Do this task to supply electrical power: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-02-610-002

- (4) Do this task to fill the potable water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-02-863-001

- (5) Do this task to pressurize the potable water system: Potable Water System - Pressurization, TASK 38-10-00-863-801

SUBTASK 38-10-02-710-016

- (6) Make sure that the water system controller fault light is off.
- (a) If the controller fault light is still on, then push the reset switch on the water system controller. .
 - (b) Make sure the fault light goes off.
 - (c) Wait five minutes, then make sure that the controller fault light does not come on again

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SUBTASK 38-10-02-710-005

- (7) Make sure the pump being tested is the operating (Master) pump.

NOTE: Only one of the two pumps will operate. The operating pump is the "Master" pump. The Master pump is selected by the water system controller, and alternates between pump 1 or pump 2 each flight and when the air/ground system transitions from air to ground mode.

- (a) If the pump being tested is not the "Master" pump, switch from ground mode to air mode and back to ground mode (Air Mode Simulation - Preparation, TASK 32-09-00-040-801, Air/Ground Mode Simulation, TASK 32-09-00-860-801, Air Mode Simulation - Restoration, TASK 32-09-00-440-801).

SUBTASK 38-10-02-710-017

- (8) Make sure there are no leaks from the pump line or connections.

SUBTASK 38-10-02-710-007

- (9) Open a lavatory or galley faucet and make sure the water flow is satisfactory. Shut the faucet off.

K. Restore the airplane to its usual condition.

SUBTASK 38-10-02-410-002

- (1) To install the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-10-02-090-001

- (2) Remove the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-02-410-003

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-02-862-002

- (4) Remove the electrical power, if it is no longer necessary. Do the task Remove Electrical Power, TASK 24-22-00-860-806

————— **END OF TASK** —————

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POTABLE WATER SYSTEM CONTROLLER - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the potable water system controller.
- (2) An installation of the potable water system controller.

TASK 38-10-03-000-801

2. POTABLE WATER SYSTEM CONTROLLER REMOVAL

A. **References**

<u>Reference</u>	<u>Title</u>
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. **Tools/Equipment**

<u>Reference</u>	<u>Description</u>
STD-149	Cap and Plug - NAS834

C. **Location Zones**

<u>Zone</u>	<u>Area</u>
165	Area Aft of Bulk Cargo Compartment, Left

D. **Access Panels**

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

E. **Prepare for the removal**

SUBTASK 38-10-03-010-001

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-03-010-002

- (2) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-10-03-860-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

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F. Remove the Water System Controller

SUBTASK 38-10-03-020-001

- (1) Disconnect the electrical connector (DM38014) from the controller.
- (2) Install a protective cap and plug, STD-149 on the airplane electrical connector and the controller electrical connector.
- (3) Remove the four bolts, four spacers, and twelve washers, that attach the controller to the mounting plate, and remove the controller. Keep the bolts, washers, and spacers for reuse on installation of the controller.

———— **END OF TASK** ————

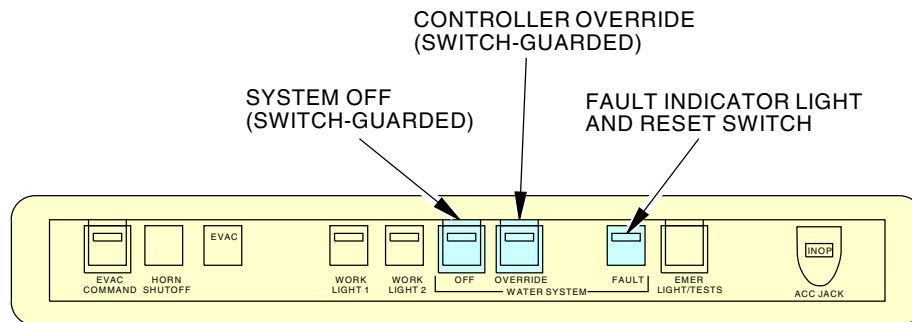
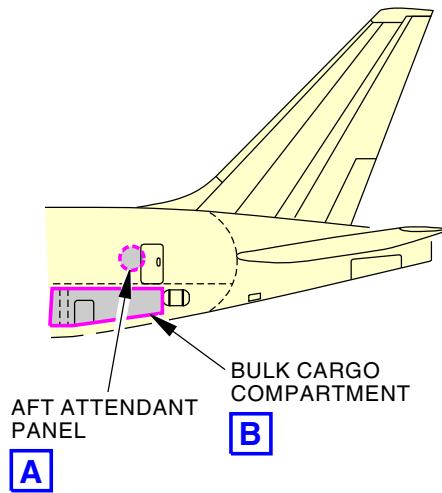
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AFT ATTENDANT PANEL

A

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POTABLE WATER SYSTEM CONTROLLER - REMOVAL\INSTALLATION
Figure 401/38-10-03-990-801 (Sheet 1 of 2)

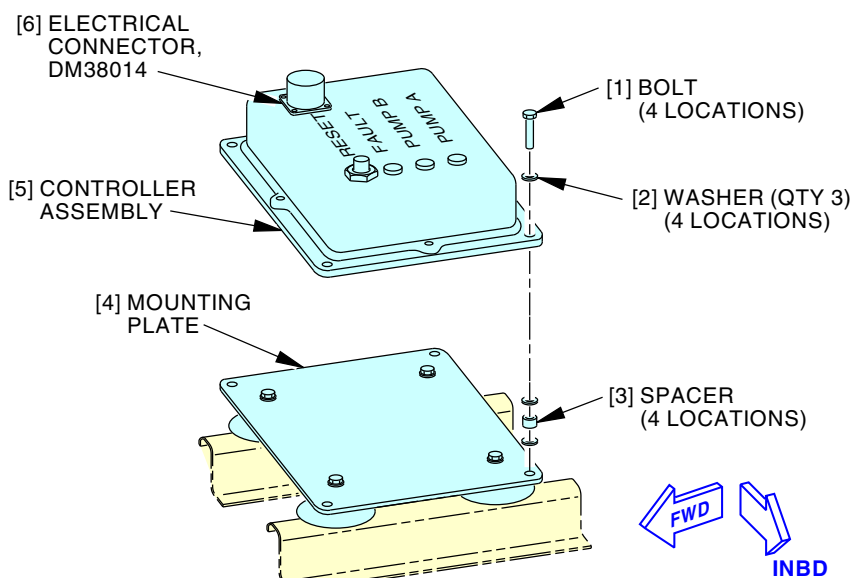
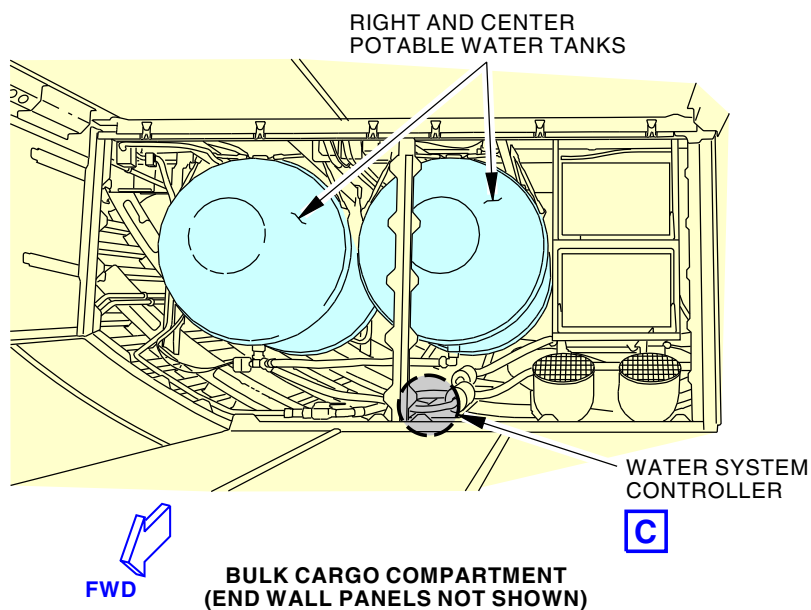
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WATER SYSTEM CONTROLLER

C

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POTABLE WATER SYSTEM CONTROLLER - REMOVAL/INSTALLATION Figure 401/38-10-03-990-801 (Sheet 2 of 2)

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TASK 38-10-03-400-801

3. POTABLE WATER SYSTEM CONTROLLER INSTALLATION

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Controller assembly	38-11-52-01-025	ARO ALL

D. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

E. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

F. Prepare for the Task

SUBTASK 38-10-03-010-003

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-03-490-002

- (2) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-03-010-004

- (3) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Install the Controller

SUBTASK 38-10-03-420-001

- (1) Place the controller assembly [5] in its installed position on the mounting plate [4].

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- (2) Install the bolts [1], washers [2], and the spacers [3] that attach the controller assembly to the mounting plate.
- (3) Remove the protective caps, and attach the electrical connector DM38014 [6] to the controller assembly [5].
- (4) Remove the safety tags and close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

- (5) Do the controller operational check.

H. Controller Operational Check

SUBTASK 38-10-03-860-002

- (1) Do this task to supply the electrical power: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-10-03-610-001

- (2) Make sure that there is water in the potable water tanks. Do this task, as necessary, to service the water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-03-710-001

- (3) Make sure that the WATER SYSTEM lights (OFF, OVERRIDE, FAULT) on the AFT ATTENDANT PANEL are not on (Figure 401).
- (4) Make sure that the FAULT light on the controller is not on (Figure 401).

NOTE: The FAULT LIGHT may come on depending on the prior condition of the actuator board.

- (a) If the FAULT LIGHT is on, keep the controller energized for a minimum of 6 minutes and then toggle the RESET button on the Controller Assembly.

NOTE: The FAULT LIGHT should turn OFF and the indicator light indicating an energized pump should switch from PUMP A to PUMP B.

- (5) Make sure that one of the two water pumps is operating.

NOTE: The controller commands only one of the two water pumps to operate when the potable water system is in the normal/flight mode. Indicator lights on the controller will show if PUMP A or PUMP B is operating.

- (6) Press the WATER SYSTEM OFF switch, on the AFT ATTENDANT PANEL. Make sure that the water pump stops.
- (7) Press the WATER SYSTEM OFF switch again, and make sure that one of the water pumps is operating.
- (8) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

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- (9) Pull the AFT SYSTEM DRAIN VALVE control handle, on the aft water service panel. Make sure that both of the water pumps are operating. Push the AFT SYSTEM DRAIN VALVE control handle in to the stop.
- (10) Close this access panel:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|--------------------------------|
| 154AR | Aft Potable Water Service Door |

I. Restore the airplane to its usual condition

SUBTASK 38-10-03-410-001

- (1) To install the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-10-03-080-001

- (2) Remove the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-03-410-002

- (3) Close this access panel:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 825 | Bulk Cargo Door |

SUBTASK 38-10-03-610-002

- (4) Do this task, as necessary, to service the water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-03-860-003

- (5) Remove the electrical power, if it is no longer necessary. Do this task: Remove Electrical Power, TASK 24-22-00-860-806

———— **END OF TASK** ————

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POTABLE WATER PUMP CHECK VALVES - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the water pump check valve(s).
- (2) An installation of the water pump valve(s).

TASK 38-10-04-000-801

2. CHECK VALVE REMOVAL

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-149	Cap and Plug - NAS834

C. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for the removal

SUBTASK 38-10-04-616-001

- (1) To drain the potable water tanks do this task: Potable Water System - Drain, TASK 12-14-01-616-802

NOTE: It is not necessary to do the steps for draining the galleys, lavatories, or the FWD potable water distribution system. You need only drain the water tanks, and the aft potable water distribution system.

SUBTASK 38-10-04-010-001

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-10-04-490-001

- (3) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

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SUBTASK 38-10-04-010-002

- (4) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-10-04-860-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

F. Remove the check valve

SUBTASK 38-10-04-020-001

- (1) Disconnect the two clamshell coupling clamps that connect the pump check valve to the water pump manifold.
- (2) Remove the clamshell coupling from the connection and remove the check valve. Remove and discard the packings.
- (3) Place clean protective cap and plug, STD-149 over the open manifold and check valve fittings, to prevent the entry of foreign objects and potable water system contamination.

————— END OF TASK —————

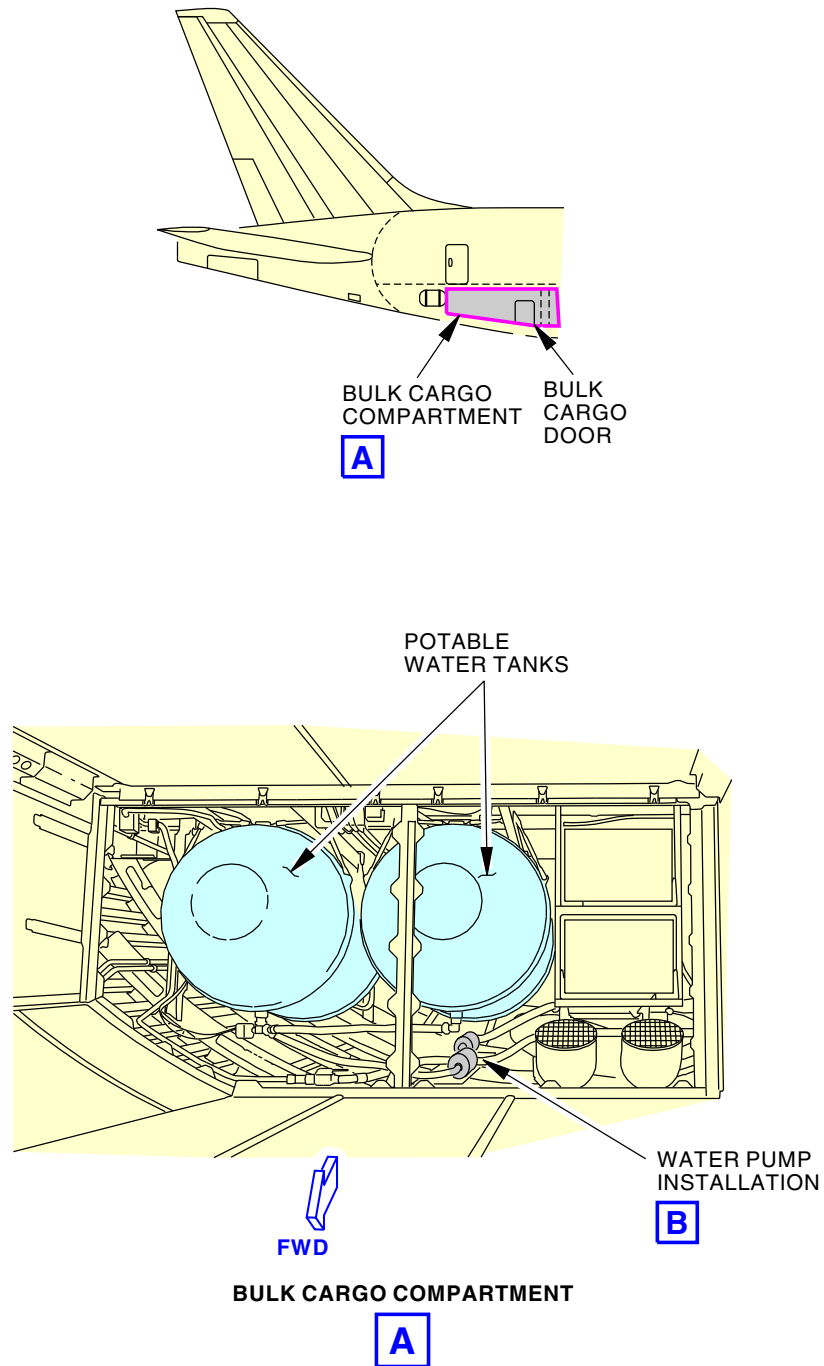
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POTABLE WATER PUMP CHECK VALVES - REMOVAL/INSTALLATION
Figure 401/38-10-04-990-801 (Sheet 1 of 2)

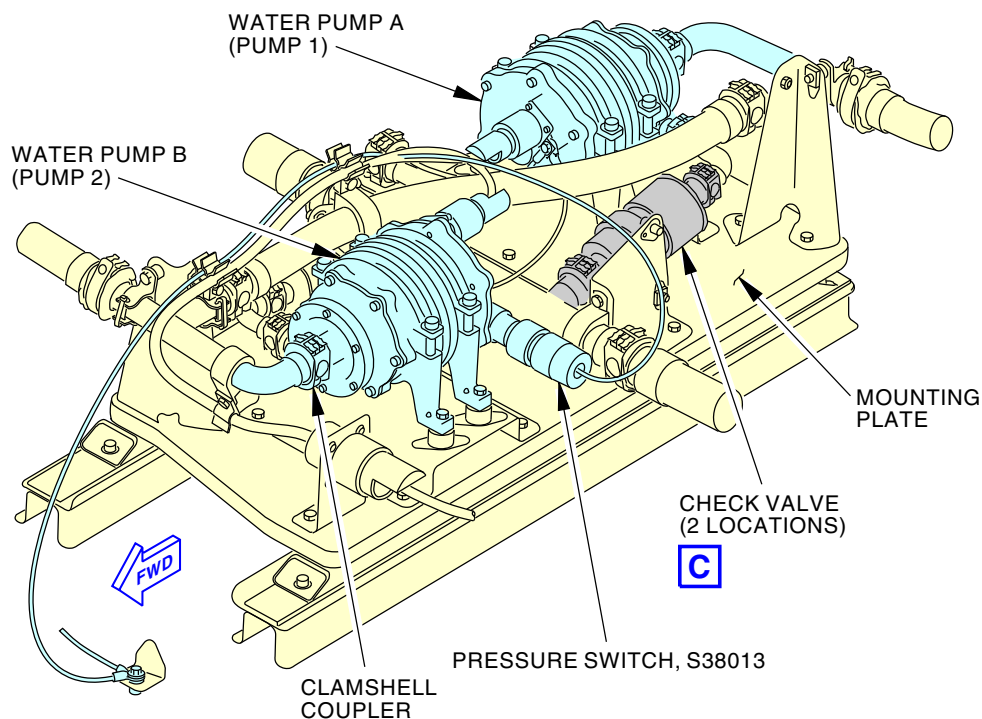
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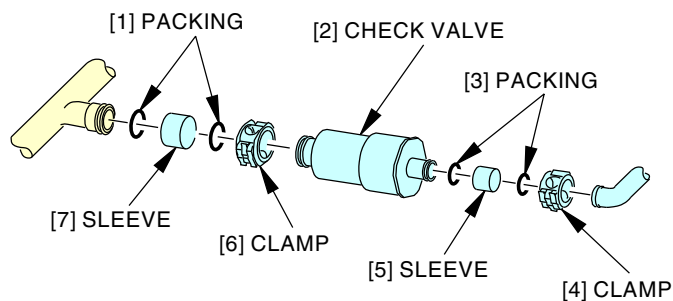
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WATER PUMP INSTALLATION

[B]



**CHECK VALVE
(PUMP A CHECK VALVE SHOWN, PUMP B
CHECK VALVE IS EQUIVALENT)**

[C]

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POTABLE WATER PUMP CHECK VALVES - REMOVAL/INSTALLATION Figure 401/38-10-04-990-801 (Sheet 2 of 2)

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TASK 38-10-04-400-801

3. CHECK VALVE - INSTALLATION

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Packing	38-10-04-01-030	ARO ALL
2	Check valve	38-10-04-01-035	ARO ALL
3	Packing	38-10-04-01-025	ARO ALL

E. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

F. Access Panels

Number	Name/Location
825	Bulk Cargo Door

G. Install the Check Valve

SUBTASK 38-10-04-420-001

- (1) Remove the caps and plugs from the manifold fittings. Then clean the fittings.

SUBTASK 38-10-04-430-005

- (2) Lubricate the fittings, the new packings [1] and new packings [3] with the Molykote 111 Compound, D00189. Then put the new packings [1] and [3] in their installed positions on the pump manifold fittings and the check valve [2].

SUBTASK 38-10-04-430-001

- (3) Put the check valve [2] in its installed position on the water pump manifold.

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SUBTASK 38-10-04-430-003

- (4) Install the clamshell coupling sleeve [7] and clamp [6] to the connection of the check valve and the pump manifold.
 - (a) Make sure that the clamshell clamp is fully closed and that the latch is locked.

SUBTASK 38-10-04-430-004

- (5) Install the clamshell coupling clamp [4] and sleeve [5] to the connection of the check valve and the water pump manifold.
 - (a) Make sure that the clamshell clamp is fully closed and that the latch is locked.

H. Check Valve Installation Test

SUBTASK 38-10-04-860-003

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-10-04-861-001

- (2) Do this task to supply the electrical power: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-10-04-610-001

- (3) Do this task to fill the potable water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-04-863-001

- (4) Pressurize the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801

SUBTASK 38-10-04-790-003

- (5) Make sure that there are no water leaks at the connections of the check valve that was replaced.

I. Put the Airplane Back to Its Usual Condition.

SUBTASK 38-10-04-410-001

- (1) To install the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-10-04-410-002

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-04-090-001

- (3) Remove the large cargo door safety barrier, SPL-1988, if it is not necessary for more tasks.

SUBTASK 38-10-04-680-001



DRAIN POTABLE WATER FROM THE AIRCRAFT WHICH ARE NOT IN OPERATION AND DO NOT HAVE PROTECTION FROM GROUND FREEZE. IF POTABLE WATER IS NOT DRAINED BEFORE A GROUND FREEZE, THE WATER CAN FREEZE AND CAUSE DAMAGE TO WATER LINES, TANKS, AND OTHER SYSTEM COMPONENTS.

- (4) Do this task to drain the potable water tanks, if it is necessary:

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Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-10-04-862-001

- (5) Remove the electrical power, if it is not necessary. Do this task : Remove Electrical Power,
TASK 24-22-00-860-806

————— **END OF TASK** —————

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POTABLE WATER PUMPS PRESSURE SWITCH - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the pressure switch
 - (2) An installation of the pressure switch.
 - (3) An operational check of the pressure switch.

TASK 38-10-05-000-801

2. PRESSURE SWITCH REMOVAL

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-149	Cap and Plug - NAS834

C. Consumable Materials

Reference	Description	Specification
G50138	Cloth - Soft Cotton	

D. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Task

SUBTASK 38-10-05-616-001

- (1) To drain the potable water tanks, do this task: Potable Water System - Drain, TASK 12-14-01-616-802

NOTE: It is not necessary to do the steps for draining the galleys, lavatories, or the FWD potable water distribution system. You need only to drain the water tanks, and the aft potable water distribution system.

SUBTASK 38-10-05-860-001

- (2) Do this task

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Open these circuit breakers and install safety tags:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-10-05-010-001

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-10-05-490-001

- (4) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-05-010-002

- (5) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Pressure Switch Removal

SUBTASK 38-10-05-020-001

- (1) Place a soft cotton cloth, G50138 under the pressure switch to catch any residual water that may spill from the manifold when you remove the switch.
- (2) Disconnect the electrical connector from the pressure switch.
- (3) Disconnect the S38013 pressure switch from the pump manifold.
- (4) Put a clean protective cap and plug, STD-149 in the pump manifold to keep contamination out of the potable water system.
- (5) Restore the airplane to its usual condition, if your are not installing the pressure switch immediately.

————— END OF TASK —————

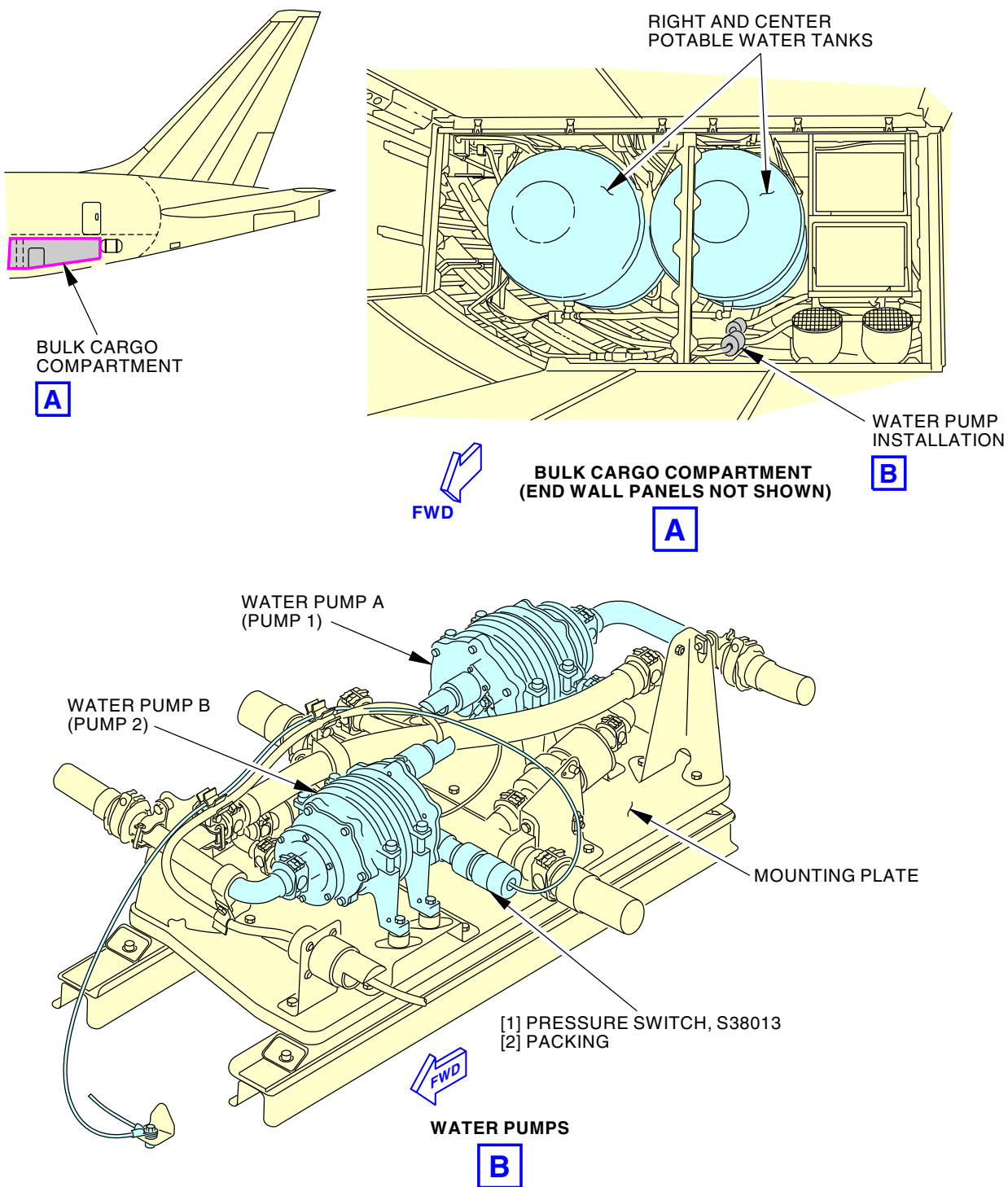
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POTABLE WATER PUMPS PRESSURE SWITCH - REMOVAL INSTALLATION Figure 401/38-10-05-990-801

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TASK 38-10-05-400-801

3. PRESSURE SWITCH INSTALLATION

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
32-09-00-040-801	Air Mode Simulation - Preparation (P/B 201)
32-09-00-440-801	Air Mode Simulation - Restoration (P/B 201)
32-09-00-860-801	Air/Ground Mode Simulation (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Pressure switch, S38013	38-10-05-01-040	ARO ALL
2	Packing	38-10-05-01-035	ARO ALL

E. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

F. Access Panels

Number	Name/Location
825	Bulk Cargo Door

G. Prepare for the Task

SUBTASK 38-10-05-010-003

(1) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

as necessary.

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SUBTASK 38-10-05-490-002

- (2) Install the large cargo door safety barrier, SPL-1988 across the cargo door opening, as necessary.

SUBTASK 38-10-05-010-004

- (3) To remove the endwall panel of the bulk cargo compartment, do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

H. Pressure Switch Installation

SUBTASK 38-10-05-420-001

- (1) Remove the cap from the pump manifold fitting and clean the fitting.

SUBTASK 38-10-05-430-003

- (2) Put the Molykote 111 Compound, D00189 on the new packing [2]. Then put the new packing in its installed position on the pressure switch, S38013 [1].

SUBTASK 38-10-05-430-001

- (3) Install the pressure switch, S38013 [1] to the pump manifold fitting.

SUBTASK 38-10-05-430-002

- (4) Connect the electrical connector to the pressure switch. Make sure the electrical connector is fully engaged and locked.

SUBTASK 38-10-05-865-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

I. Pressure Switch Installation Test

SUBTASK 38-10-05-861-001

- (1) Do this task to supply electrical power: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-10-05-610-002

- (2) Do this task to fill the potable water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-10-05-863-001

- (3) Do this task to pressurize the potable distribution system: Potable Water System - Pressurization, TASK 38-10-00-863-801

SUBTASK 38-10-05-710-003

- (4) Make sure that pump 1 (A) is the potable water pump that is operating.
 - (a) If pump 2 (B) is the potable water pump that is operating, switch from ground mode to air mode and back to ground mode to make pump 1 the operating pump (Air Mode Simulation - Preparation, TASK 32-09-00-040-801, Air/Ground Mode Simulation, TASK 32-09-00-860-801, Air Mode Simulation - Restoration, TASK 32-09-00-440-801).
 - 1) Verify that pump 1 is the potobale water pump that is operating.

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- (b) Make sure there are no water leaks at the pressure switch and pump manifold connection.

SUBTASK 38-10-05-865-002

- (5) Open the circuit breaker for water pump 1. This is the circuit breaker:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-10-05-210-001

- (6) Make sure the fault light at the controller comes on after approximately 10 minutes.

SUBTASK 38-10-05-710-006

- (7) Make sure that water pump 2 starts to operate.

SUBTASK 38-10-05-710-007

- (8) After three to five minutes, open a lavatory faucet. Make sure that the water flow is satisfactory, then close the faucet.

J. Restore the airplane to its usual condition

SUBTASK 38-10-05-410-001

- (1) Do this task to install the bulk cargo compartment endwall panel: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-10-05-090-001

- (2) Remove the large cargo door safety barrier, SPL-1988, if it is not necessary for more tasks.

SUBTASK 38-10-05-680-001



DRAIN POTABLE WATER FROM THE AIRCRAFT WHICH ARE NOT IN OPERATION AND DO NOT HAVE PROTECTION FROM GROUND FREEZE. IF POTABLE WATER IS NOT DRAINED BEFORE A GROUND FREEZE, THE WATER CAN FREEZE AND CAUSE DAMAGE TO WATER LINES, TANKS, AND OTHER SYSTEM COMPONENTS.

- (3) Do this task to drain the potable water tanks, if it is necessary:
Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-10-05-862-001

- (4) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

————— END OF TASK —————

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WATER TANK DEACTIVATION - MAINTENANCE PRACTICES

1. General

- A. These procedures can be used to isolate and deactivate a leaking water tank to allow an airplane to fly temporarily with a functioning potable water system until a new tank can be obtained, and the aircraft put back into its original configuration.
- B. The following parts may be required to accomplish the tasks:
- (1) Spare Water Hose (P/N AS4470-12-0150)
 - (2) Spare Water Hose (P/N AS4472K0270-000)
 - (3) Spare Pump Bypass Restrictor Hose (P/N AS4471-06-0502).
 - (4) Packing (NAS1611-013A).
 - (5) Plug for 1. inch (MS21913J16)
 - (6) Union (MS21902J12)
 - (7) Union (MS21902J6).
- C. This procedure has these tasks:
- (1) A deactivation of the right water tank.
 - (2) A deactivation of the center water tank.
 - (3) A deactivation of the left water tank.

TASK 38-11-01-040-807

2. Right Water Tank Deactivation

Figure 201

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

C. Prepare for the Right Water Tank Deactivation

SUBTASK 38-11-01-680-007

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-11-01-860-031

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

D. Procedure

SUBTASK 38-11-01-020-070

- (1) Disconnect the tee drain fitting [12] under the right water tank [13].

SUBTASK 38-11-01-480-006

- (2) Install plug (P/N MS21913J16) on the tee drain fitting [12].

SUBTASK 38-11-01-020-071

- (3) Disconnect the water hose [14] from the fill port [2] of the right water tank [13].

SUBTASK 38-11-01-020-072

- (4) Disconnect the water hose [4] from the overflow port [3] of the right water tank [13].

SUBTASK 38-11-01-420-049

- (5) Do one of the following steps.

(a) Method 1:

- 1) Use a union (P/N MS21902J12) and spare hose (AS4470-12-0150) to connect water hose [14] and water hose [4] together.

NOTE: This connection should make a continuous connection from the fill/overflow valve, directly to the fill port of the center tank.

(b) Method 2:

NOTE: This method will INOP the aft fill port. The tanks can be filled only from the forward fill port.

- 1) Remove water hose [14] and water hose [4] from the water system.
- 2) Install a plug at the open center water tank [10] fill port [5].
- 3) Install a plug at the open fill/overflow valve.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-01-860-032

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-670-017

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

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SUBTASK 38-11-01-670-018

(3) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-01-790-010

(4) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-01-710-013

(5) Examine the water hose connections for leakage.

SUBTASK 38-11-01-710-014

(6) Examine the fittings on the bottom of the water tanks for leakage.

———— **END OF TASK** ————

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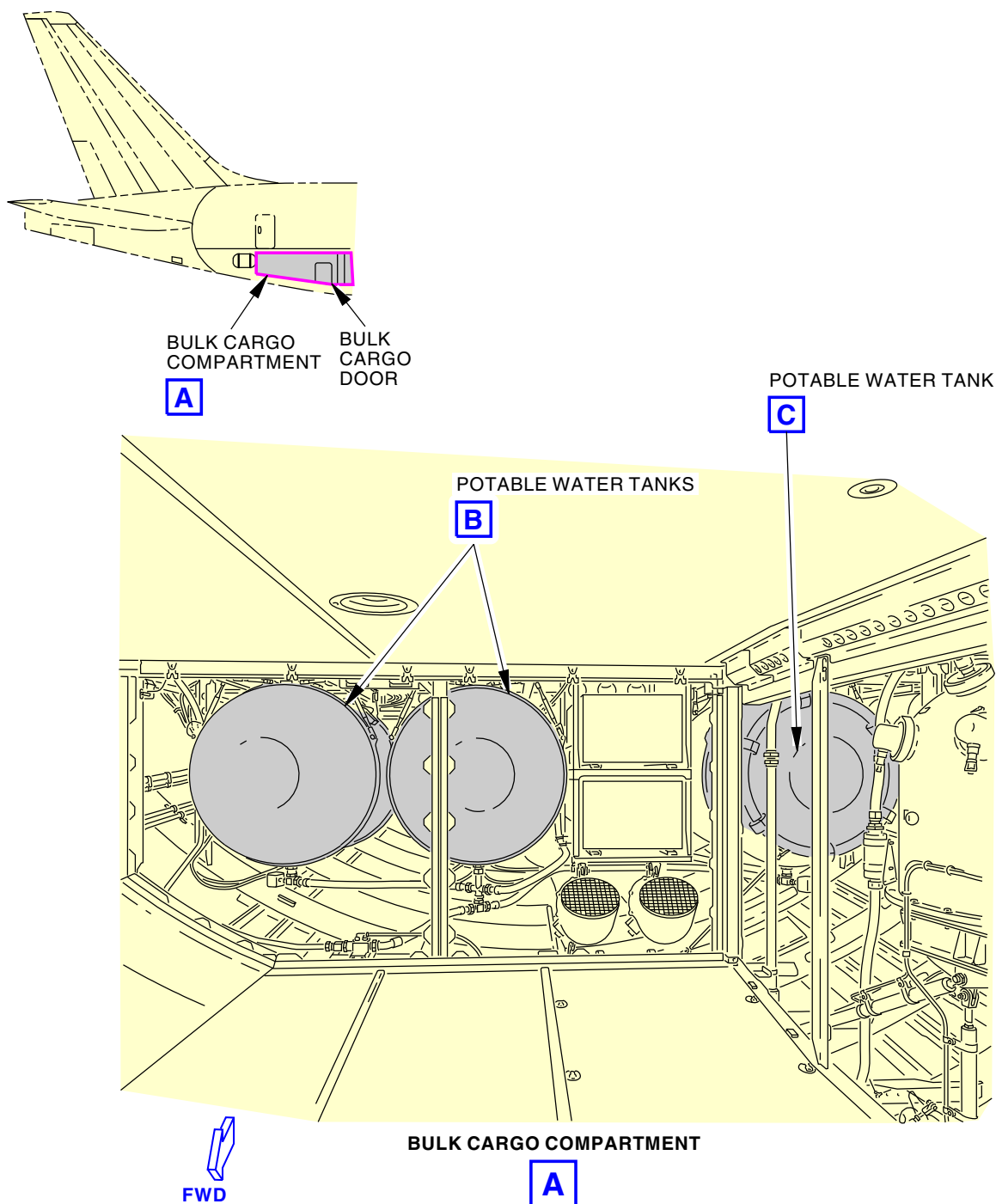
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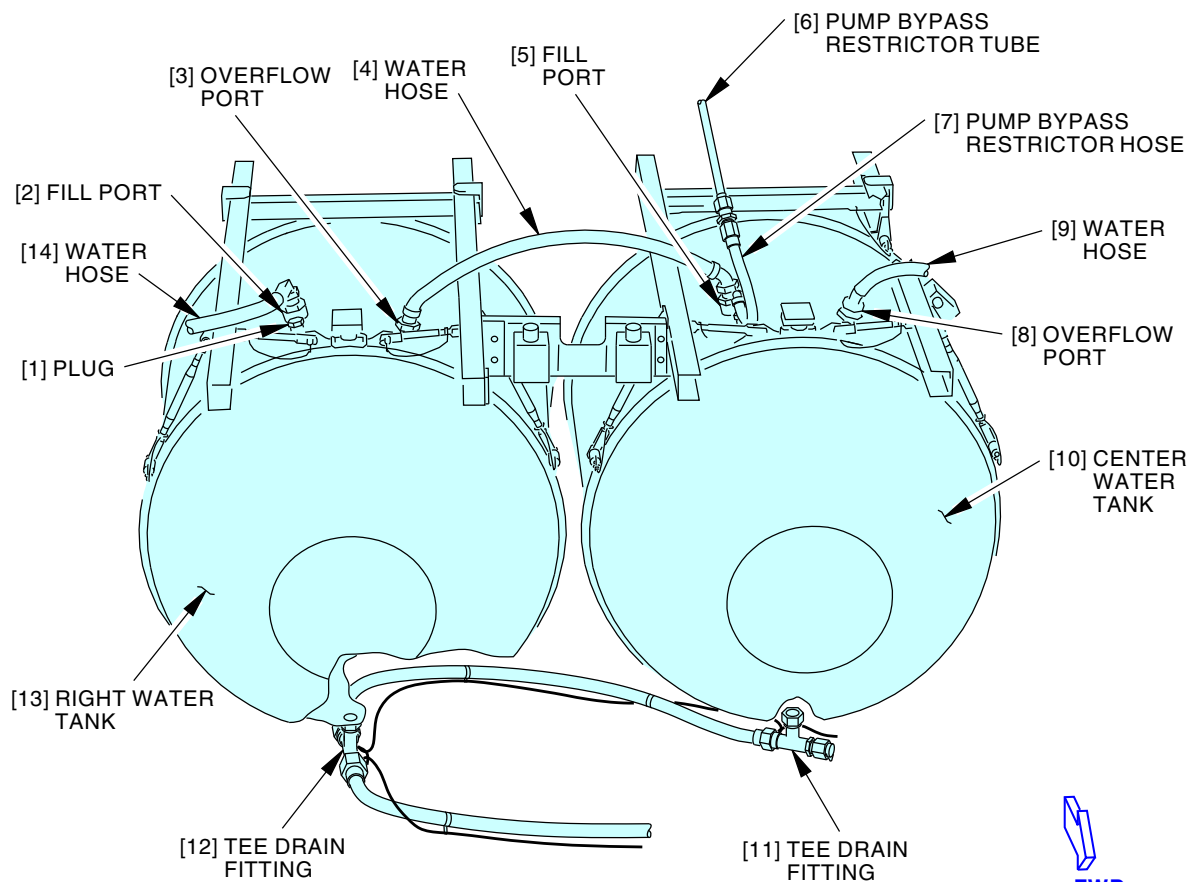
Water Tank Deactivation
Figure 201/38-11-01-990-814 (Sheet 1 of 3)

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POTABLE WATER TANKS

B

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**Water Tank Deactivation
Figure 201/38-11-01-990-814 (Sheet 2 of 3)**

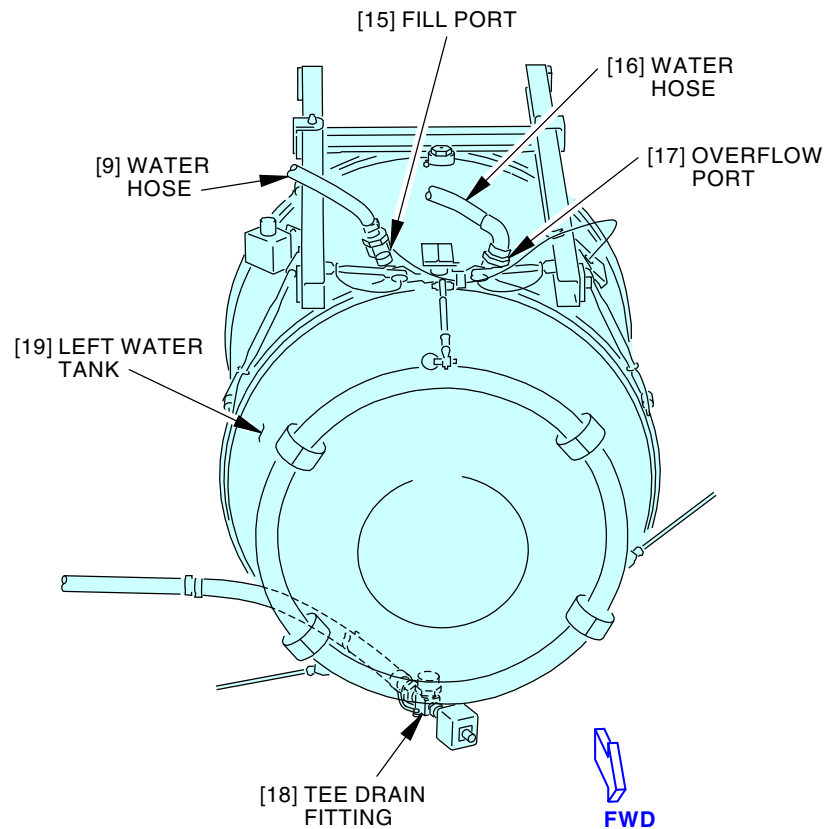
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POTABLE WATER TANK

C

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Water Tank Deactivation
Figure 201/38-11-01-990-814 (Sheet 3 of 3)

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TASK 38-11-01-040-808

3. Center Water Tank Deactivation

Figure 201

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Prepare for the Center Water Tank Deactivation

SUBTASK 38-11-01-680-008

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-11-01-010-036

- (2) Gain access to the Aft Bulk Cargo Compartment.

SUBTASK 38-11-01-020-073

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-11-01-860-034

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT

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

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

C. Procedure

SUBTASK 38-11-01-020-074

- (1) Disconnect the tee drain fitting [11] under the center water tank [10].

SUBTASK 38-11-01-480-007

- (2) Install a plug (MS21913J16) in the tee drain fitting [11].

SUBTASK 38-11-01-020-075

- (3) Disconnect the water hose [4] from the fill port [5] of the center water tank [10].

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SUBTASK 38-11-01-020-076

- (4) Disconnect the water hose [9] from the overflow port [8] of the center water tank [10].

SUBTASK 38-11-01-420-050

- (5) Use a union (P/N MS21902J12) and spare hose (AS4472K0270-00) to connect water hose [4] and water hose [9] together.

NOTE: This should make a continuous connection from the right tank overflow line, directly to the fill port of the left tank.

SUBTASK 38-11-01-020-077

- (6) Disconnect the pump bypass restrictor hose [7] b-nuts from the union at the pump bypass restrictor tube [6] and from the union at the top of the center water tank [10].

SUBTASK 38-11-01-020-078

- (7) Remove the union (P/N MS21902J6) from the top of the center water tank [10] and retain.

SUBTASK 38-11-01-020-079

- (8) Remove the plug [1] (P/N MS21913J6) from the pump bypass restrictor port of the right water tank [13] right water tank.

SUBTASK 38-11-01-420-051

- (9) Connect the pump bypass restrictor tube [6] to the pump bypass restrictor port of the right water tank [13] using pump bypass restrictor hose [7] (AS4471-06-0502) or equivalent, packing (P/N NAS1611-013A), and the union (P/N MS21902J6) retained from the center water tank [10].

D. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-01-860-035

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-670-019

- (3) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-01-670-020

- (4) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-01-790-011

- (5) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-01-610-006

- (6) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

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SUBTASK 38-11-01-710-015

- (7) Examine the fittings on the bottom of the water tanks for leakage.

SUBTASK 38-11-01-420-052

- (8) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-01-210-006

- (9) Make sure that the work area is clean and clear of tools and other equipment.

————— END OF TASK —————

TASK 38-11-01-040-809

4. Left Water Tank Deactivation

Figure 201

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Prepare for the Left Water Tank Deactivation

SUBTASK 38-11-01-680-009

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-11-01-010-037

- (2) Gain access to the Aft Bulk Cargo Compartment.

SUBTASK 38-11-01-020-080

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-11-01-860-037

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

- (5) Open these circuit breakers:

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

C. Procedure

SUBTASK 38-11-01-020-081

- (1) Disconnect the tee drain fitting [18] under the left water tank [19].

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SUBTASK 38-11-01-480-008

- (2) Install a plug (MS21913J16) in the tee drain fitting [18].

SUBTASK 38-11-01-020-082

- (3) Disconnect the water hose [9] from the fill port [15] of the left water tank [19].

SUBTASK 38-11-01-020-083

- (4) Disconnect the water hose [16] from the overflow port [17] of the left water tank [19].

SUBTASK 38-11-01-420-053

- (5) Use a new union (P/N MS21902J12) and spare hose (P/N AS4472K0270-000) to connect water hose [9] and water hose [16] together.

NOTE: This connection should make a continuous connection from the center tank overflow line to the left tank overflow line.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-01-860-038

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-670-021

- (3) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-01-670-022

- (4) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-01-790-012

- (5) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-01-610-007

- (6) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-11-01-710-016

- (7) Examine the fittings on the bottom of the water tanks for leakage.

SUBTASK 38-11-01-420-054

- (8) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-01-210-007

- (9) Make sure that the work area is clean and clear of tools and other equipment.

————— **END OF TASK** —————

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WATER TANK - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the potable water tank.
 - (2) An installation of the potable water tank.
- B. The potable water tank is referred to as the water tank in this procedure.

TASK 38-11-01-000-803

2. Water Tank Removal

Figure 401

A. References

<u>Reference</u>	<u>Title</u>
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
38-10-02-000-802	Potable Water Pump Removal (P/B 401)
38-14-05-000-801	Water Quantity Sensor 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.

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-149	Cap and Plug - NAS834

C. Location Zones

<u>Zone</u>	<u>Area</u>
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

E. Prepare for the removal

SUBTASK 38-11-01-616-001

- (1) Do this task to drain the water tanks: Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-11-01-865-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-010-011

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-01-490-001

- (4) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-01-010-012

- (5) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

F. Water Tank Removal

SUBTASK 38-11-01-010-018

- (1) Do this Subtask, if you are removing the center water tank, and not removing the left water tank.

NOTE: You must remove the center post assembly from the bulk cargo compartment endwall to remove the center water tank from the airplane.

- (a) Remove the bolt [49], washer [50], and nut [51] that attach the center post assembly [47] to the bulk cargo compartment floor fitting [52].
- (b) Pull the post assembly pin [48] from the bulk cargo compartment ceiling structure, as you move the bottom of the post assembly forward, to remove the post assembly.

SUBTASK 38-11-01-010-019

- (2) Do this Subtask, if you are removing the center water tank: Potable Water Pump Removal, TASK 38-10-02-000-802.

SUBTASK 38-11-01-030-001

- (3) Disconnect the water hoses from the top of the water tank.
- (a) Hold the tank fitting with a wrench to stop the fitting from moving.

SUBTASK 38-11-01-030-002

- (4) For the center water tank, disconnect the pump bypass restricter hose, from the top of the water tank.

SUBTASK 38-11-01-020-056

- (5) Disconnect the electrical connectors [70] for the water tank quantity sensors.

SUBTASK 38-11-01-030-009

- (6) Disconnect the B-nut [14] and Tee fitting [15] from the bottom of the water tank assembly.

NOTE: Be ready to catch any water that may remain in the tank.

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- (a) Move the hoses, Tee fitting [15], and bonding jumpers [16] away from the tank.

NOTE: Be careful that you do not damage the bonding jumper that is connected to the Tee fitting.

SUBTASK 38-11-01-430-015

- (7) Put the protective cap and plug, STD-149 in each of the open fittings on the tank, water hoses, and fittings.

SUBTASK 38-11-01-030-010

- (8) Support the forward end of the tank assembly [1] its position with a block, strap, or rope.

SUBTASK 38-11-01-030-012

- (9) Disconnect the water tank from the cradle assembly.
- (a) Remove nuts [166], washers [165], and bolts [164] at the water tank forward support strap [4].
- (b) Move the forward part of the water tank in the down direction..
- 1) Make sure the shear pin [6] is in the tank block [8].
- (c) Remove nuts [166], washers [165], and bolts [167] at the water tank aft support strap [5].

SUBTASK 38-11-01-020-047

- (10) Remove the potable tank assembly [1].

SUBTASK 38-11-01-020-057

- (11) If the tank will be replaced, do this task: Water Quantity Sensor Removal, TASK 38-14-05-000-801.

NOTE: The sensor will be used to install in the new water tank.

SUBTASK 38-11-01-030-027

- (12) For the right side water tank, if the tank will be replaced, remove the elbow adapter [18] from the top of the tank and keep.

NOTE: The elbow adapter will be used to install the tank.

SUBTASK 38-11-01-030-006

- (13) If the tank will be replaced, remove the plugs and unions and standpipes from the tank ports and keep.

NOTE: The plugs and unions and standpipes are used to install the new tank assembly.

———— **END OF TASK** ————

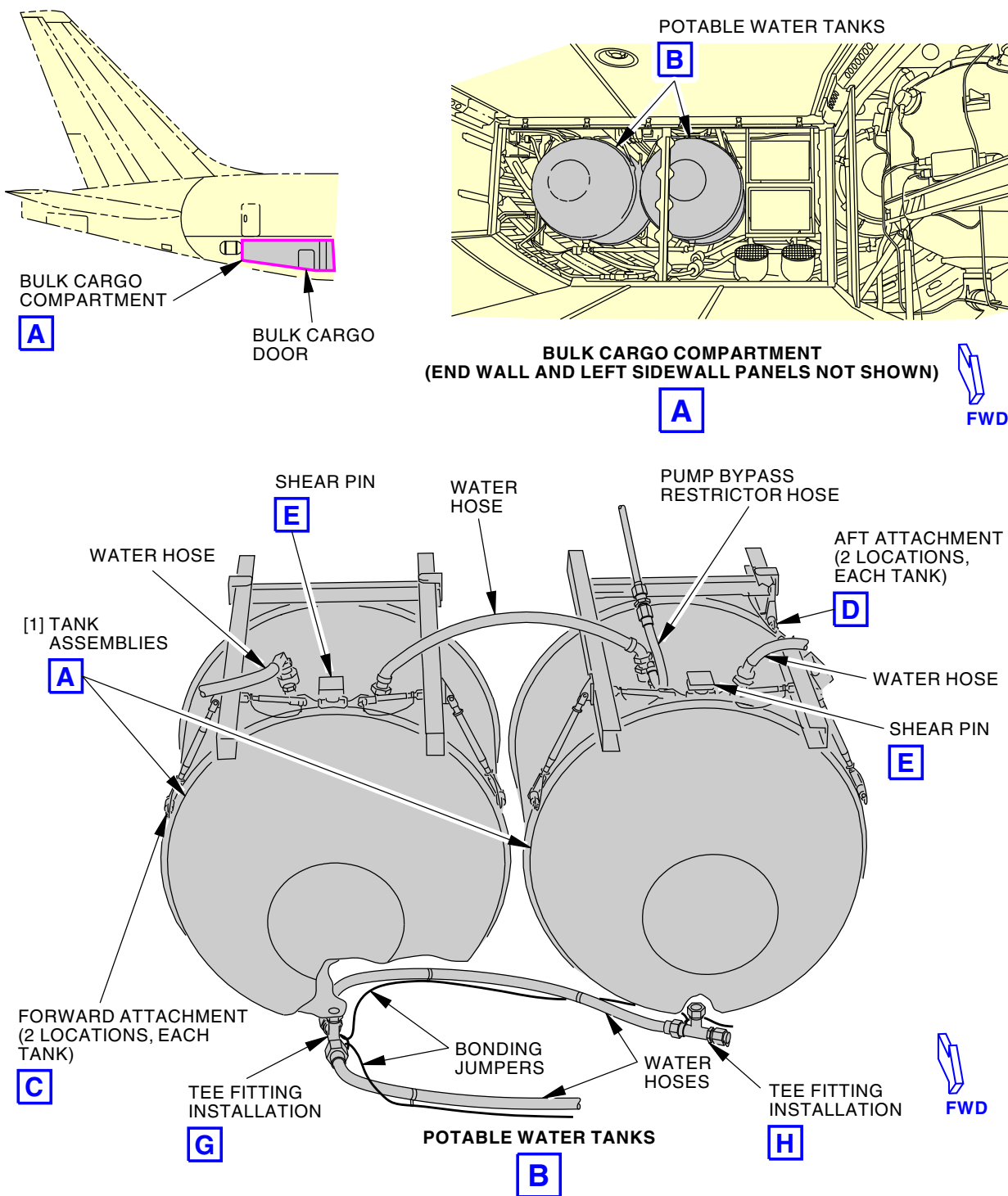
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2115390 S0000452041_V3

Water Tank - Removal/Installation
Figure 401/38-11-01-990-809 (Sheet 1 of 5)

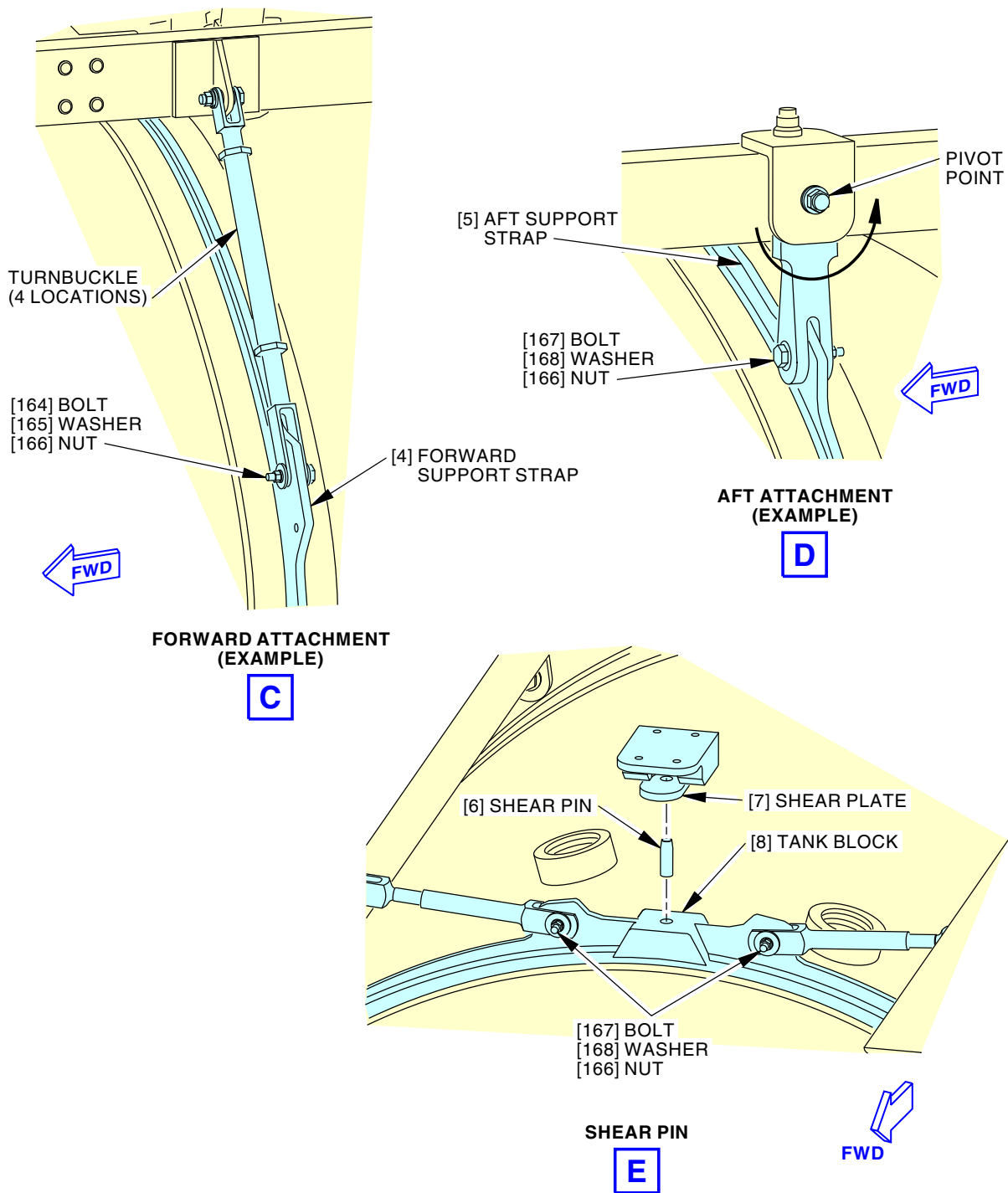
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2115267 S0000452047_V2

**Water Tank - Removal/Installation
Figure 401/38-11-01-990-809 (Sheet 2 of 5)**

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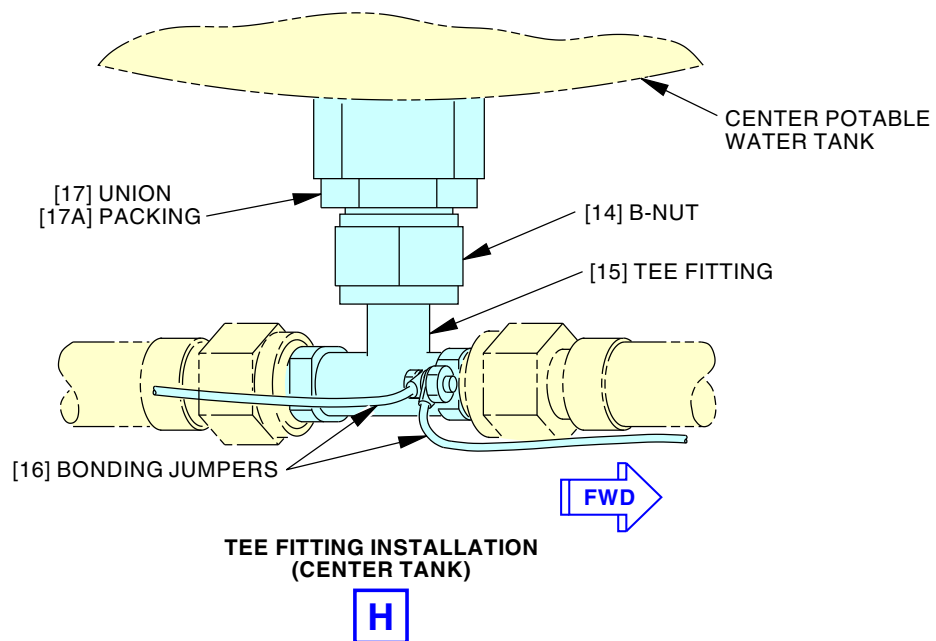
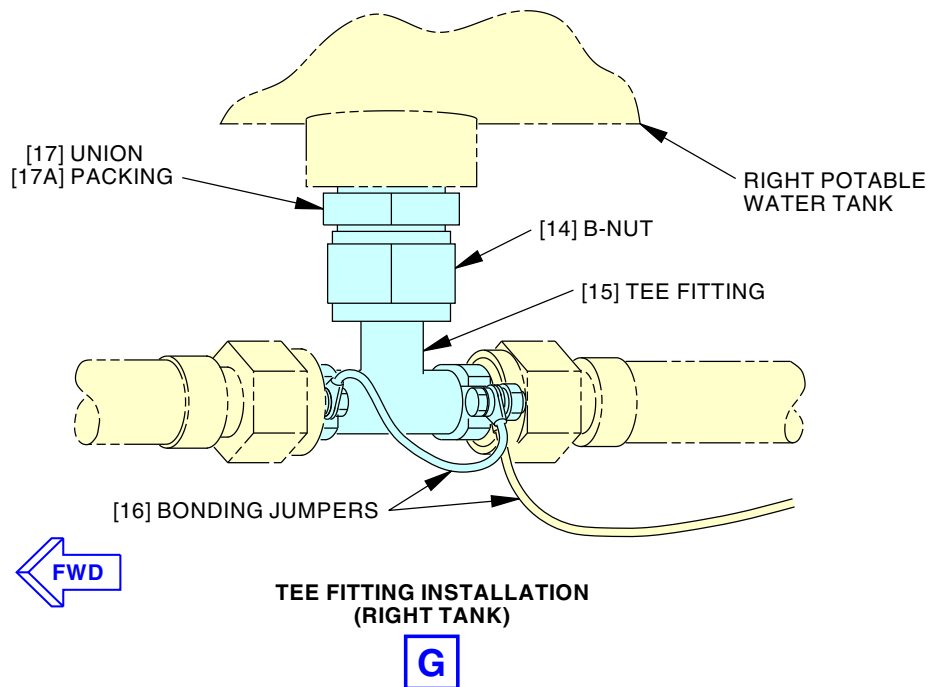
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U91750 S0000221449_V3

Water Tank - Removal/Installation
Figure 401/38-11-01-990-809 (Sheet 3 of 5)

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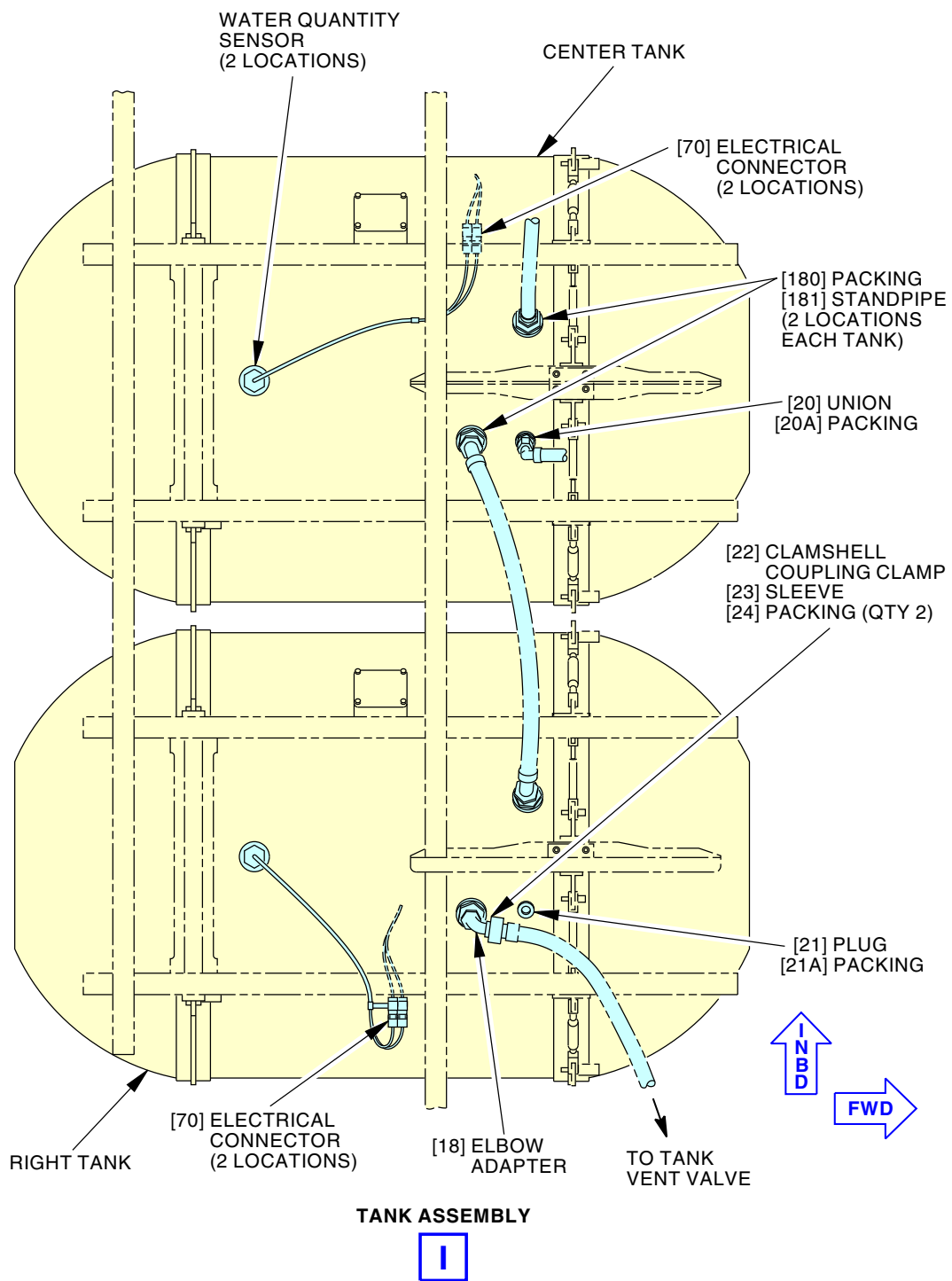
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2004447 S0000393306_V4

Water Tank - Removal/Installation
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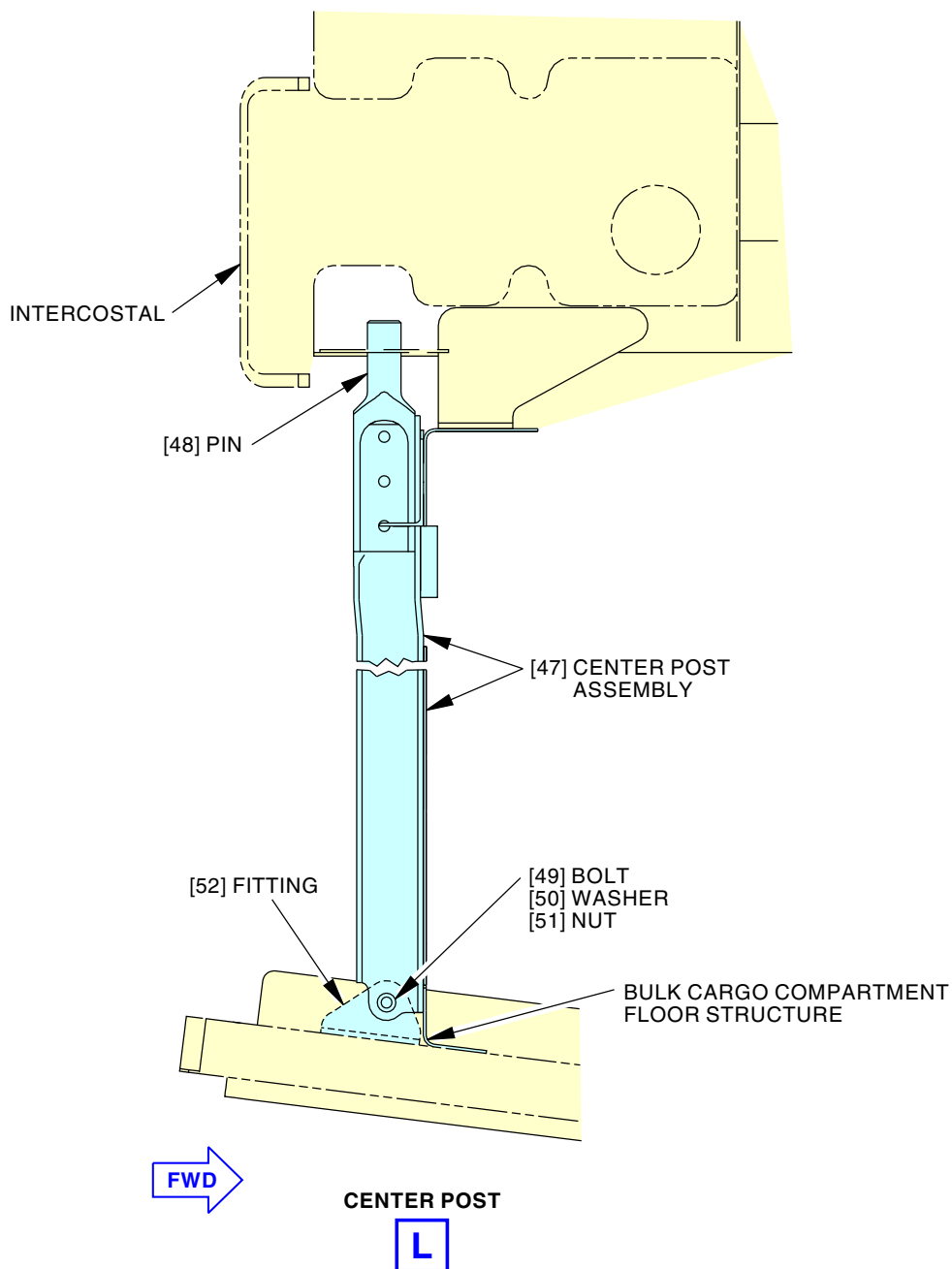
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1339464 S0000235960_V3

Water Tank - Removal/Installation
Figure 401/38-11-01-990-809 (Sheet 5 of 5)

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TASK 38-11-01-400-803

3. Water Tank Installation

Figure 401

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
20-10-05-400-801	Turnbuckle Locking Clips Installation (P/B 401)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - 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)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
38-10-02-400-802	Potable Water Pump Installation (P/B 401)
38-14-05-400-801	Water Quantity Sensor Installation (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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Tank assembly	38-11-01-09G-080	ARO ALL
24	Packing	38-11-01-09G-120	ARO ALL

E. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

F. Access Panels

Number	Name/Location
825	Bulk Cargo Door

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G. Prepare for the task

SUBTASK 38-11-01-865-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-010-013

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-01-490-002

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-01-010-014

- (4) Do this task, as necessary: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

H. Water Tanks Installation.

SUBTASK 38-11-01-400-001

- (1) Put the potable water tank assembly [1] into the aft bulk cargo compartment.

SUBTASK 38-11-01-420-042

- (2) If you are installing a new tank, do the following steps to accomplish the tank build up:

NOTE: These steps may be performed before or after the tank is attached to the structure.

NOTE: New tank fittings are recommended. If you use salvaged fittings make sure they are clean and free of damage. New packings are required.

- (a) Lubricate all of the packings with Molykote 111 Compound, D00189 prior to installation.
- (b) Install the packings [180] and the standpipes [181] in the tank ports on the top of the water tank. Tighten the standpipes to 150 ±15 in-lb (17 ±2 N·m).
- (c) For the right/outboard water tank, install the elbow adapter [18] on the larger of the two forward outboards ports. Tighten the adapter to 150 ±15 in-lb (17 ±2 N·m).
- (d) Do this task: Water Quantity Sensor Installation, TASK 38-14-05-400-801
- (e) For the right/outboard water tank, install the packing [21A] and plug [21] in the forward port on the top of the water tank. Tighten the plug to 150 ±15 in-lb (16.9 ±1.7 N·m).
- (f) For the center water tank, install the packing [20A] and union [20] in the forward port on the top of the water tank. Tighten the union to 150 ±15 in-lb (16.9 ±1.7 N·m).
- (g) Install the packing [17A] and union [17] in the tank port on the bottom of the water tank. Tighten the plug to 550 ±40 in-lb (62.1 ±4.6 N·m)

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SUBTASK 38-11-01-420-043

- (3) Install the bolts [167], washers [165], and nuts [166] to the aft support strap [5].

SUBTASK 38-11-01-820-001

- (4) Put the four turnbuckles in their positions on the forward support strap [4] and connect to the tank as follows:
- (a) Connect the bolts [167], washers [168], nuts [166] and turnbuckles to the top of forward support strap [4].
 - (b) Connect the bolts [164], washers [165], nuts [166] and turnbuckles to the forward support strap [4].
 - (c) Apply the sealant, A00247 to the shear shear pin [6].
 - (d) Make sure the shear shear pin [6] is in the tank block [8].
 - (e) Make sure the shear shear pin [6] goes into the shear plate [7].
 - (f) Adjust the turnbuckles until there is no clearance between the tank block [8] and the shear plate [7].
 - (g) Install the locking clips in the turnbuckles (Turnbuckle Locking Clips Installation, TASK 20-10-05-400-801), or lockwire the turnbuckles (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801).

SUBTASK 38-11-01-430-009

- (5) Put the Tee fitting [15] in its position on the union [17], and align the Tee fitting for best fit. Tighten the B-nut 650 ± 40 in-lb (73.4 ± 4.6 N·m).
- (a) Make sure that the bonding jumpers [16] are connected to the Tee fitting [15]. Install the bonding
 - (b) Install, and seal the bonding jumpers as necessary. Use the sealant, A02315

SUBTASK 38-11-01-430-010

- (6) Connect the water hoses to the standpipes [181] standpipes on the top of the water tank. Tighten the water hose B-nuts to 150 ± 15 in-lb (16.9 ± 1.7 N·m).

SUBTASK 38-11-01-430-011

- (7) Do these steps, if you are installing the right water tank.
- (a) Put the Molykote 111 Compound, D00189 on the two packings [24]. Put the tank vent valve water hose in its position on the elbow adapter [18], and install the sleeve [23] and clamshell coupling clamp [22].
 - (b) Make sure the clamshell coupling clamp latch is locked.

SUBTASK 38-11-01-430-012

- (8) Connect the pump bypass restricter hose to the union [20] on the top of center tank, and tighten the B-nut to 150 ± 15 in-lb (16.9 ± 1.7 N·m).

SUBTASK 38-11-01-410-037

- (9) Connect the electrical connectors [70] for the water tank quantity sensor.

SUBTASK 38-11-01-410-029

- (10) Do this task, as necessary, to install the water pumps and mounting plate assembly:
Potable Water Pump Installation, TASK 38-10-02-400-802

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SUBTASK 38-11-01-865-003

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-861-001

- (12) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-01-670-013

- (13) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801

SUBTASK 38-11-01-863-001

- (14) Do this task to pressurize the potable water system: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-01-210-003

- (15) Make sure there are no leaks at the water hose fittings, or the tank assembly plugs.

I. Put the Airplane Back to its Usual Condition

SUBTASK 38-11-01-430-035

- (1) Do these steps, as necessary, to install the center post assembly [47].
- (a) Put the center post assembly pin [48] in its position in the bulk cargo compartment ceiling bracket.
 - (b) Put the bottom of the center post assembly [47] in its position on the fitting [52].
 - (c) Install the bolt [49], through the center post assembly [47] and the fitting [52]. Install the washer [50] and nut [51] on the bolt [49], and tighten the nut.

SUBTASK 38-11-01-410-022

- (2) Do this task to install the endwall panels: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-01-090-001

- (3) Remove the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-01-410-023

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-01-610-001

- (5) Do this task, as necessary: Potable Water Tank - Fill, TASK 12-14-01-600-810

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SUBTASK 38-11-01-862-001

- (6) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

————— END OF TASK —————

TASK 38-11-01-000-804

4. Water Tank (Aft of Waste Tanks) Removal

Figure 402

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-14-05-000-801	Water Quantity Sensor 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-149	Cap and Plug - NAS834

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for the removal

SUBTASK 38-11-01-616-002

- (1) Do this Task to drain the water tanks: Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-11-01-865-004

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-010-015

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-01-490-003

- (4) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-01-010-016

- (5) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-11-01-020-048

- (6) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-11-01-020-049

- (7) Remove the waste tank enclosure post aft of the waste tank as follows:
- (a) Remove the screws [43] at the lower end of the post [44] assembly.
 - (b) Loosen or remove the bolts [45] at the upper end of the post [44] assembly.
 - (c) Move the post [44] up, then outboard, and then down to disengage the upper end of the post from the slot in the barrel fitting [46].
 - (d) Remove the post [44].

SUBTASK 38-11-01-020-050

- (8) Remove the bulk cargo compartment heating duct near the waste tank as follows:
- (a) Remove the screws [38] to remove the shroud [37].
 - (b) Loosen the clamp [30] to remove the sleeve [31] from the upper duct assembly [33].
 - (c) Remove the screws [32] for the upper duct assembly [33].
 - (d) Loosen the nut [34] of the upper duct assembly [33] to disconnect the union [35] from the center duct assembly [36].
 - (e) Remove the upper duct assembly [33].
 - (f) Remove the screws [39] and washer [40] to remove the clamp.
 - (g) Pull up to remove the center duct assembly [36] from the lower duct assembly [42].
- Put the protective cap and plug, STD-149 on the open ducts.

F. Water Tank Removal

SUBTASK 38-11-01-030-015

- (1) Disconnect the water hoses from the top of the water tank assembly.

SUBTASK 38-11-01-020-058

- (2) Disconnect the electrical connectors [70] for the water quantity sensor.

SUBTASK 38-11-01-030-017

- (3) Disconnect the B-nut [14] and Tee fitting [15] from the bottom of the water tank.

NOTE: Be ready to catch any water that may remain in the tank.

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- (a) Move the hose, Tee fitting [15] and bonding jumpers [16] away from the water tank.

NOTE: Be careful that you do not damage the bonding jumper that is connected to the Tee fitting.

SUBTASK 38-11-01-030-018

- (4) Put the protective cap and plug, STD-149 in each of the open fittings on the tank, water hoses, and fittings.

SUBTASK 38-11-01-030-019

- (5) Loosen the turnbuckle and cable assembly [26], the turnbuckle and cable assembly [28], and the turnbuckle [25] until the foam blocks [27] do not touch the water tank.
- (a) Pull the pins to disconnect the turnbuckle and cable assembly [26], the turnbuckle and cable assembly [28], and the turnbuckle [25] from the support ring assembly [29].

SUBTASK 38-11-01-490-004

- (6) Put a support under the forward end of the water tank. Use blocks, a strap, or rope to support the tank.
- (a) Make sure you support the forward part of the water tank assembly [1] in its position.

SUBTASK 38-11-01-020-068

- (7) Loosen the turnbuckles, as necessary, and remove nuts [166], washers [165], and bolts [164] from forward support strap [4]

SUBTASK 38-11-01-030-021



DO NOT MOVE THE FORWARD PART OF THE WATER TANK MORE THAN 20 DEGREES FROM ITS HORIZONTAL POSITION. MAKE SURE THAT THE WATER TANK IS BLOCKED TO PREVENT MOVEMENT OF MORE THAN 20 DEGREES. IF YOU MOVE THE WATER TANK MORE THAN 20 DEGREES, DAMAGE TO THE WATER TANK CAN OCCUR.

- (8) Move the forward part of the water tank assembly [1] in the down direction.

SUBTASK 38-11-01-212-001

- (9) Make sure the shear pin [6] is in the tank block [8].

SUBTASK 38-11-01-020-069

- (10) Remove nuts [166], washers [165], and bolts [167] from the aft support strap [5].

SUBTASK 38-11-01-020-051

- (11) Remove the potable water tank assembly [1] .

SUBTASK 38-11-01-030-024

- (12) If the tank will be replaced, remove the plugs and unions and standpipes from the tank ports and keep.

NOTE: The plugs and unions and standpipes are used to install the new tank assembly.

SUBTASK 38-11-01-020-059

- (13) If the tank will be replaced, do this task: Water Quantity Sensor Removal, TASK 38-14-05-000-801.

SUBTASK 38-11-01-430-016

- (14) Put the protective cap and plug, STD-149 in all the open ports on the tank assembly and the open water lines.

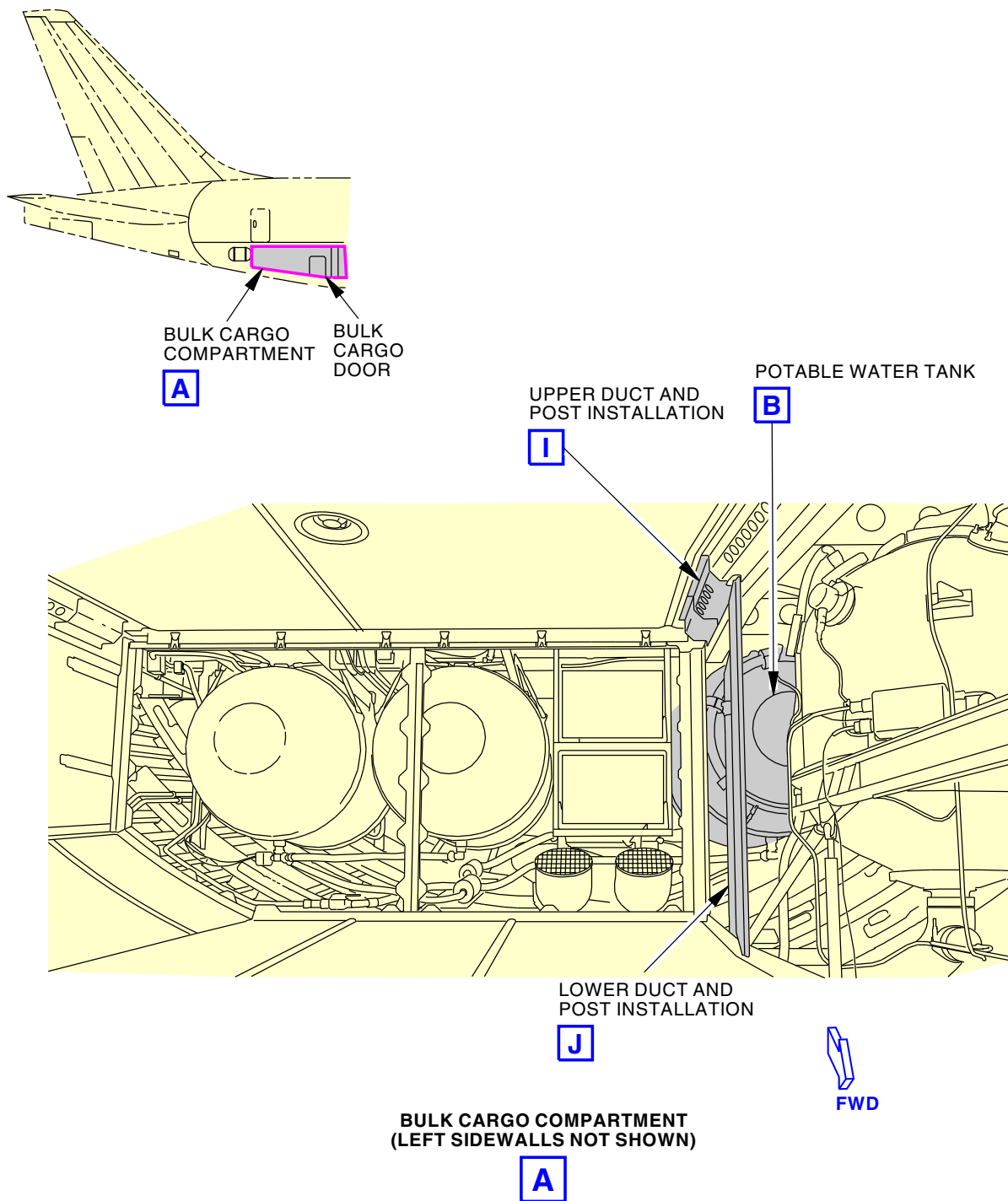
————— END OF TASK —————

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**Water Tank (Aft of Waste Tanks) Removal/Installation
Figure 402/38-11-01-990-810 (Sheet 1 of 5)**

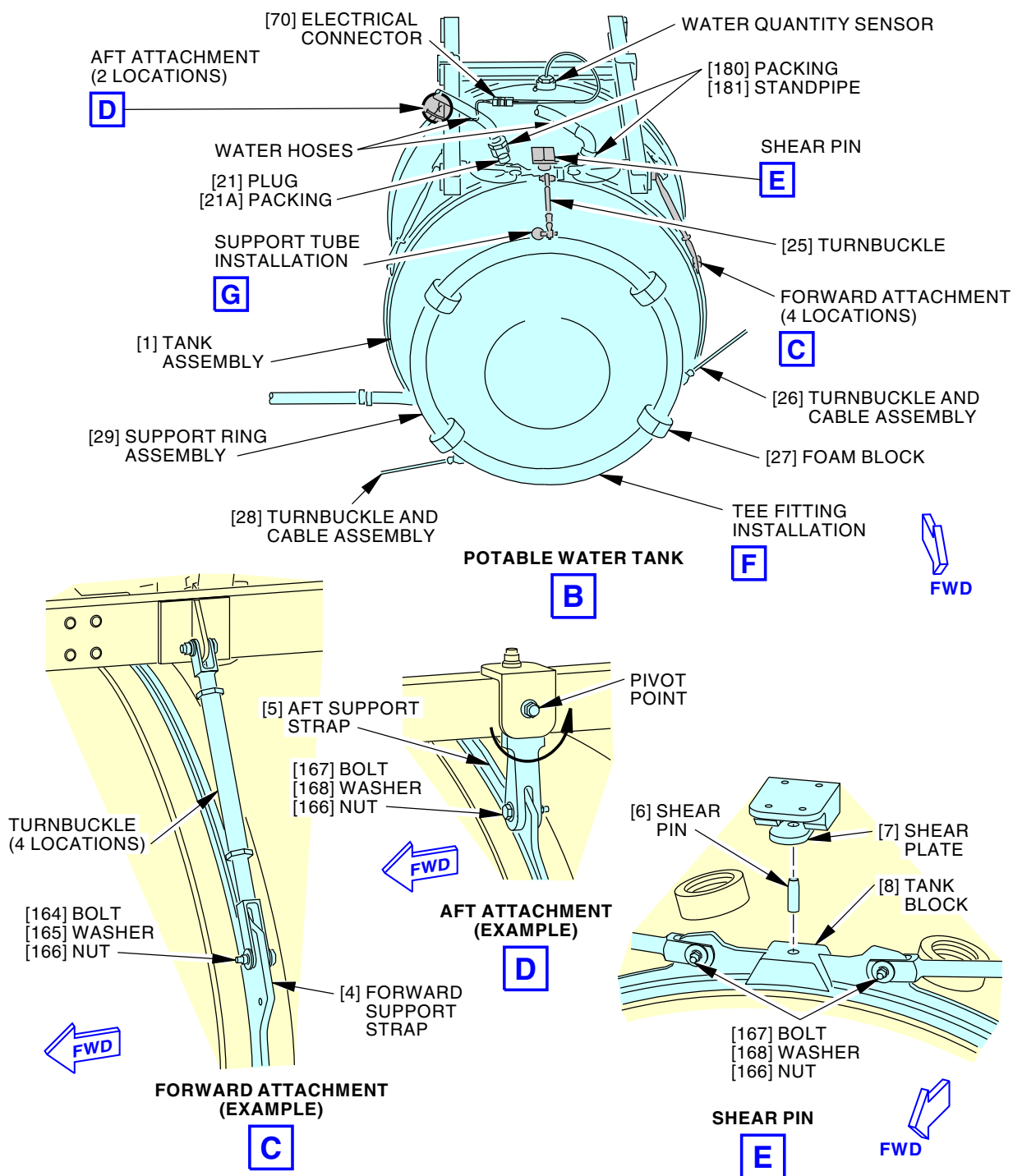
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2115428 S0000452175_V3

Water Tank (Aft of Waste Tanks) Removal/Installation
Figure 402/38-11-01-990-810 (Sheet 2 of 5)

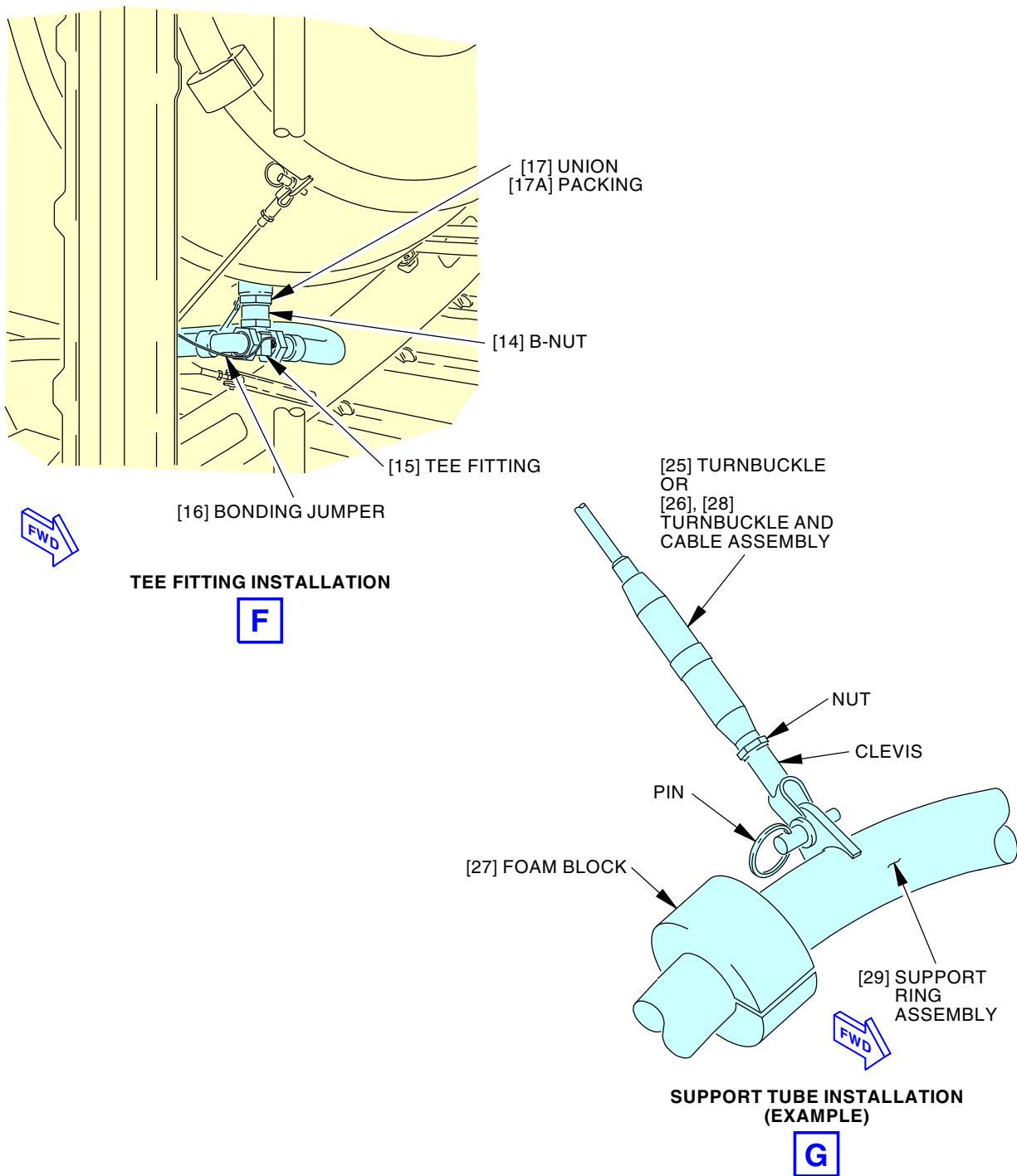
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**Water Tank (Aft of Waste Tanks) Removal/Installation
Figure 402/38-11-01-990-810 (Sheet 3 of 5)**

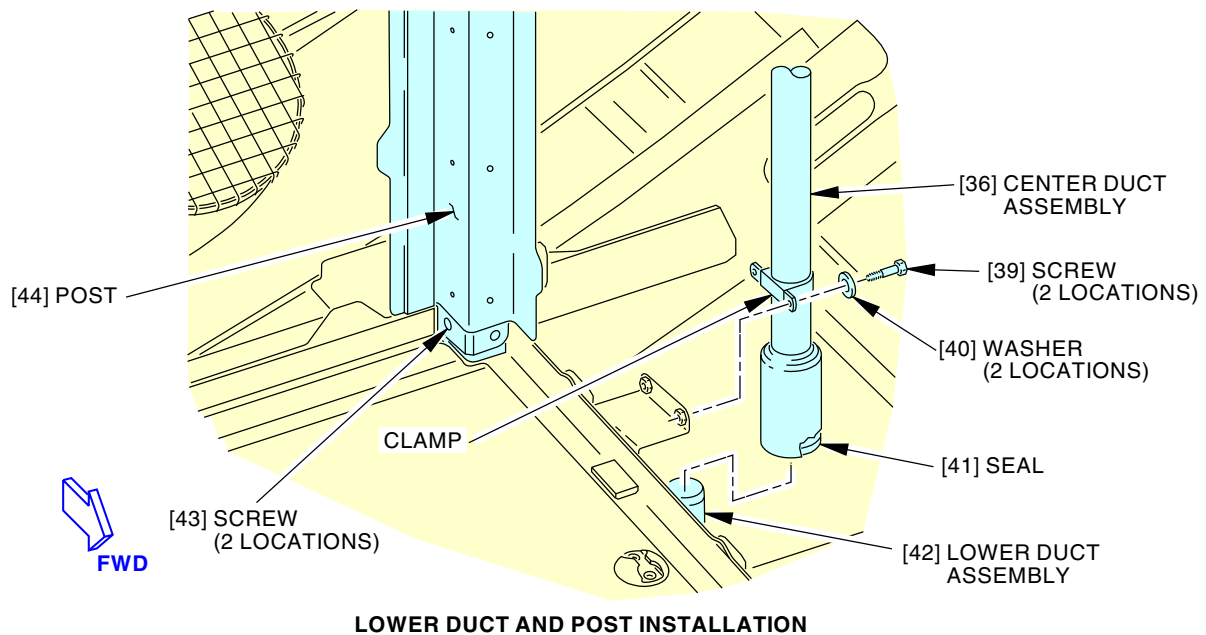
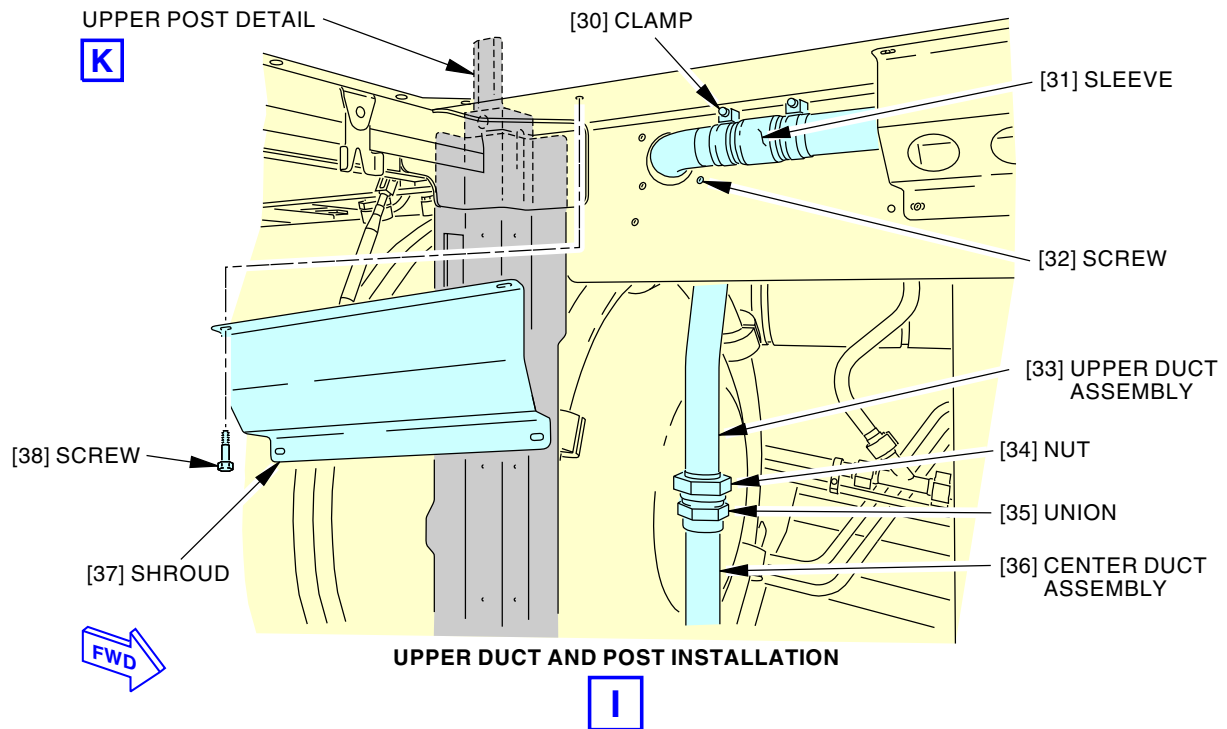
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Water Tank (Aft of Waste Tanks) Removal/Installation Figure 402/38-11-01-990-810 (Sheet 4 of 5)

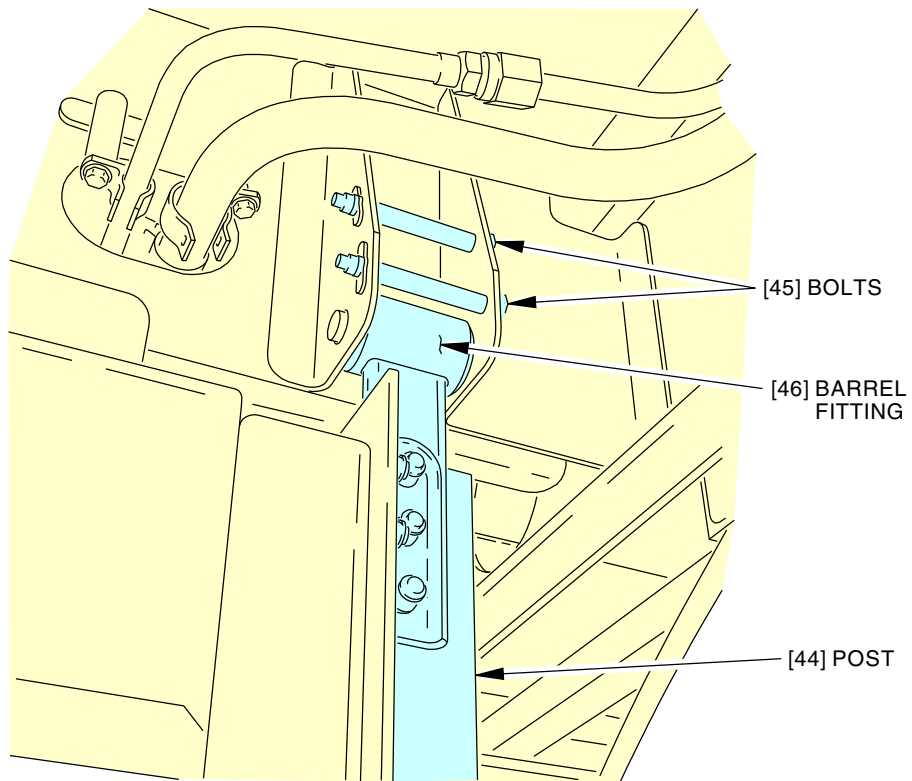
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UPPER POST DETAIL

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Water Tank (Aft of Waste Tanks) Removal/Installation
Figure 402/38-11-01-990-810 (Sheet 5 of 5)

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TASK 38-11-01-400-804

5. Water Tank (Aft of Waste Tanks) Installation

(Figure 402)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
20-10-05-400-801	Turnbuckle Locking Clips Installation (P/B 401)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - 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)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
38-14-05-400-801	Water Quantity Sensor Installation (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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Tank assembly	38-11-01-09G-080	ARO ALL
41	Seal	21-44-03-01-170	ARO ALL
		21-44-03-01-171	ARO ALL

E. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

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F. Access Panels

Number	Name/Location
825	Bulk Cargo Door

G. Prepare for the task

SUBTASK 38-11-01-860-026

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-010-030

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-01-480-004

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-01-010-031

- (4) Do this task, as necessary: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

H. Water Tank Installation

SUBTASK 38-11-01-420-035

- (1) Put the potable water tank assembly [1] into the aft bulk cargo compartment.

SUBTASK 38-11-01-420-044

- (2) If you are installing a new tank, do the following steps to accomplish the tank build up:

NOTE: These steps may be performed before or after the tank is attached to the structure.

NOTE: New tank fittings are recommended. If you use salvaged fittings make sure they are clean and free of damage. New packings are required.

- (a) Lubricate all of the packings with Molykote 111 Compound, D00189 prior to installation.
- (b) Install the packings [180] and the standpipes [181] in the tank ports on the top of the water tank. Tighten the standpipes to 150 ±15 in-lb (17 ±2 N·m).
- (c) Do this task: Water Quantity Sensor Installation, TASK 38-14-05-400-801
- (d) Install the packing [21A] and plug [21] in the forward port on the top of the water tank. Tighten the plug to 270 ±15 in-lb (30.5 ±1.7 N·m).
- (e) Install the packing [17A] and union [17] in the tank port on the bottom of the water tank. Tighten the plug to 550 ±40 in-lb (62.1 ±4.6 N·m)

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SUBTASK 38-11-01-420-046

- (3) Install the bolts [167], washers [165], and nuts [166] to the aft support strap [5].

SUBTASK 38-11-01-430-020

- (4) Put the four turnbuckles in their positions on the forward support strap [4] and connect to the tank as follows:
- (a) Connect the bolts [167], washers [168], nuts [166] and turnbuckles to the top of forward support strap [4].
 - (b) Connect the bolts [164], washers [165], nuts [166] and turnbuckles to the forward support strap [4].
 - (c) Apply the sealant, A00247 to the shear pin [6].
 - (d) Make sure the shear pin [6] is in the tank block [8].
 - (e) Make sure the shear pin [6] goes into the shear plate [7].
 - (f) Adjust the turnbuckles until there is no clearance between the tank block [8] and the shear plate [7].
 - (g) Install the locking clips in the turnbuckles (Turnbuckle Locking Clips Installation, TASK 20-10-05-400-801), or lockwire the turnbuckles (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801).

SUBTASK 38-11-01-430-021

- (5) Connect the support ring assembly [29] to the turnbuckles as follows:
- (a) Put the support ring assembly [29] and foam blocks [27] in its position.
 - (b) Install the pins to connect the turnbuckle [25], the turnbuckle and cable assembly [26] and the turnbuckle and cable assembly [28] to the support ring assembly [29].
 - (c) Adjust each turnbuckle until there is no clearance between the water tank and the foam blocks [27]. Make sure there is equal tension on the cables.
 - (d) Tighten each turnbuckle three more turns.
 - (e) Install the locking clips in the turnbuckles (Turnbuckle Locking Clips Installation, TASK 20-10-05-400-801), or lockwire the turnbuckles (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801).

SUBTASK 38-11-01-420-047

- (6) Put the Tee fitting [15] in its position on the union [17], and align the Tee fitting for best fit. Tighten the B-nut 650 $\pm$ 40 in-lb (73.4 $\pm$ 4.6 N·m).
- (a) Make sure that the bonding jumpers [16] are connected to the Tee fitting [15]. Install the bonding
 - (b) Install, and seal the bonding jumpers as necessary. Use the sealant, A02315

SUBTASK 38-11-01-420-048

- (7) Connect the water hoses to the standpipes on the top of the water tank. Tighten the water hose B-nuts to 150 $\pm$ 15 in-lb (16.9 $\pm$ 1.7 N·m).

SUBTASK 38-11-01-410-039

- (8) Connect the electrical connectors [70] for the water tank quantity sensor.

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SUBTASK 38-11-01-865-005

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
G	12	C38310	WTR SYS ELECT PUMP 1
L	4	C30400	WTR SPLY LINE HTRS
L	9	C30403	WATER DRAIN LINE HEATING AFT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-01-861-002

- (10) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-01-670-014

- (11) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-01-860-027

- (12) Do this task to pressurize the potable water system: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-01-790-007

- (13) Make sure there are no leaks at the water hose fittings, or the tank assembly plugs.

I. Put the Airplane Back to its Usual Condition

SUBTASK 38-11-01-410-024

- (1) Install the bulk cargo compartment heating duct near the waste tank as follows:
- Make sure that the seal [41] is in the center duct assembly [36] and that it is not damaged. Replace the seal, as necessary.
 - Put the center duct assembly [36] in its position on the lower duct assembly [42].
 - Install the screw [39] and washer [40] to attach the clamp.
 - Put the upper duct assembly [33] in its position.
 - Install the sleeve [31] and two clamps [30] on the upper duct assembly [33]
 - Install the screws [32] that attach the upper duct assembly [33] to the airplane structure.
 - Connect the upper duct assembly [33] to the center duct assembly [36] , Hold the union [35] with a wrench, and tighten the nut [34].
 - Install the shroud [37] and the screws [38].

SUBTASK 38-11-01-410-025

- (2) Install the waste tank enclosure post aft of the waste tank as follows:
- Put the post [44] assembly in its position in the barrel fitting [46].
 - Install the screws [43] at the lower end of the post [44].
 - Install the bolts [45] at the upper end of the post [44].

SUBTASK 38-11-01-410-026

- (3) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

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SUBTASK 38-11-01-410-027

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-01-090-002

- (5) Remove the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-01-410-028

- (6) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-01-610-002

- (7) Do this task, as necessary: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-11-01-862-002

- (8) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

————— **END OF TASK** —————

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WATER TANK SUPPORT SHEAR FITTING - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) An inspection of the support shear pin for the water tank.
 - (2) A removal of the support shear pin.
 - (3) An installation of the support shear pin.
- B. The Support Shear Pin is referred to as the Shear Pin in this procedure.

TASK 38-11-02-200-801

2. Water Tank Shear Pin Inspection

(Figure 201)

A. References

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Water Tank Shear Pin Inspection

SUBTASK 38-11-02-010-001

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-02-010-002

- (2) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-11-02-210-001

- (3) Make sure there is no clearance between the tank block [2] and shear plate [1].

SUBTASK 38-11-02-210-002

- (4) Make sure there is no forward or aft movement of the tank when you put a force on the tank.

SUBTASK 38-11-02-210-003

- (5) Make sure there is no inboard or outboard movement of the tank when you put a force on the tank.

SUBTASK 38-11-02-210-004

- (6) Look at the slot in the shear plate [1] to see if the shear pin [3] is bent, is not there, or has a crack.

———— **END OF TASK** ————

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TASK 38-11-02-200-802

3. Water Tank (Aft of Waste Tanks) Shear Pin Inspection

(Figure 202)

A. References

Reference	Title
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

B. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Water Tank Shear Pin Inspection

SUBTASK 38-11-02-010-005

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-02-010-006

- (2) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-11-02-210-005

- (3) Make sure there is no clearance between the tank block [2] and shear plate [1].

SUBTASK 38-11-02-210-006

- (4) Make sure there is no forward or aft movement of the tank when you put a force on the tank.

SUBTASK 38-11-02-210-007

- (5) Make sure there is no inboard or outboard movement of the tank when you put a force on the tank.

SUBTASK 38-11-02-210-008

- (6) Look at the slot in the shear plate [1] to see if the shear pin [3] is bent, is not there, or has a crack.

SUBTASK 38-11-02-010-007

- (7) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-11-02-010-008

- (8) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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TASK 38-11-02-000-801

4. Water Tank Shear Pin Removal

(Figure 201)

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-11-02-680-001

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-11-02-860-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-02-010-003

- (3) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-02-010-004

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

E. Shear Pin Removal

SUBTASK 38-11-02-020-002

- (1) If it is necessary for access, disconnect the water hoses on the top of the water tank.

SUBTASK 38-11-02-020-003

- (2) If it is necessary for access, disconnect the drain hoses on the bottom of the water tank.

SUBTASK 38-11-02-020-004

- (3) Disconnect the electrical connector from the water quantity transmitters.

SUBTASK 38-11-02-860-002

- (4) Make sure you hold the water tank in its position.

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SUBTASK 38-11-02-020-005

- (5) Pull the forward pins from the forward support strap.

SUBTASK 38-11-02-860-003



DO NOT MOVE THE FORWARD PART OF THE WATER TANK MORE THAN 20 DEGREES FROM ITS HORIZONTAL POSITION. IF YOU MOVE THE WATER TANK MORE THAN 20 DEGREES, DAMAGE TO THE WATER TANK CAN OCCUR. MAKE SURE THE WATER TANK IS BLOCKED TO PREVENT MOVEMENT OF MORE THAN 20 DEGREES.

- (6) Move the forward part of the water tank in the down direction to get access to the shear pin [3].

SUBTASK 38-11-02-020-006

- (7) Remove the shear pin [3] from the tank block [2].

————— **END OF TASK** —————

TASK 38-11-02-400-801

5. Water Tank Shear Pin Installation

(Figure 201)

A. References

Reference	Title
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Shear Pin Installation

SUBTASK 38-11-02-390-001

- (1) Apply the sealant, A00247 to the shear pin [3].

SUBTASK 38-11-02-420-001

- (2) Put the shear into the tank block [2].

SUBTASK 38-11-02-860-004

- (3) Lift the water tank into its position.

SUBTASK 38-11-02-420-006

- (4) Connect the forward pins to the forward support strap as follows:
- (a) Make sure the shear pin [3] is in the tank block [2].

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- (b) Make sure the shear pin [3] goes into the shear plate [1].
- (c) Adjust the turnbuckles until there is no clearance between the tank block [2] and the shear plate [1].
- (d) Tighten the locknut on the turnbuckle.
- (e) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-11-02-420-003

- (5) Connect the water hoses to the top of the water tanks.

SUBTASK 38-11-02-420-004

- (6) If it was necessary for access, connect the drain hoses on the bottom of the water tank.

SUBTASK 38-11-02-420-005

- (7) Connect the electrical connector to the water quantity transmitters.

SUBTASK 38-11-02-860-005

- (8) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-02-860-006

- (9) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-02-670-001

- (10) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-02-710-005

- (11) Examine the connections of the water hoses for leaks.

SUBTASK 38-11-02-710-002

- (12) Examine the drain hoses on the bottom of the water tanks for leakage.

F. Put Airplane Back to Its Usual Condition

SUBTASK 38-11-02-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-02-410-002

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

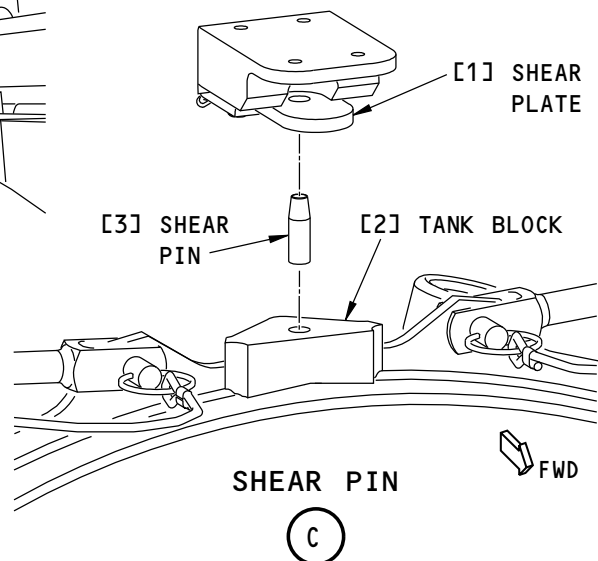
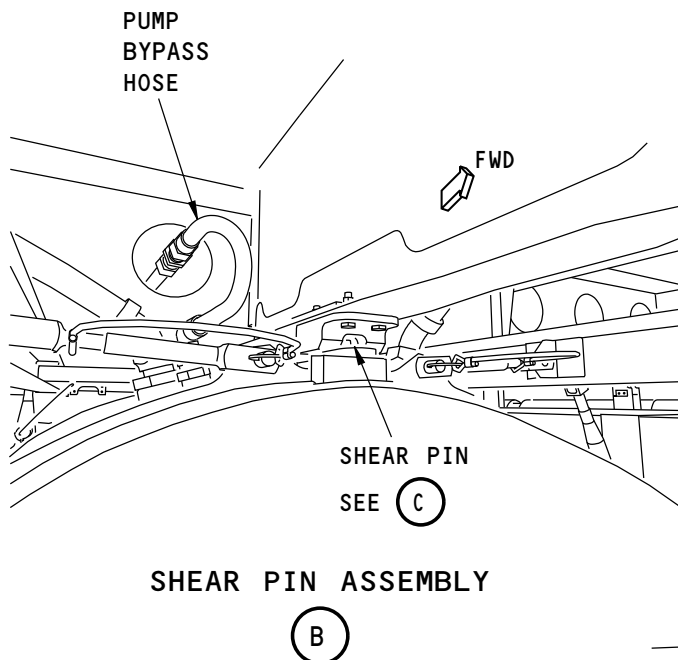
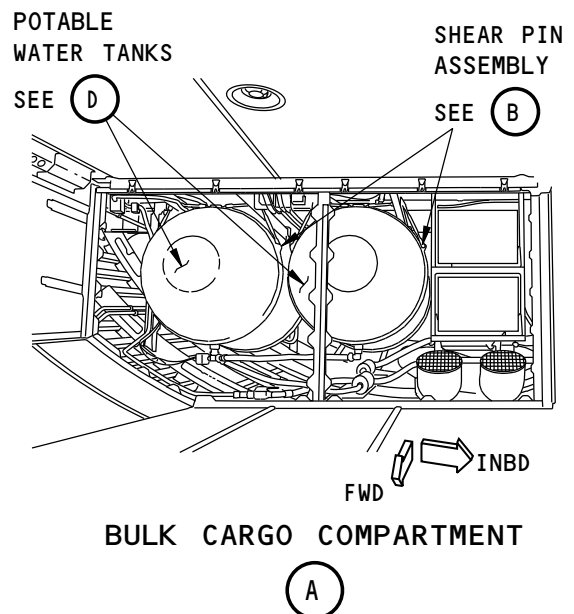
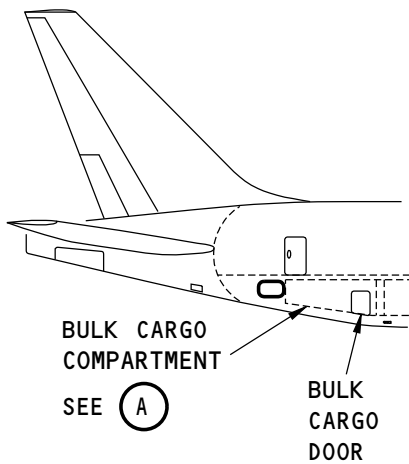
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**Water Tank Support Shear Fitting Maintenance Practice
Figure 201/38-11-02-990-803 (Sheet 1 of 2)**

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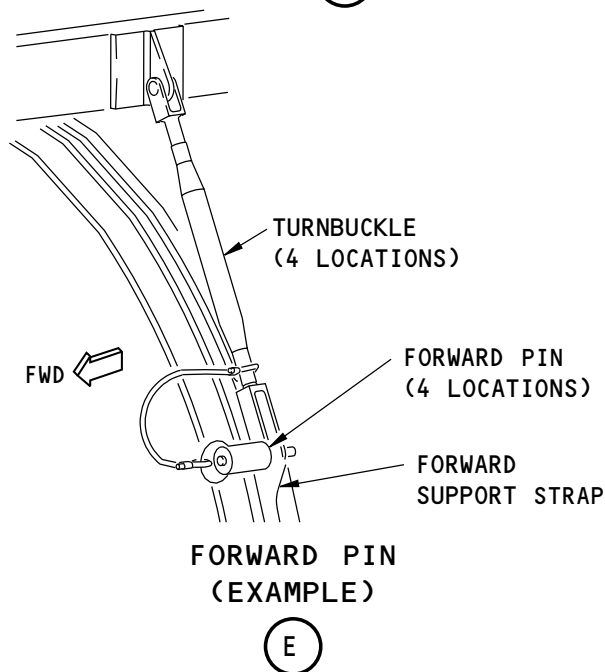
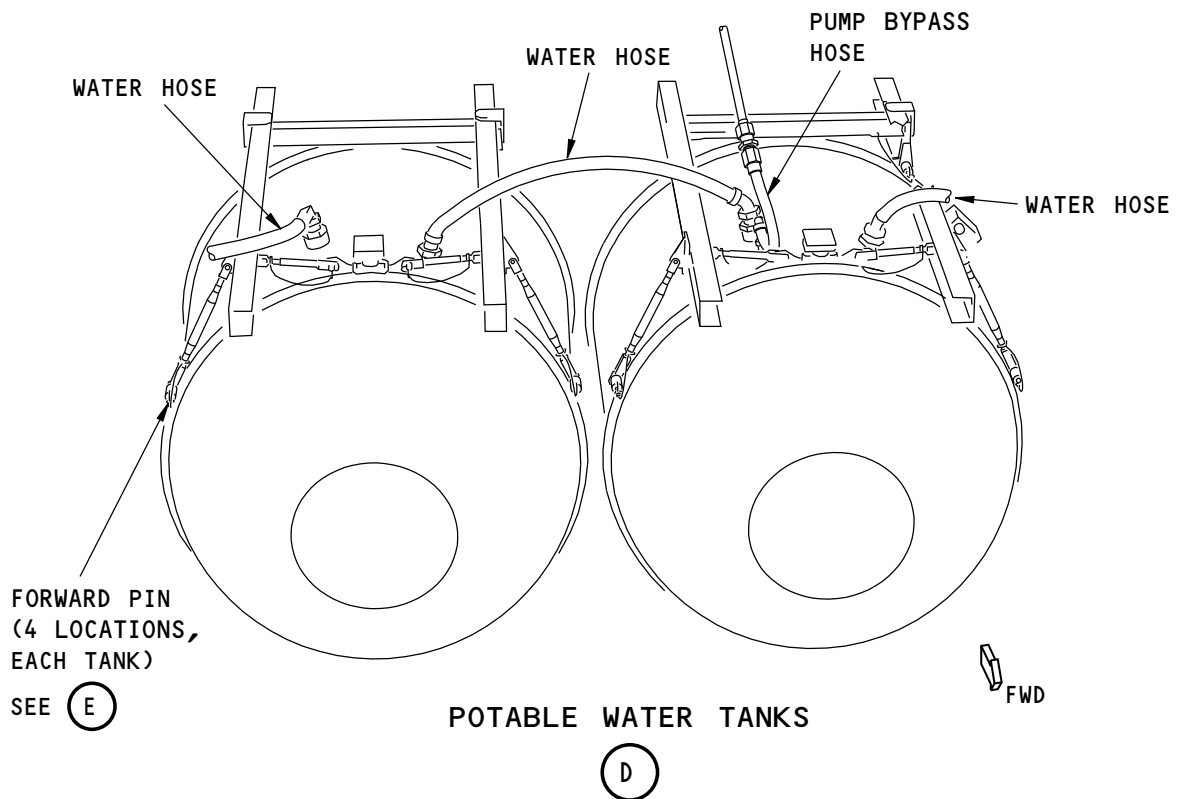
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Water Tank Support Shear Fitting Maintenance Practice
Figure 201/38-11-02-990-803 (Sheet 2 of 2)

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TASK 38-11-02-000-802

6. Water Tank (Aft of Waste Tanks) Shear Pin Removal

(Figure 202)

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)

B. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-11-02-680-002

- (1) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-11-02-860-008

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-02-010-009

- (3) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-02-010-010

- (4) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

E. Shear Pin Removal

SUBTASK 38-11-02-020-007

- (1) If it is necessary for access, disconnect the water hoses on the top of the water tank.

SUBTASK 38-11-02-020-008

- (2) If it is necessary for access, disconnect the drain hoses on the bottom of the water tank.

SUBTASK 38-11-02-020-009

- (3) Disconnect the electrical connector from the water quantity transmitter.

SUBTASK 38-11-02-020-010

- (4) Loosen the clevis [43] of the eye end [44], cable assembly [45], and cable assembly [46] until the foam blocks [47] do not touch the water tank.

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- (a) Pull the pins [48] to disconnect the support tube assembly [49].

SUBTASK 38-11-02-860-009

- (5) Make sure you hold the water tank in its position.

SUBTASK 38-11-02-020-011

- (6) Pull the forward pins from the forward support strap.

SUBTASK 38-11-02-860-010



DO NOT MOVE THE FORWARD PART OF THE WATER TANK MORE THAN 20 DEGREES FROM ITS HORIZONTAL POSITION. IF YOU MOVE THE WATER TANK MORE THAN 20 DEGREES, DAMAGE TO THE WATER TANK CAN OCCUR. MAKE SURE THE WATER TANK IS BLOCKED TO PREVENT MOVEMENT OF MORE THAN 20 DEGREES.

- (7) Move the forward part of the water tank in the down direction to get access to the shear pin [38].

SUBTASK 38-11-02-020-012

- (8) Remove the shear pin [38] from the tank block [2].

————— END OF TASK —————

TASK 38-11-02-400-802

7. Water Tank (Aft of Waste Tanks) Shear Pin Installation

(Figure 202)

A. References

Reference	Title
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
38	Pin	38-11-01-09G-075	ARO ALL

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Shear Pin Installation

SUBTASK 38-11-02-390-002

- (1) Apply the sealant, A00247 to the shear pin [38].

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SUBTASK 38-11-02-420-007

- (2) Put the shear pin [38] into the tank block [2].

SUBTASK 38-11-02-860-011

- (3) Lift the water tank into its position.

SUBTASK 38-11-02-420-008

- (4) Connect the forward pins to the forward support strap as follows:
- (a) Make sure the shear pin [38] is in the tank block [2].
 - (b) Make sure the shear pin [38] goes into the shear plate [1].
 - (c) Adjust the turnbuckles until there is no clearance between the tank block [2] and the shear plate [1].
 - (d) Tighten the locknut on the turnbuckle.
 - (e) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-11-02-420-009

- (5) Connect the support tube assembly [49] to the eye end [44], cable assembly [45], and cable assembly [46] as follows:
- (a) Put the support tube assembly [49] and blocks [47] in its position.
 - (b) Install the pins [48] to connect the clevis [43] and nuts [50] of the eye end [44], cable assembly [45], and cable assembly [46].
 - (c) Adjust each clevis [43] until there is no clearance between the water tank and the foam blocks [47] with equal tension on the cables.
 - (d) Tighten each clevis [43] three more turns.
 - (e) Tighten the nuts [50] on the clevis [43].
 - (f) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-11-02-420-010

- (6) If it was necessary for access, connect the water hoses to the top of the water tanks.

SUBTASK 38-11-02-420-011

- (7) If it was necessary for access, connect the drain hoses on the bottom of the water tank.

SUBTASK 38-11-02-420-012

- (8) Connect the electrical connector to the water quantity transmitter.

SUBTASK 38-11-02-860-012

- (9) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-02-860-013

- (10) do this task: Supply Electrical Power, TASK 24-22-00-860-805

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SUBTASK 38-11-02-670-002

- (11) If the you disconnected the hoses, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-02-710-003

- (12) Examine the connections of the water hoses and the pneumatic tube for leakage.

SUBTASK 38-11-02-710-004

- (13) Examine the drain hoses on the bottom of the water tanks for leakage.

G. Put Airplane Back to Its Usual Condition

SUBTASK 38-11-02-410-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-11-02-410-004

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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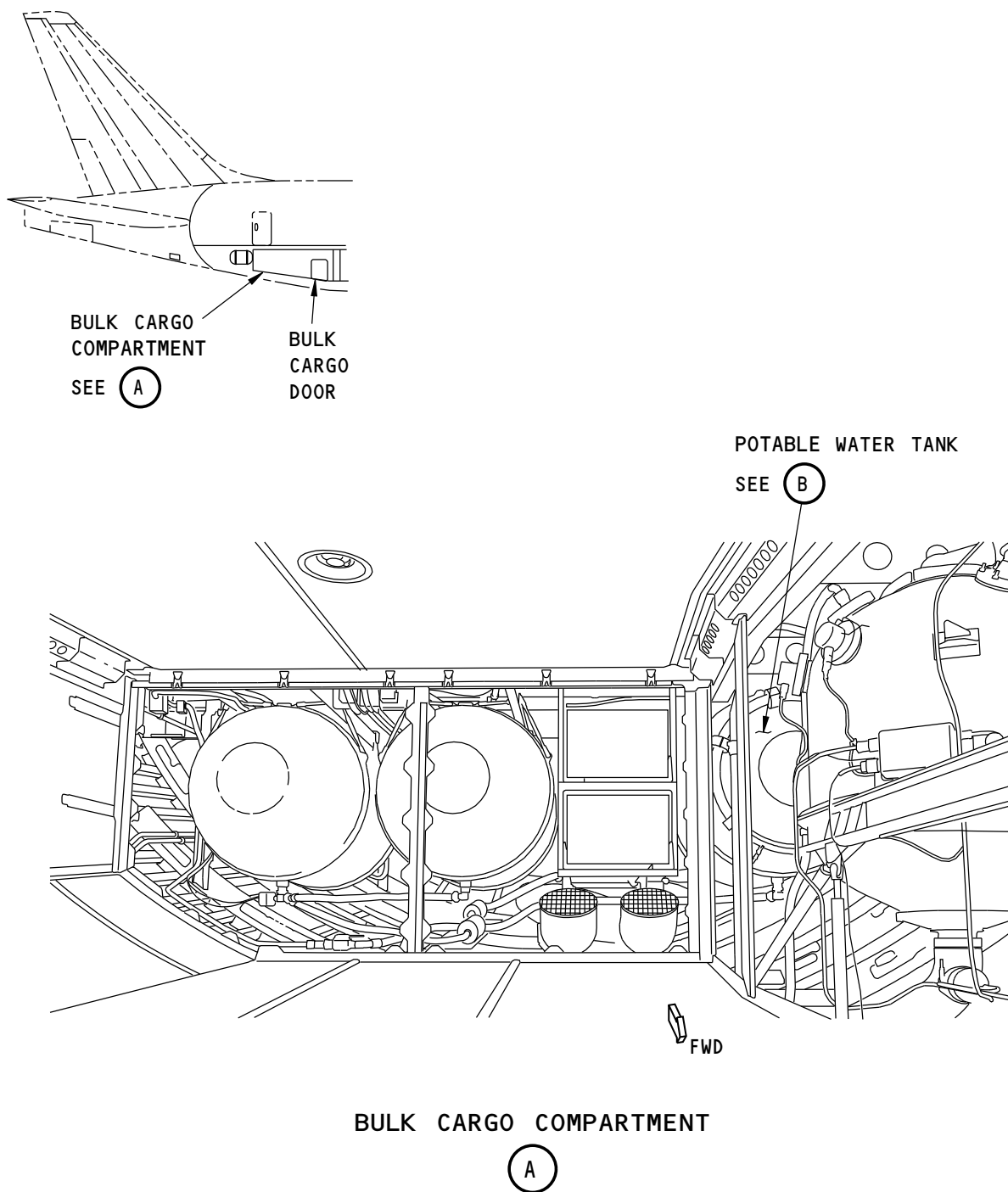
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Water Tank (Aft of the Waste Tank) Support Shear Fitting Maintenance Practice
Figure 202/38-11-02-990-802 (Sheet 1 of 3)

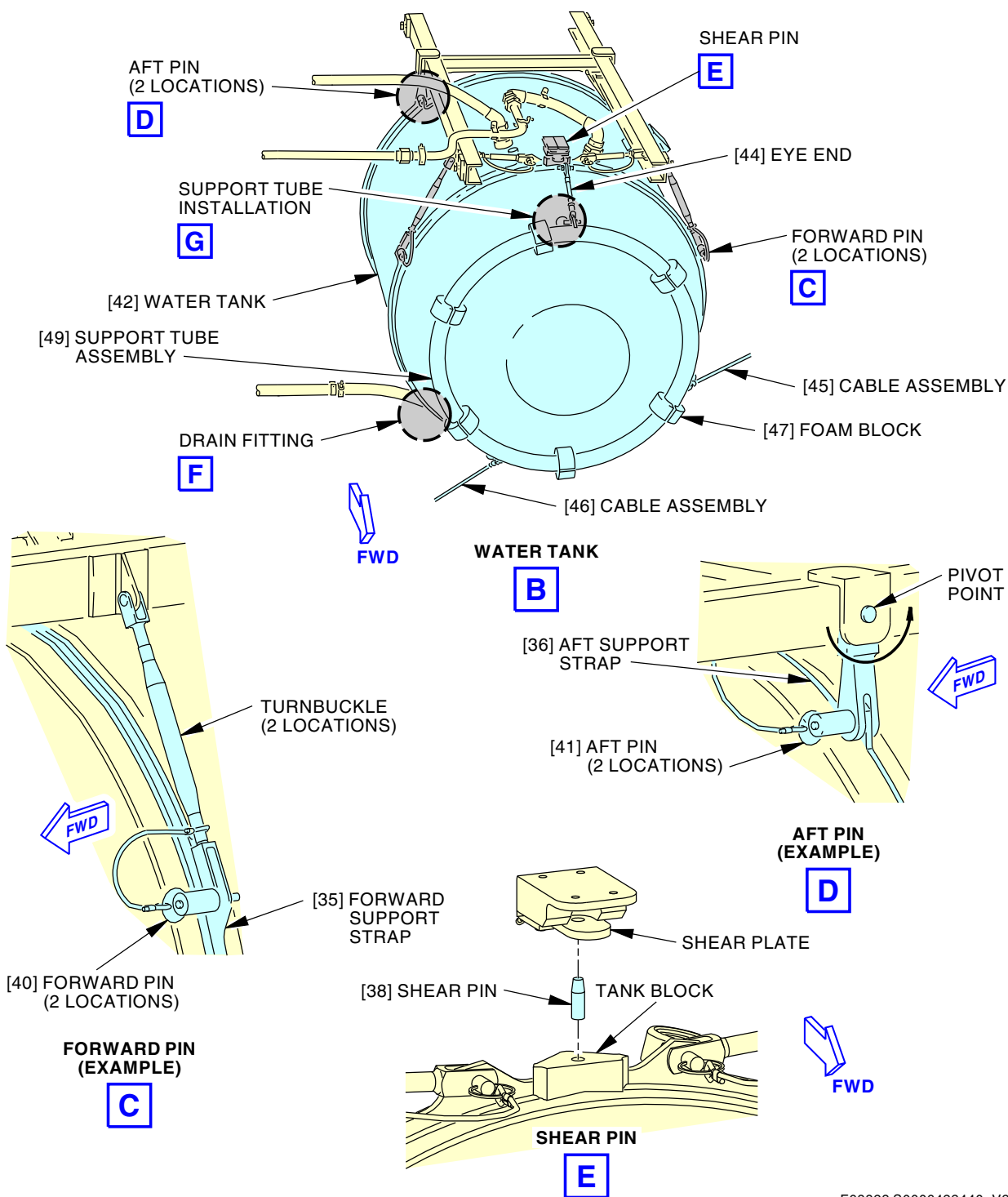
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Water Tank (Aft of the Waste Tank) Support Shear Fitting Maintenance Practice
Figure 202/38-11-02-990-802 (Sheet 2 of 3)

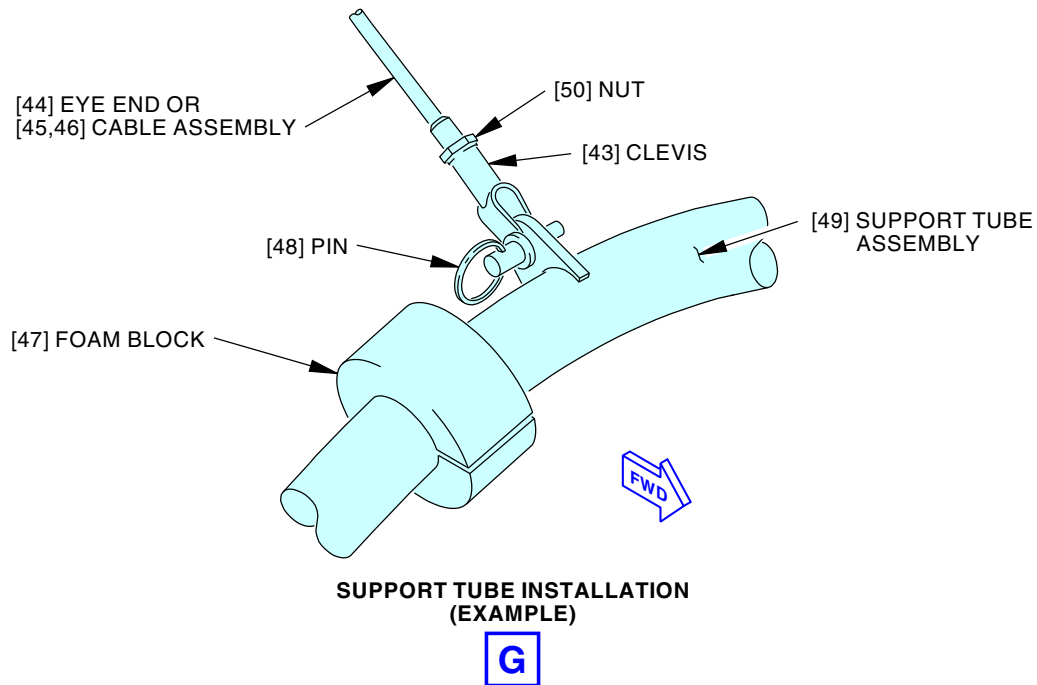
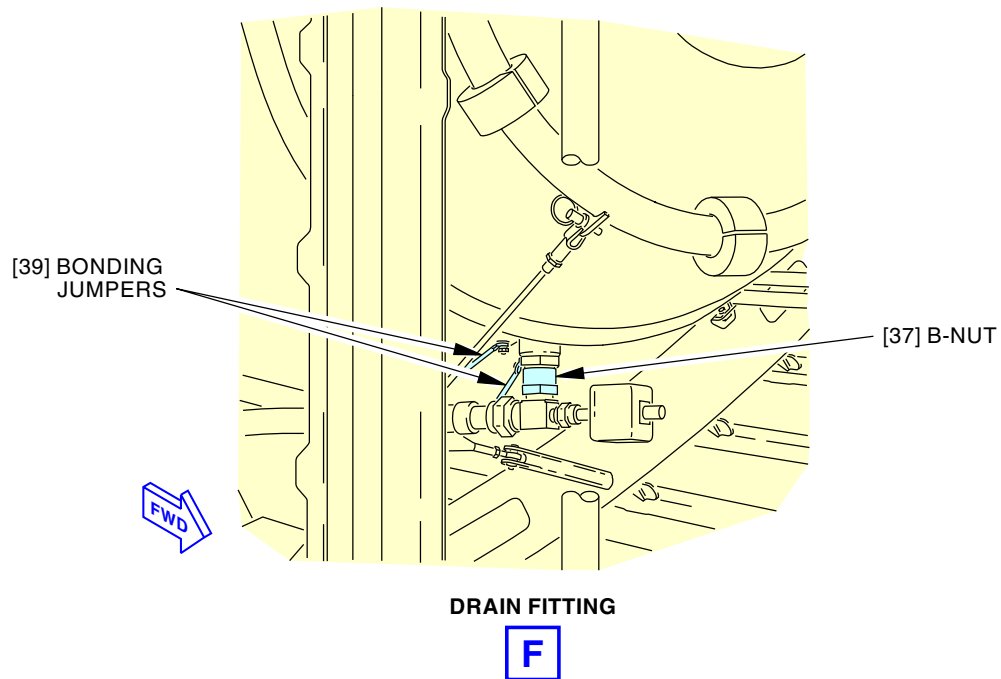
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Water Tank (Aft of the Waste Tank) Support Shear Fitting Maintenance Practice
Figure 202/38-11-02-990-802 (Sheet 3 of 3)

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AIRCRAFT MAINTENANCE MANUAL

FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the fill/overflow valve.
- (2) An installation of the fill/overflow valve.
- (3) A removal of the control cable for the fill/overflow valve.
- (4) An installation of the control cable for the fill/overflow valve.

TASK 38-11-04-000-803

2. Fill/Overflow Valve Removal

A. **References**

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. **Tools/Equipment**

Reference	Description
STD-149	Cap and Plug - NAS834

C. **Location Zones**

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

D. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

E. **Prepare for the task**

SUBTASK 38-11-04-860-014

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-010-017

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-04-010-018

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

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F. Fill/Overflow Valve Removal

SUBTASK 38-11-04-030-001

- (1) Remove the two screws [26] and two nuts [27], and remove the fill overflow valve interlock switch [17] from the valve bracket. Retain the switch, screws and nuts for reuse when you install the valve.

NOTE: You do not need to disconnect the interlock switch [17] electric wires. You will use the same interlock switch to install the valve.

SUBTASK 38-11-04-030-002

- (2) Remove the pin [13], cotter pin [14], and washer [15], to disconnect the control cable assembly from the Fill/Overflow Valve [10] control lever.

SUBTASK 38-11-04-030-004

- (3) Disconnect the three water hoses [12] hoses from the fill overflow valve.

SUBTASK 38-11-04-030-005

- (4) Loosen the B-nut, and disconnect the Fill/Overflow Valve [10] from the cross fitting [18].

SUBTASK 38-11-04-020-019

- (5) Disconnect the four bolts [7], washers [8], and nuts [9] that attach the fill/overflow valve bracket to the airplane structure, and remove the valve. Retain the bolts, washers, and nuts for reuse on installation of the valve.
- (6) Put the protective cap and plug, STD-149 on the open water hoses, the cross fitting [18] port, and the Fill/Overflow Valve [10] ports.

————— **END OF TASK** —————

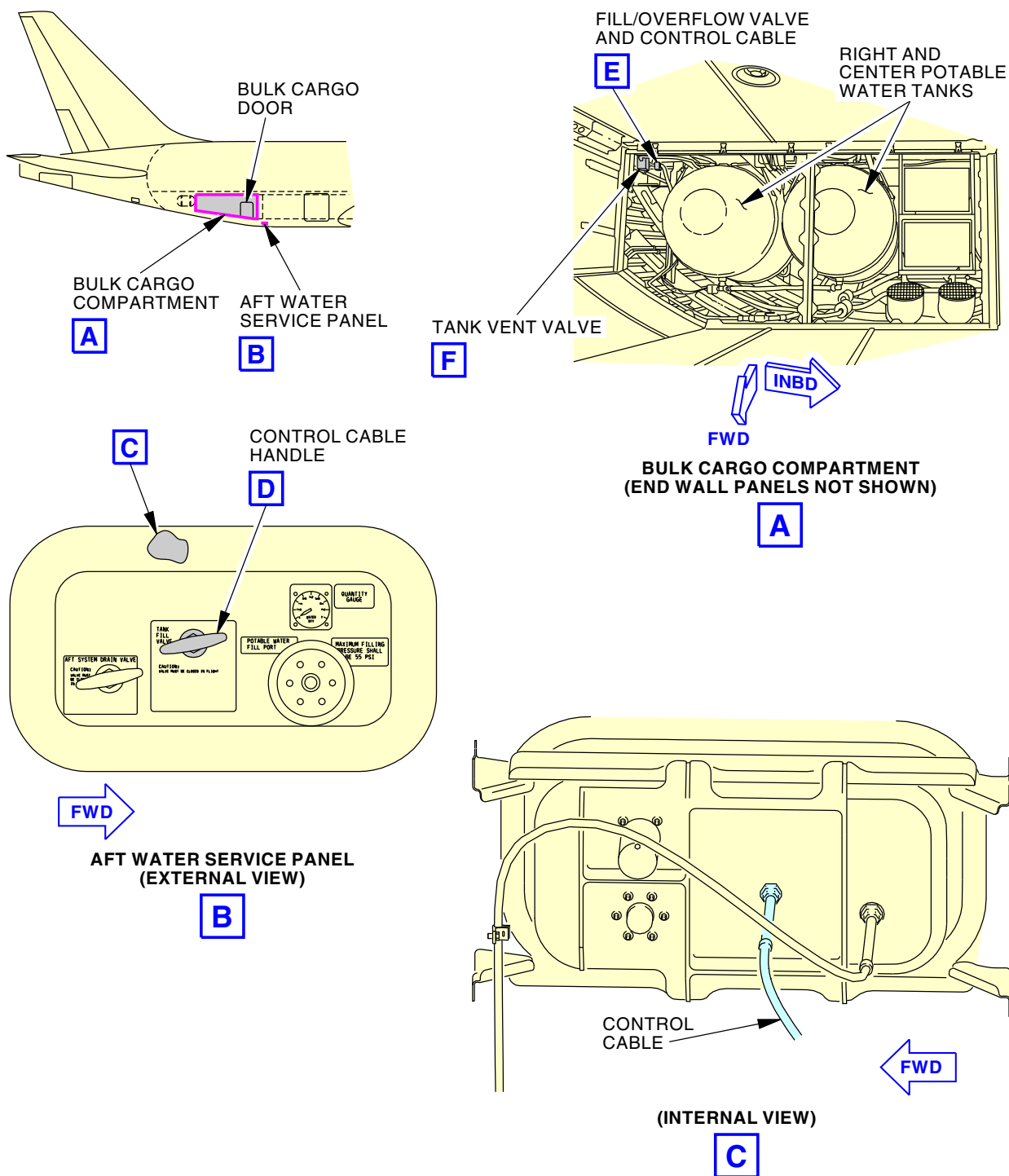
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FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION
Figure 401/38-11-04-990-803 (Sheet 1 of 6)

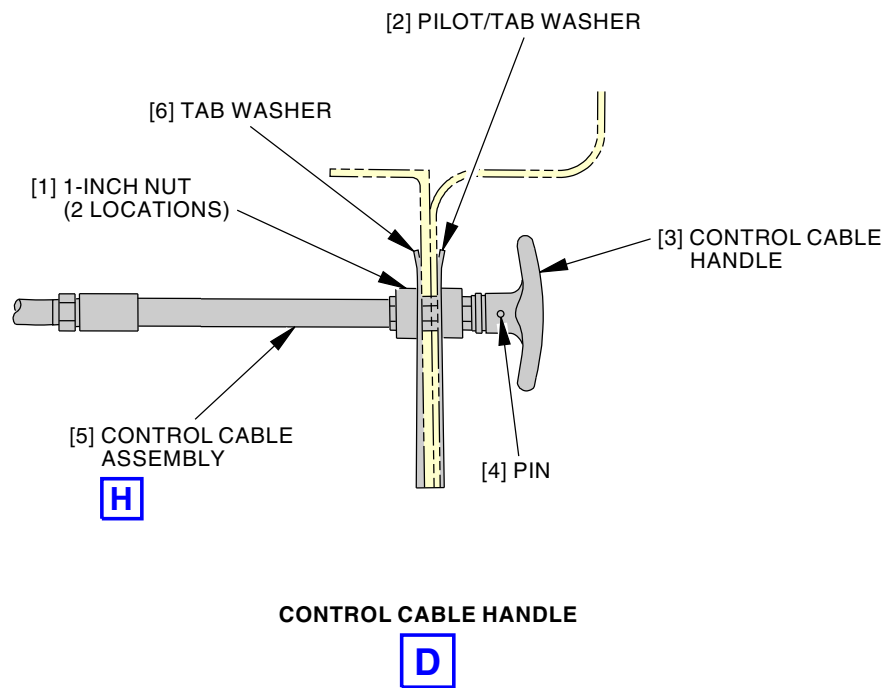
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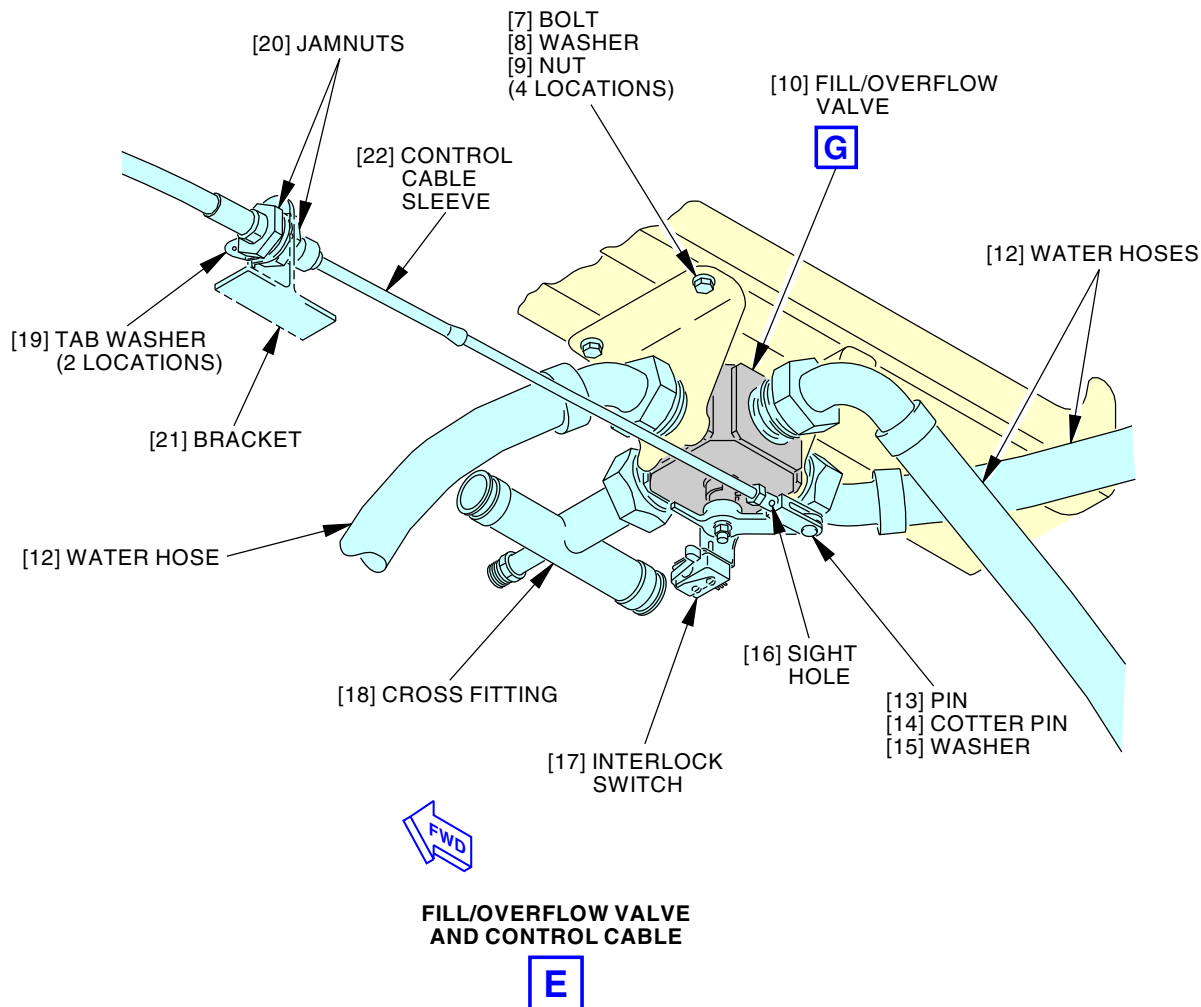
FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION
Figure 401/38-11-04-990-803 (Sheet 2 of 6)

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FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION
Figure 401/38-11-04-990-803 (Sheet 3 of 6)

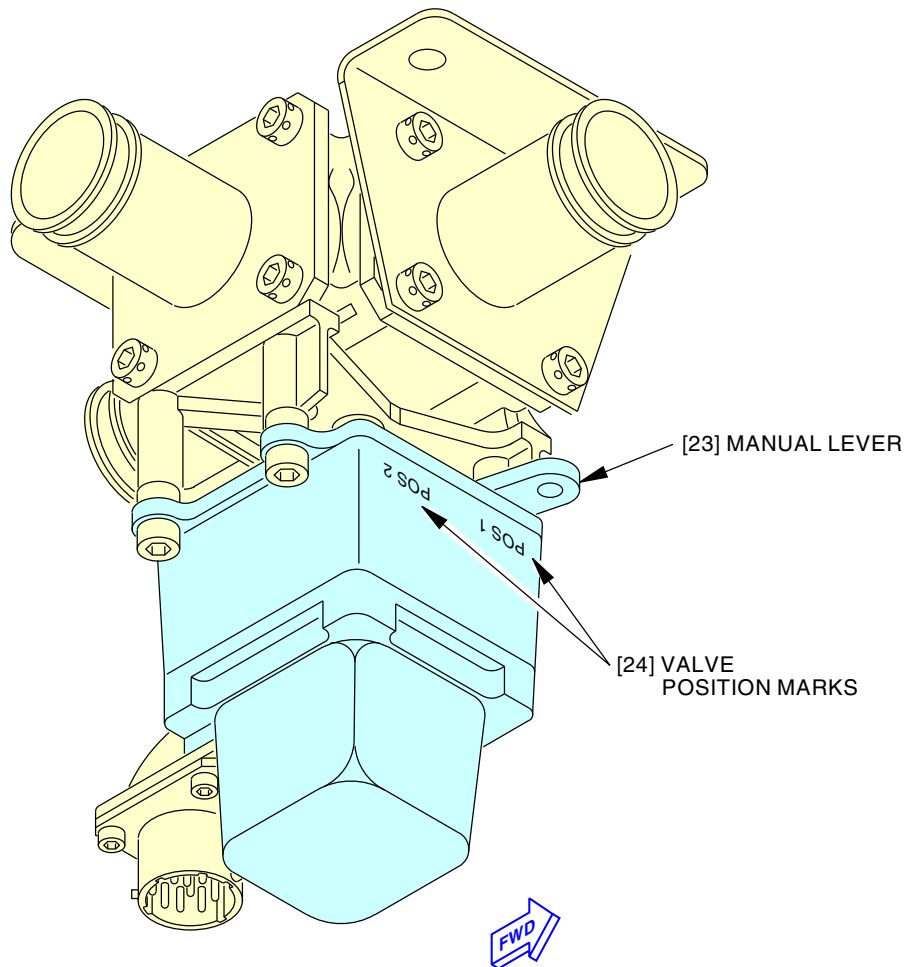
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TANK VENT VALVE

F

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FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION
Figure 401/38-11-04-990-803 (Sheet 4 of 6)

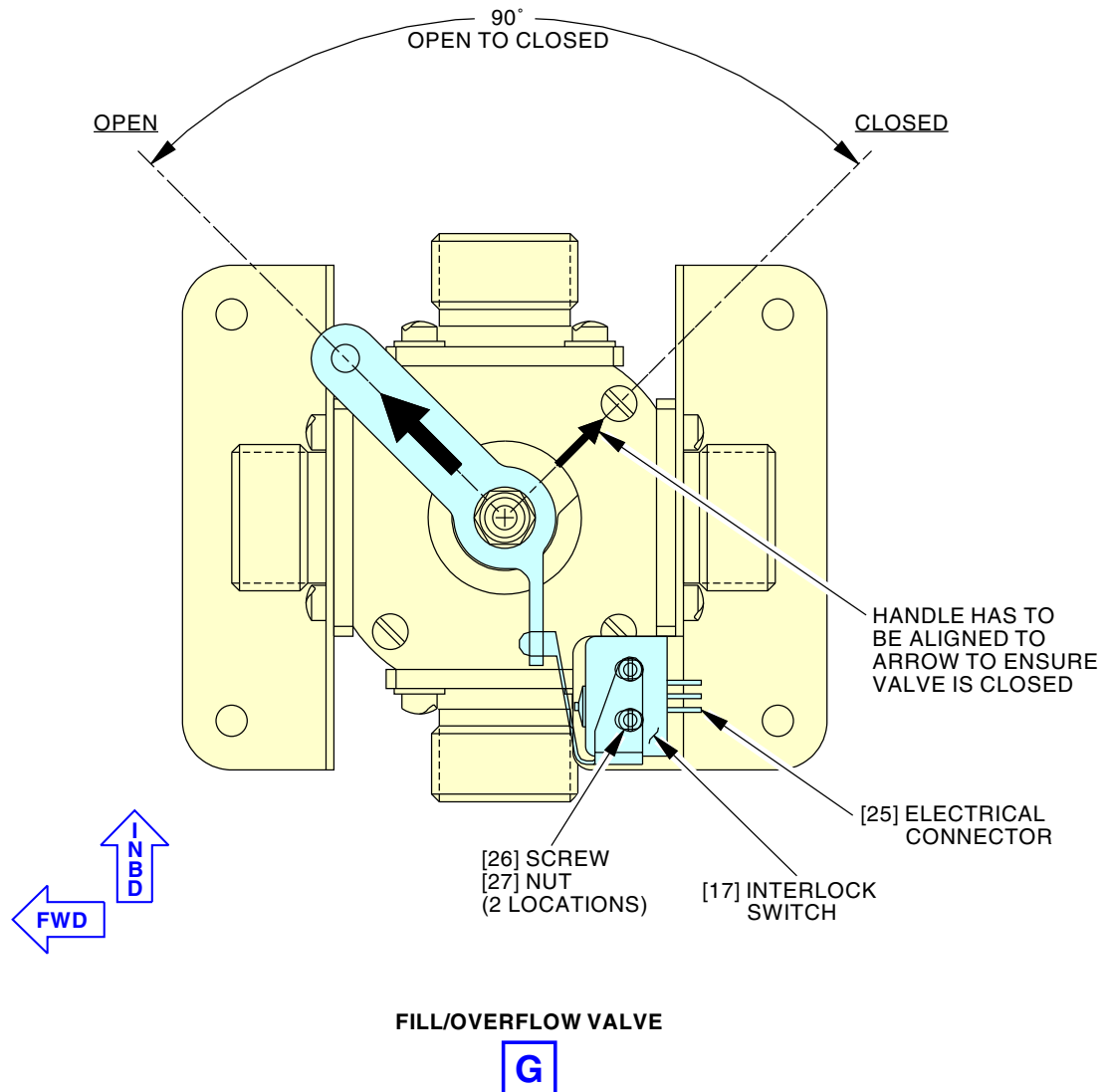
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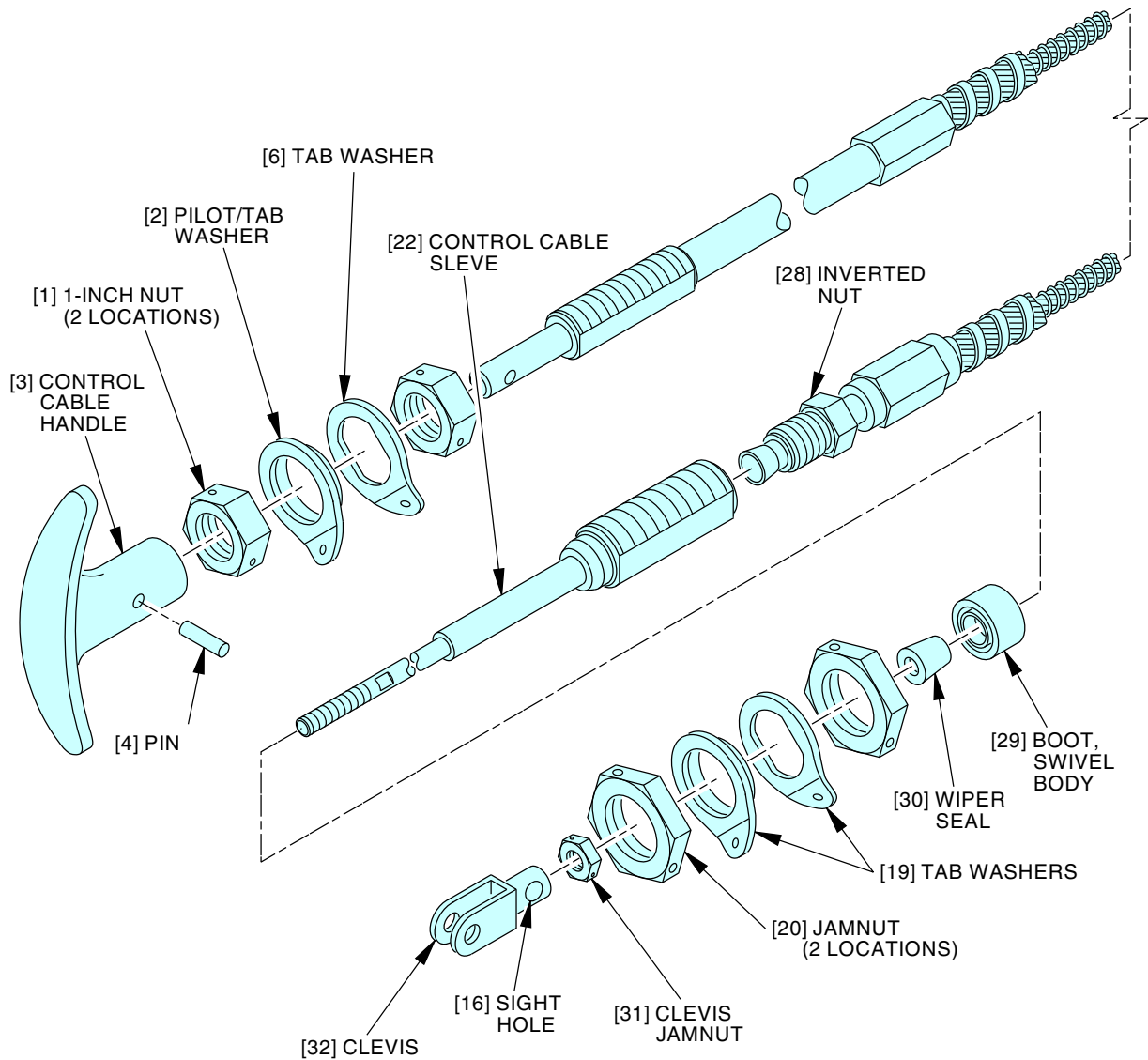
FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION
Figure 401/38-11-04-990-803 (Sheet 5 of 6)

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CONTROL CABLE ASSEMBLY



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FILL/OVERFLOW VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION
Figure 401/38-11-04-990-803 (Sheet 6 of 6)

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TASK 38-11-04-400-803

3. Fill/Overflow Valve Installation

(Figure 401)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-11-04-720-802	Fill/Overflow Valve Control Cable and Interlock Switch - Functional Check (P/B 501)
38-11-04-820-802	Fill/Overflow Valve Control Cable and Interlock Switch Adjustment (P/B 501)
WDM 38-14-11	Wiring Diagram Manual

B. Tools/Equipment

Reference	Description
STD-149	Cap and Plug - NAS834

C. Location Zones

Zone	Area
165	Area Aft of Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for the Valve Installation

SUBTASK 38-11-04-860-015

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-010-019

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

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SUBTASK 38-11-04-010-020

- (3) Do this task, as necessary: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

F. Fill-Overflow Valve Installation Procedure

SUBTASK 38-11-04-420-014

- (1) Remove the protective cap and plug, STD-149 from the water hoses [12] connections, and clean the fittings, as necessary.

SUBTASK 38-11-04-420-015

- (2) Place the Fill/Overflow Valve [10] in its position, with the valve control lever inboard. Install the four bolts [7], washers [8], and nuts [9] that attach the valve bracket to the airplane structure.

SUBTASK 38-11-04-420-016

- (3) Connect the fill overflow valve to the cross fitting [18]. Hold the cross fitting with a wrench, and tighten the nut to 40 in-lb (4.5 N·m) torque.

SUBTASK 38-11-04-420-017

- (4) Connect the three water hoses [12] to the Fill/Overflow Valve [10] fittings. Tighten the hose fittings to 40 in-lb (4.5 N·m).

SUBTASK 38-11-04-420-018

- (5) Put the control cable assembly clevis in its position on the fill/overflow valve control lever arm, and install the pin [13], washer [15] and cotter pin [14]. Rotate the valve control lever, as necessary, to align the control lever with the control cable assembly clevis and clevis pin.

SUBTASK 38-11-04-430-001

- (6) Place the fill overflow valve interlock switch [17] in its position on the valve bracket. Install the two screws [26] and nuts [27] that attach the switch to the bracket. Do not tighten the screws and nuts at this time.
- (7) Splice the interlock switch [17] electrical wires to the airplane wires, as necessary (WDM 38-14-11).

SUBTASK 38-11-04-860-016

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-861-002

- (9) Supply electrical power to the airplane. Do this Task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-04-820-019

- (10) Pull the TANK FILL VALVE control handle, on the aft water service panel, out to the stop.
- (11) Adjust the interlock switch [17]. Move the interlock switch [17] toward the fill/overflow valve control lever tang until the switch closes. The tank vent valve manual lever [23] will move to align with the POS 1 valve position mark [24] when the switch closes.

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- (12) Hold the interlock switch [17] in this position and tighten the two screws [26] and nuts [27] that attach the switch to the bracket.
- (13) Push the TANK FILL VALVE control handle, on the aft water service panel, in to the stop. Close the aft water service panel door (154AR).

SUBTASK 38-11-04-710-006

- (14) Do this task: Fill/Overflow Valve Control Cable and Interlock Switch - Functional Check, TASK 38-11-04-720-802.

SUBTASK 38-11-04-820-003

- (15) Do this task, as necessary: Fill/Overflow Valve Control Cable and Interlock Switch Adjustment, TASK 38-11-04-820-802.

SUBTASK 38-11-04-790-001

- (16) Supply water pressure to the fill/overflow valve water line connections and make sure they do not leak. Do this task to service the potable water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-11-04-670-002

- (17) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

G. Restore the airplane to its usual condition.

SUBTASK 38-11-04-410-016

- (1) Do this task to install the Bulk Cargo compartment endwall panel: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-04-410-017

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-04-862-002

- (3) Remove the electrical power, if it is no longer necessary. Do this task to remove the electrical power: Remove Electrical Power, TASK 24-22-00-860-806

————— END OF TASK —————

TASK 38-11-04-000-804

4. Fill/Overflow Valve Control Cable Removal

Figure 401

A. References

<u>Reference</u>	<u>Title</u>
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
164	Area Below Bulk Cargo Compartment, Right
166	Area Aft of Bulk Cargo Compartment, Right

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C. Access Panels

Number	Name/Location

154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

D. Prepare for the task

SUBTASK 38-11-04-860-017

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-010-021

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-04-010-022

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-11-04-010-023

- (4) Remove the Bulk cargo compartment floor panels above the water service panel. Do this Task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801

SUBTASK 38-11-04-010-025

- (5) On the right side of the centerline, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801

E. Control Cable Assembly Removal

SUBTASK 38-11-04-010-026

- (1) Open this access panel:

Number	Name/Location
154AR	Aft Potable Water Service Door

SUBTASK 38-11-04-030-006

- (2) Remove the pin [4] for the TANK FILL VALVE Control Cable Handle [3], and remove the control cable handle.
- (3) Remove the sealant from the TANK FILL VALVE control cable 1-inch nut [1] and Pilot/Tab Washer [2], and remove the lockwire.

SUBTASK 38-11-04-030-007

- (4) At the water service panel exterior, remove the 1-inch nut [1] and Pilot/Tab Washer [2] from the control cable assembly.
- (5) Access the interior side of the water service panel, and remove the sealant from the 1-inch nut [1] and Tab Washer [6] at the water service panel.

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- (6) Remove the 1-inch nut [1] and Tab Washer [6] from the control cable assembly.
NOTE: Keep the two 1-inch nuts and two tab washers to install the control cable assembly.
- (7) Remove the control cable assembly from the water service panel.

SUBTASK 38-11-04-030-008

- (8) Cut the straps to remove the control cable assembly from the P-clamps.

SUBTASK 38-11-04-030-009

- (9) Remove the cotter pin [14], pin [13], and washer [15] from the control cable clevis, and disconnect the clevis from the Fill/Overflow Valve [10] control lever.

SUBTASK 38-11-04-030-010

- (10) Remove the aft jam nut [20] and Tab Washer [19], at the control cable assembly bracket [21].
- (11) Remove the control cable assembly from the bracket [21], and remove the Fwd. jam nut [20] and Tab Washer [19] from the cable assembly.

NOTE: Keep the two jam nuts and two tab washers to install the control cable assembly.

SUBTASK 38-11-04-020-020

- (12) Remove the control cable assembly from the airplane.

END OF TASK

TASK 38-11-04-400-804

5. Fill/Overflow Valve Control Cable Installation

Figure 401

A. References

Reference	Title
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-06-400-801	Sidewall Liner Installation (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-11-04-720-802	Fill/Overflow Valve Control Cable and Interlock Switch - Functional Check (P/B 501)
38-11-04-820-802	Fill/Overflow Valve Control Cable and Interlock Switch Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
A01076	Adhesive - Synthetic Rubber	BAC5010 Type 93 (BMS5-95 Class B)
G02020	Clay, Modeling	

C. Location Zones

Zone	Area
164	Area Below Bulk Cargo Compartment, Right
165	Area Aft of Bulk Cargo Compartment, Left
166	Area Aft of Bulk Cargo Compartment, Right

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D. Access Panels

Number	Name/Location

154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

E. Prepare for the task

SUBTASK 38-11-04-860-018

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-020-021

- (2) Open these access panels:

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

F. Control Cable Assembly Installation

SUBTASK 38-11-04-430-003

- (1) Put the control cable assembly in its position in the P-clamps. Do not install the P-clamp straps at this time.

SUBTASK 38-11-04-030-019

- (2) If necessary, remove the pin and the control cable handle from the cable assembly.

SUBTASK 38-11-04-430-004

- (3) Install the 1-inch nut [1] and the Tab Washer [6] in their position on the Control Cable Handle end of the Control Cable Assembly [5], if necessary.

SUBTASK 38-11-04-430-019

- (4) Push the control cable end through the water service panel hole. Put the Pilot/Tab Washer [2] in its position on the control cable assembly and loosely install the 1-inch nut [1].
 - (a) Install the Control Cable Handle [3] handle on the control cable, and install the pin [4].
 - (b) Tape a 1/16 in. (2 mm) shim to the control cable handle nudger bracket, on the water service panel door.

SUBTASK 38-11-04-860-025

- (5) Close and latch the water service panel door.

SUBTASK 38-11-04-820-020

- (6) Fully seat the Tab Washer [6] in its position on the water service panel and the Control Cable Assembly [5].

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- (a) At the inner side of the water service panel, push the control cable assembly out, until the Control Cable Handle [3] touches the nudger bracket shim. Hold the control cable assembly in this position.
- (b) Tighten the inner side 1-inch nut [1] hand tight.
 - 1) Optional: Install a lockwire on the Tab Washer [6] and the inner side 1-inch nut [1] to keep the nut in its position.
- (c) Open the water service panel door. Remove the shim from the water service panel door nudger bracket.

SUBTASK 38-11-04-430-020

- (7) Make sure that the Pilot/Tab Washer [2] is fully seated on the control cable, then hand tighten the outer side 1-inch nut [1] .

SUBTASK 38-11-04-212-002

- (8) Make sure that the Control Cable Assembly [5], the Pilot/Tab Washer [2], the Tab Washer [6], and the 1-inch nut [1] are fully seated on the water service panel.

SUBTASK 38-11-04-860-026

- (9) Push the Control Cable Handle [3] in, to the stop.

SUBTASK 38-11-04-212-003

- (10) Put the clay, G02020 on the control cable handle. Close and latch the aft potable water service panel door.

SUBTASK 38-11-04-212-004

- (11) Open the aft potable water service door. Do a visual check of the clay to determine the gap between the control handle and the nudger bracket, with the door closed.
 - (a) If you used the optional lockwire, then remove the lockwire on the Tab Washer [6] and the inner side 1-inch nut [1]
 - (b) Rotate the two 1-inch nuts [1], as necessary, and adjust the distance between the TANK FILL VALVE control handle and the nudger bracket, with the door closed, to $\frac{1}{8}$ in. (3.2 mm) or less.

NOTE: Make sure that the clearance between the nudger bracket and the service panel door is $\frac{1}{8}$ in. (3.2 mm) or less. If the clearance is too large, the cable handle can come out with the water service panel door closed.
 - (c) Make sure that the nudger bracket does not touch the TANK FILL VALVE control handle, with the water service door (154AR) closed.

SUBTASK 38-11-04-430-013

- (12) Tighten the two 1-inch nuts [1] at the water service panel. Apply 450 $\pm$ 50 in-lb (51 $\pm$ 6 N·m) torque.

SUBTASK 38-11-04-860-027

- (13) Push the Control Cable Handle [3] in, to the stop.

SUBTASK 38-11-04-212-005

- (14) Put the clay, G02020 on the control cable handle. Close and latch the aft potable water service panel door.

SUBTASK 38-11-04-212-006

- (15) Open the aft potable water service door. Do a visual check of the clay to determine the gap between the control handle and the nudger bracket, with the door closed.

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- (a) Make sure the gap between the Tank Fill Valve Control Cable Handle [3] and the nudger bracket, with the door closed, is $\frac{1}{8}$ in. (3.2 mm) or smaller.

NOTE: Make sure that the clearance between the nudger bracket and the service panel door is $\frac{1}{8}$ in. (3.2 mm) or less. If the clearance is too large, the cable handle can come out with the water service panel door closed.

- (b) Make sure that the nudger bracket does not touch the TANK FILL VALVE control handle, with the water service door (154AR) closed.

SUBTASK 38-11-04-430-046

- (16) Lockwire the two 1-inch nuts [1] (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801)

SUBTASK 38-11-04-430-014

- (17) Apply a fillet seal to the two 1-inch nuts [1], the Pilot/Tab Washer [2] and the Tab Washer [6] at the water service panel. Use the adhesive, A01076.

SUBTASK 38-11-04-860-019

- (18) Push the TANK FILL VALVE Control Cable Handle [3] in to the stop.

SUBTASK 38-11-04-430-006

- (19) Remove the clevis [32], the clevis jamnut [31], one jamnut [20] and one Tab Washer [19] from the control cable assembly.

SUBTASK 38-11-04-430-021

- (20) Put the control cable in its position in the bracket [21]

SUBTASK 38-11-04-430-022

- (21) Tighten the inverted nut [28] hand tight to seat the nut in the sleeve. Do not overtighten the nut.

SUBTASK 38-11-04-430-023

- (22) Put one jamnut [20] and one Tab Washer [19] in their position on the control cable sleeve assembly, at the bracket [21]. Do not tighten the two jamnuts [20] at this time.

SUBTASK 38-11-04-430-024

- (23) Put the clevis [32], and the clevis jamnut [31], on the control cable assembly. Do not tighten the jam nut at this time.

SUBTASK 38-11-04-860-020

- (24) Rotate the Fill/Overflow Valve [10] passed the closed (flight) position, to the internal valve stop.
(a) Optional: Lockwire the Fill/Overflow Valve [10] control lever in this position.

SUBTASK 38-11-04-430-007

- (25) Align the clevis [32] pin hole with the Fill/Overflow Valve [10] control lever pin hole. Adjust the clevis by moving Control Cable Sleeve [22] and jamnuts [20] in the bracket [21], and by turning the clevis on the rod end.
(a) Make sure the control cable threaded end shows in the clevis [32] sight hole [16].

SUBTASK 38-11-04-430-008

- (26) Put the clevis [32] in its position on the Fill/Overflow Valve [10] control lever, and install the pin [13], the washer [15] and the cotter pin [14].

SUBTASK 38-11-04-430-009

- (27) Tighten the jamnuts [20] hand tight to seat the control cable assembly in the bracket [21].

SUBTASK 38-11-04-430-011

- (28) Tighten the clevis jamnut [31]. Apply 17.5 ± 1.5 in-lb (2.0 ± 0.2 N·m) torque. Lockwire the clevis jamnut [31]

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SUBTASK 38-11-04-430-012

- (29) Tighten the two jamnuts [20]. Apply 450 ±50 in-lb (51 ±6 N·m) torque. Lockwire the two jamnuts [20] and the inverted nut [28].

SUBTASK 38-11-04-030-012

- (30) If you used the optional lockwire to hold the Fill/Overflow Valve [10] lever at its stop, remove the lockwire.

SUBTASK 38-11-04-430-010

- (31) Make sure the control cable assembly is seated in the P-clamps, and install the straps on the P-clamps.

SUBTASK 38-11-04-860-021

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-710-009

- (33) Do this task: Fill/Overflow Valve Control Cable and Interlock Switch - Functional Check, TASK 38-11-04-720-802

SUBTASK 38-11-04-830-001

- (34) Do this task, if necessary. Fill/Overflow Valve Control Cable and Interlock Switch Adjustment, TASK 38-11-04-820-802

G. Restore the airplane to its usual condition

SUBTASK 38-11-04-410-018

- (1) Install the Bulk cargo compartment floor panels above the water service panel, as necessary. Do this Task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801

SUBTASK 38-11-04-410-019

- (2) On the right side of the centerline, do this task as necessary: Bulk Cargo Floor Installation, TASK 25-52-11-400-801

SUBTASK 38-11-04-410-020

- (3) At the area adjacent to the right side end wall of the bulk cargo compartment, do this task as necessary: Sidewall Liner Installation, TASK 25-52-06-400-801.

SUBTASK 38-11-04-410-021

- (4) Do this task, as necessary: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-04-410-022

- (5) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

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<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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FILL/OVERFLOW VALVE CONTROL CABLE AND INTERLOCK SWITCH - ADJUSTMENT/TEST

1. General

A. The procedure has these tasks:

- (1) An operational test of the fill/overflow valve.
- (2) An adjustment of the control cable and interlock switch for the fill/overflow valve.

TASK 38-11-04-720-802

2. Fill/Overflow Valve Control Cable and Interlock Switch - Functional Check

Figure 501

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-11-04-000-803	Fill/Overflow Valve Removal (P/B 401)
38-11-04-400-804	Fill/Overflow Valve Control Cable Installation (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
COM-6729	Gauge - Force, Push/Pull 0-200 pounds Part #: DG-200 Supplier: 92456 Opt Part #: DPPH-150 Supplier: 92456
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right
825	Bulk Cargo Door

D. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

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E. Prepare for the task

SUBTASK 38-11-04-860-022

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-010-032

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-04-010-033

- (3) Do this task, if necessary, to remove the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-11-04-860-023

- (4) Do this task to supply electrical power to the airplane. Supply Electrical Power, TASK 24-22-00-860-805

F. Control Cable and Interlock Switch - Operational Check

SUBTASK 38-11-04-710-008

- (1) Make sure that the Water System OFF, OVERRIDE, and FAULT lights, on the Aft Attendant's panel, are not on.

SUBTASK 38-11-04-610-002

- (2) Do this task to service the water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810. Make sure that the potable water service operation is satisfactory. Make sure that there is a sufficient quantity of water in the tanks to do the test (1/8 Tank minimum recommended).

SUBTASK 38-11-04-210-014

- (3) Open three or more galley or lavatory faucets, and make sure that the flow of water is satisfactory. After two to three minutes, close the faucets.

SUBTASK 38-11-04-010-043

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-04-211-001

- (5) At the potable water service panel, measure the force necessary to move the control cable assembly [5] through its full travel. Measure the force necessary to move the control cable handle [3] to open, and to close. Use the force gauge (0-200lbs), COM-6729. Make sure that the cable operation is smooth and free.

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- (a) Make sure that the force required to push and pull the handle does not exceed 50 lb (22.7 kg).
- (b) Replace the control cable assembly, if more than 50 lb (22.7 kg) force is necessary to operate the control cable. Replace the control cable if it does not move smoothly through the full range of travel. These are the Tasks:

Fill/Overflow Valve Removal, TASK 38-11-04-000-803

Fill/Overflow Valve Control Cable Installation, TASK 38-11-04-400-804

SUBTASK 38-11-04-212-001

- (6) Push the TANK FILL VALVE control handle in to the stop.
 - (a) Make sure that the Fill/Overflow Valve [7] is in the closed/flight position. Do this Task, if necessary, to close the valve: Fill/Overflow Valve Control Cable and Interlock Switch Adjustment, TASK 38-11-04-820-802
NOTE: The fill/overflow valve is closed if the arrow on the valve control lever is aligned with the arrow on the valve body.
 - (b) Make sure that the Tank Vent Valve manual lever is aligned with the POS 2 valve position mark [18] on the valve body.
- (7) Pull the TANK FILL VALVE control handle out to the stop.
 - (a) Make sure that the service panel door will not close, when the TANK FILL VALVE control handle is not in.
 - (b) Make sure that the Fill Overflow valve is in the full open/fill position.
NOTE: The fill/overflow valve is in the open/fill position if the valve control lever is aligned with the forward inboard screw on the valve body.
 - (c) Make sure that the Tank Vent Valve manual lever is aligned with the POS 1 mark on the valve body. If necessary, do this Task, to set the Tank Vent Valve to Position 1: Fill/Overflow Valve Control Cable and Interlock Switch Adjustment, TASK 38-11-04-820-802
- (8) Push the TANK FILL VALVE control handle in, to the stop.

SUBTASK 38-11-04-220-001

- (9) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

- (a) Make sure that the clearance between TANK FILL VALVE control handle and the water service panel door nudger bracket is $\frac{1}{8}$ in. (3.2 mm) or less, with the door closed.
NOTE: Make sure that the clearance between the nudger bracket and the service panel door is $\frac{1}{8}$ in. (3.2 mm) or less. If the clearance is too large, the cable handle can come out with the water service panel door closed.
- (b) Make sure that the TANK FILL VALVE control handle does not touch the nudger bracket, with the water service panel door closed.
- (c) Do this Task, if necessary, to adjust the clearance between the handle and the nudger bracket: Fill/Overflow Valve Control Cable and Interlock Switch Adjustment, TASK 38-11-04-820-802

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G. Restore the airplane to its usual condition.

SUBTASK 38-11-04-410-023

- (1) Do this task to install the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-04-090-002

- (2) Remove the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-04-860-024

- (3) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

— END OF TASK —

TASK 38-11-04-820-802

3. Fill/Overflow Valve Control Cable and Interlock Switch Adjustment

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - 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)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
38-11-04-000-804	Fill/Overflow Valve Control Cable Removal (P/B 401)
38-11-04-400-804	Fill/Overflow Valve Control Cable Installation (P/B 401)
FIM 38-10 TASK 814	Potable Water System Flow not Sufficient - Fault Isolation

B. Tools/Equipment

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

Reference	Description
COM-6729	Gauge - Force, Push/Pull 0-200 pounds Part #: DG-200 Supplier: 92456 Opt Part #: DPPH-150 Supplier: 92456

C. Consumable Materials

Reference	Description	Specification
A01076	Adhesive - Synthetic Rubber	BAC5010 Type 93 (BMS5-95 Class B)
G02020	Clay, Modeling	

D. Location Zones

Zone	Area
164	Area Below Bulk Cargo Compartment, Right
166	Area Aft of Bulk Cargo Compartment, Right

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(Continued)

Zone	Area
825	Bulk Cargo Door

E. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

F. Prepare for the Task:

SUBTASK 38-11-04-865-001

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-04-610-003

- (2) Make sure that there is a sufficient quantity of water in the tanks to do the test (1/8 Tank minimum recommended). Do this task, if necessary, to service the water tanks: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-11-04-010-034

- (3) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-04-010-035

- (4) Do this task to remove the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Fill/Overflow valve Control Cable Adjustment

SUBTASK 38-11-04-010-045

- (1) Open this access panel:

Number	Name/Location
154AR	Aft Potable Water Service Door

SUBTASK 38-11-04-220-007

- (2) At the potable water service panel, measure the force necessary to move the lcontrol cable assembly [5] through its full travel. Measure the force necessary to move the control cable handle [3] to open, and to close. Use the force gauge (0-200lbs), COM-6729.
- (a) Make sure that the cable operates smoothly, with no binding, through its full travel.
- (b) Do one of these steps, if more than 50 lb (22.7 kg) of force is necessary to move the cable.

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- 1) Replace the control cable assembly. These are the tasks.
Fill/Overflow Valve Control Cable Removal, TASK 38-11-04-000-804
Fill/Overflow Valve Control Cable Installation, TASK 38-11-04-400-804
- 2) Disassemble and lubricate the control cable. Refer to the manufacturers CMM.
These are the tasks to remove and install the control cable.
.Fill/Overflow Valve Control Cable Removal, TASK 38-11-04-000-804
Fill/Overflow Valve Control Cable Installation, TASK 38-11-04-400-804

SUBTASK 38-11-04-860-032

- (3) Push the control cable handle [3] in, to the stop.

SUBTASK 38-11-04-220-008

- (4) Put the clay, G02020 on the control cable handle. Close and latch the potable water service panel door.

SUBTASK 38-11-04-220-009

- (5) Open the potable water service door. Do a visual check of the clay to find the clearance between the control handle and the nudger bracket, with the door closed.

NOTE: Make sure that the clearance between the nudger bracket and the service panel door is $\frac{1}{8}$ in. (3.2 mm) or less. If the clearance is too large, the cable handle can come out with the water service panel door closed.

- (a) Make sure that the clearance between the control cable handle [3] and the nudger bracket, with the door closed, is $\frac{1}{8}$ in. (3.2 mm) or smaller. If necessary, do these steps to adjust the clearance.
 - 1) Remove the Bulk cargo compartment floor panels above the water service panel.
Do this Task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801
 - 2) Remove the lockwire and the sealant from the two 1-inch nuts [1], the Pilot/Tab Washer [2] and the tab washer [6].
 - 3) Turn the 1-inch nuts [1] to adjust the clearance between the door nudger bracket and the control cable handle [3].
 - 4) Make sure that the Pilot/Tab Washer [2], the tab washer [6], and the 1-inch nuts [1] are fully seated on the water service panel.
 - 5) Make sure that the nudger bracket does not touch the control cable handle [3], with the water service door closed.
 - 6) Tighten the two 1-inch nuts [1] at the water service panel. Apply 450 $\pm$ 50 in-lb (51 $\pm$ 6 N·m) torque.
 - 7) Do a check of the clearance between the nudger bracket and the control cable handle [3], again. Make sure that the clearance between the nudger bracket and the service panel door is $\frac{1}{8}$ in. (3.2 mm) or less.

NOTE: Make sure that the clearance between the nudger bracket and the service panel door is $\frac{1}{8}$ in. (3.2 mm) or less. If the clearance is too large, the cable handle can come out with the water service panel door closed.

- 8) Lockwire the two 1-inch nuts [1] (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801).

SUBTASK 38-11-04-390-002

- (6) Apply a fay surface seal to the 1-inch nuts [1], the Pilot/Tab Washer [2] and the tab washer [6], at the water service panel. Use the adhesive, A01076.

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SUBTASK 38-11-04-010-036

- (7) Push the TANK FILL VALVE control cable handle [3] in, to the stop.

SUBTASK 38-11-04-030-011

- (8) Disconnect the clevis [23] from the Fill/Overflow Valve [7] control lever.

SUBTASK 38-11-04-820-005

- (9) Move the fill/overflow valve control lever passed the closed (flight/normal) position to the internal valve stop.

NOTE: The fill/overflow is closed when the arrow on the control lever is aligned with the arrow on the valve body.

- (a) Optional: Lockwire the fill/overflow control lever at this position.

SUBTASK 38-11-04-820-006

- (10) Do these steps to adjust the control cable length.
- (a) Remove the lockwire. Loosen the clevis jamnut [22] , and the two jamnuts [14] at the bracket 15.
 - (b) Make sure that the inverted nut [21] is seated in the control cable sleeve [16] . Tighten the inverted nut hand tight, to seat it in the control cable sleeve.
 - (c) Adjust the control cable length to align the clevis [23] with the fill/overflow control lever. Turn the clevis, and/or the two jamnuts [14], at the bracket [15] to adjust the cable length.

SUBTASK 38-11-04-820-009

- (11) Make sure the cable rod end threads show at the clevis sight hole [11]. . Put the clevis [23] in its position on the fill/overflow valve control lever, and install the pin [8], washer [10], and the cotter pin [9].

SUBTASK 38-11-04-430-015

- (12) Tighten the two jamnuts [14] hand tight to seat the control cable assembly in the bracket [15]. Tighten the clevis jamnut [22] hand tight. Make sure the fill/overflow valve stays in the closed/flight position.

SUBTASK 38-11-04-430-016

- (13) Tighten the clevis jamnut [22] to 16.5 ± 1.5 in-lb (1.9 ± 0.2 N·m). Lockwire the jamnut (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801). Make sure the fill/overflow valve stays in the closed/flight position.

SUBTASK 38-11-04-430-017

- (14) Tighten the two jamnuts [14] at the bracket [15], to 450 ± 50 in-lb (51 ± 6 N·m). Lockwire the jam nuts (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801). Make sure the fill/overflow valve stays in the closed/flight position. .

SUBTASK 38-11-04-030-014

- (15) Remove the lockwire from the fill/overflow valve control lever, if you installed the optional lockwire.

SUBTASK 38-11-04-820-010

- (16) Pull the TANK FILL VALVE control cable handle [3] out to the stop.

SUBTASK 38-11-04-820-011

- (17) Make sure that the fill/overflow valve is in the full open/fill position.

NOTE: The fill/overflow valve is in the open/fill position if the valve control lever is aligned with the forward inboard screw on the valve body.

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SUBTASK 38-11-04-820-012

- (18) Push the TANK FILL VALVE control cable handle in, to the stop.
- (19) Make sure the fill/overflow valve is in the closed (flight/normal) position.

NOTE: The fill/overflow is closed when the arrow on the control lever is aligned with the arrow on the valve body.

SUBTASK 38-11-04-820-023

- (20) Adjust the Fill/Overflow Valve Interlock Switch.

H. Adjust the Fill/Overflow Valve Interlock Switch

SUBTASK 38-11-04-861-001

- (1) Do this task to supply electrical power to the airplane: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-04-210-004

- (2) Make sure that the TANK FILL VALVE handle, on the aft water service panel, is pushed in to the stop.

SUBTASK 38-11-04-210-006

- (3) Make sure that the manual lever for the fill/overflow valve is aligned with the POS 2 valve position mark [18] on the tank vent valve.

SUBTASK 38-11-04-860-033

- (4) Pull the TANK FILL VALVE control handle out, to the stop.

SUBTASK 38-11-04-820-024

- (5) Make sure that the valve manual lever is aligned with the POS 1 valve position mark [18] on the tank vent valve. If the tank vent valve manual lever is not aligned with the POS 1 valve position mark [18], adjust the switch as follows:
 - (a) Loosen the two screws [19] and two nuts [20]. Move the interlock switch [12] toward the fill/overflow valve control lever until you see the tank vent valve manual lever move to the POS 1 valve position mark [18].
 - (b) Tighten the two screws [19] and two nuts [20].

SUBTASK 38-11-04-210-008

- (6) Push the TANK FILL VALVE control handle in to the stop.
 - (a) Make sure that the manual lever is aligned with the POS 2 valve position mark [18] on the tank vent valve.

SUBTASK 38-11-04-210-009

- (7) Pull the TANK FILL VALVE control handle out to the stop.
 - (a) Make sure that the manual is aligned with the POS 1 valve position mark [18] on the tank vent valve.

SUBTASK 38-11-04-410-024

- (8) Push the TANK FILL VALVE control handle in to the stop.
- (9) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-04-710-015

- (10) Do the Fill Overflow Control Cable and Interlock Switch Operational Test

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I. Fill Overflow Control Cable and Interlock Switch Operational Test.

SUBTASK 38-11-04-710-014

(1) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

(a) Make sure that the "Master" pump operates.

NOTE: Only one of the two pumps, the "Master" pump, will operate. The Master pump is selected by the water system controller, and alternates between pump 1 or pump 2 each flight.

1) If the pump does not operate, do this task: FIM 38-10 TASK 814

(b) Open two or more galley and/or lavatory faucets. Make sure the water flow is satisfactory. After two-three minutes close the lavatory and/or galley faucets.

J. Restore the airplane to its usual condition.

SUBTASK 38-11-04-410-026

(1) Do this task to install the bulk cargo compartment floor panels: Floor Panels and Walkways Installation, TASK 25-52-10-400-801

SUBTASK 38-11-04-410-025

(2) Do this task to install the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-04-862-001

(3) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

———— **END OF TASK** ————

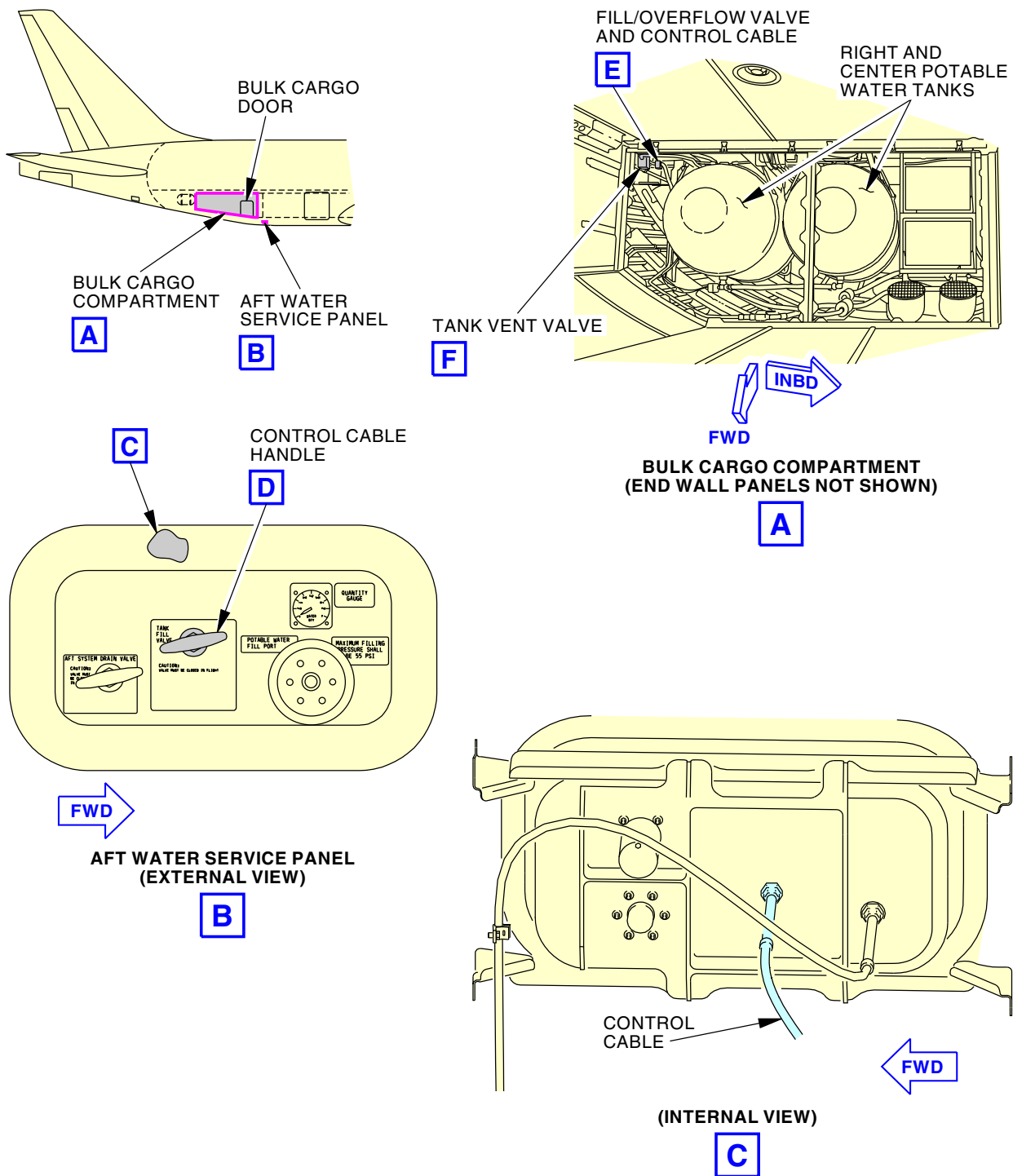
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FILL/ OVERFLOW VALVE AND CONTROL CABLE - ADJUSTMENT/TEST
Figure 501/38-11-04-990-804 (Sheet 1 of 6)

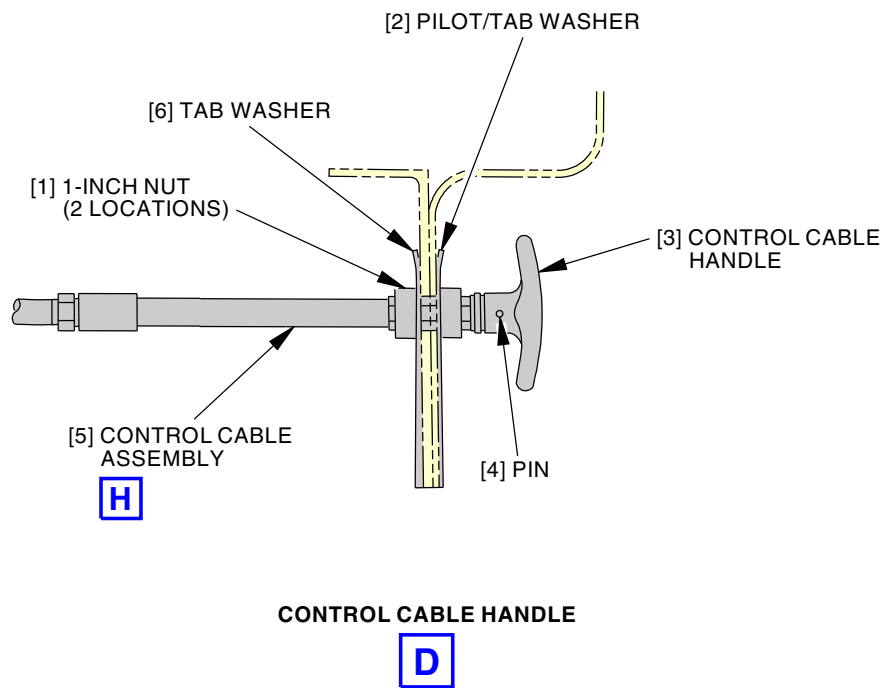
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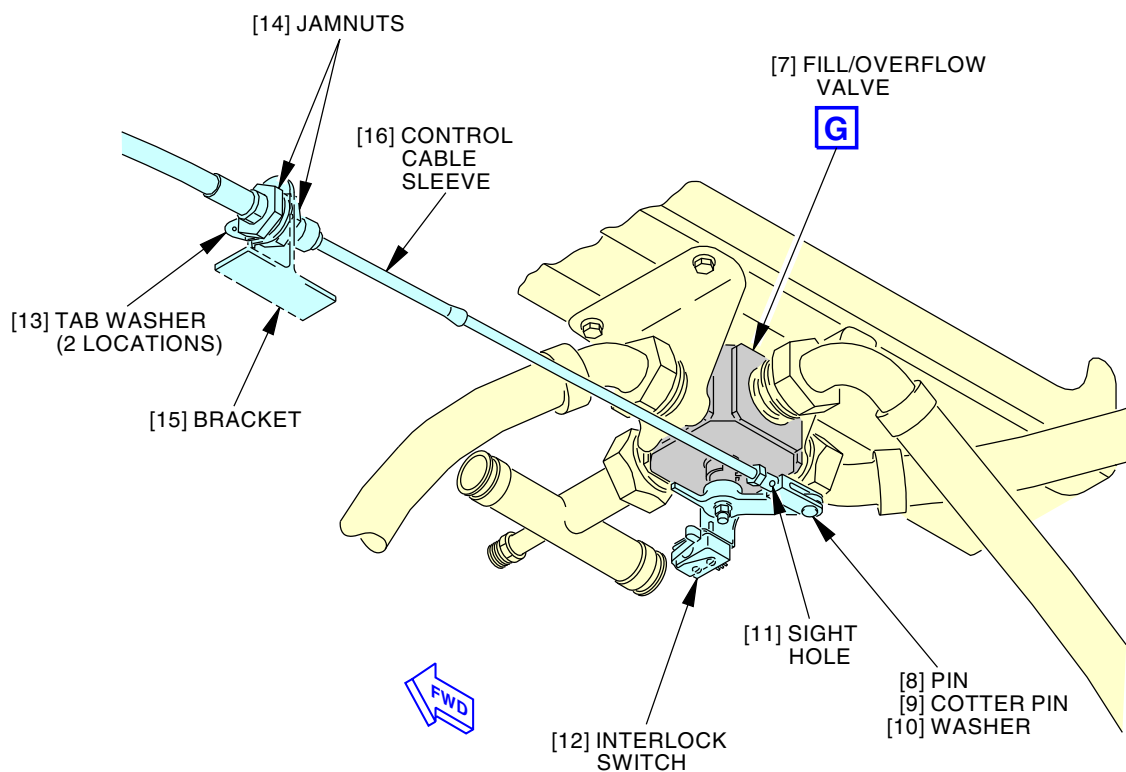
FILL/ OVERFLOW VALVE AND CONTROL CABLE - ADJUSTMENT/TEST
Figure 501/38-11-04-990-804 (Sheet 2 of 6)

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**FILL/OVERFLOW VALVE
AND CONTROL CABLE**

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FILL/ OVERFLOW VALVE AND CONTROL CABLE - ADJUSTMENT/TEST
Figure 501/38-11-04-990-804 (Sheet 3 of 6)

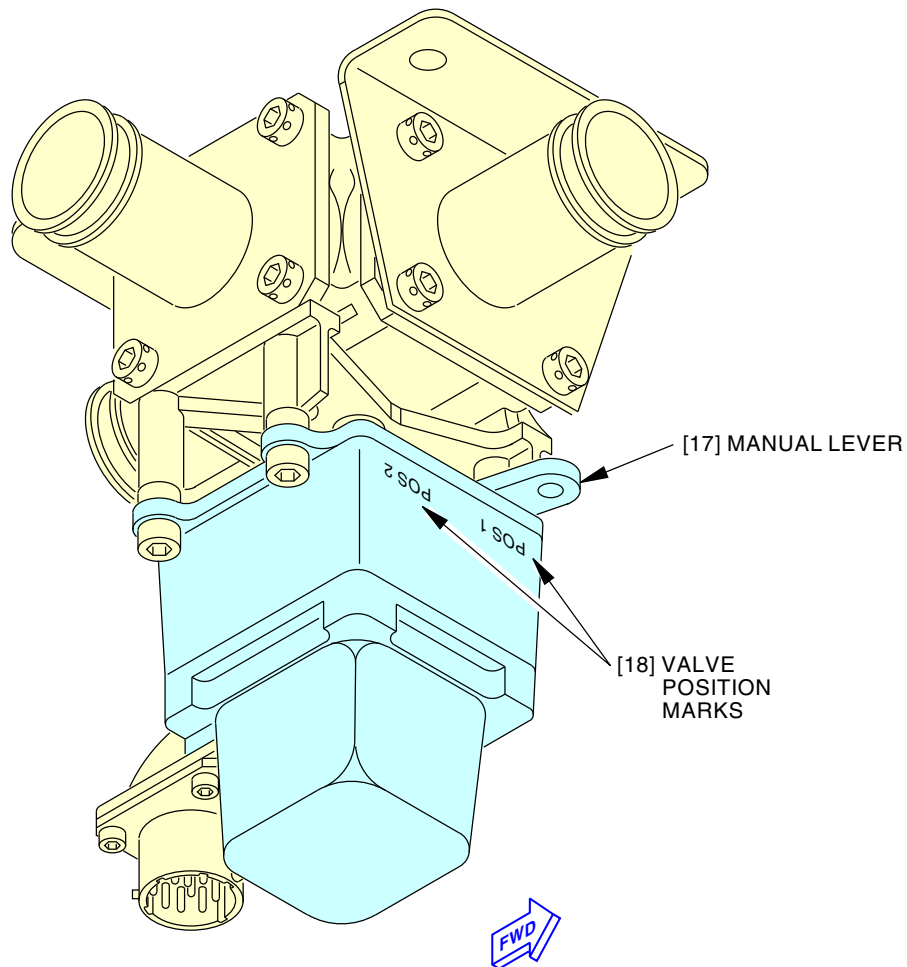
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TANK VENT VALVE

F

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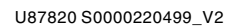
FILL/ OVERFLOW VALVE AND CONTROL CABLE - ADJUSTMENT/TEST
Figure 501/38-11-04-990-804 (Sheet 4 of 6)

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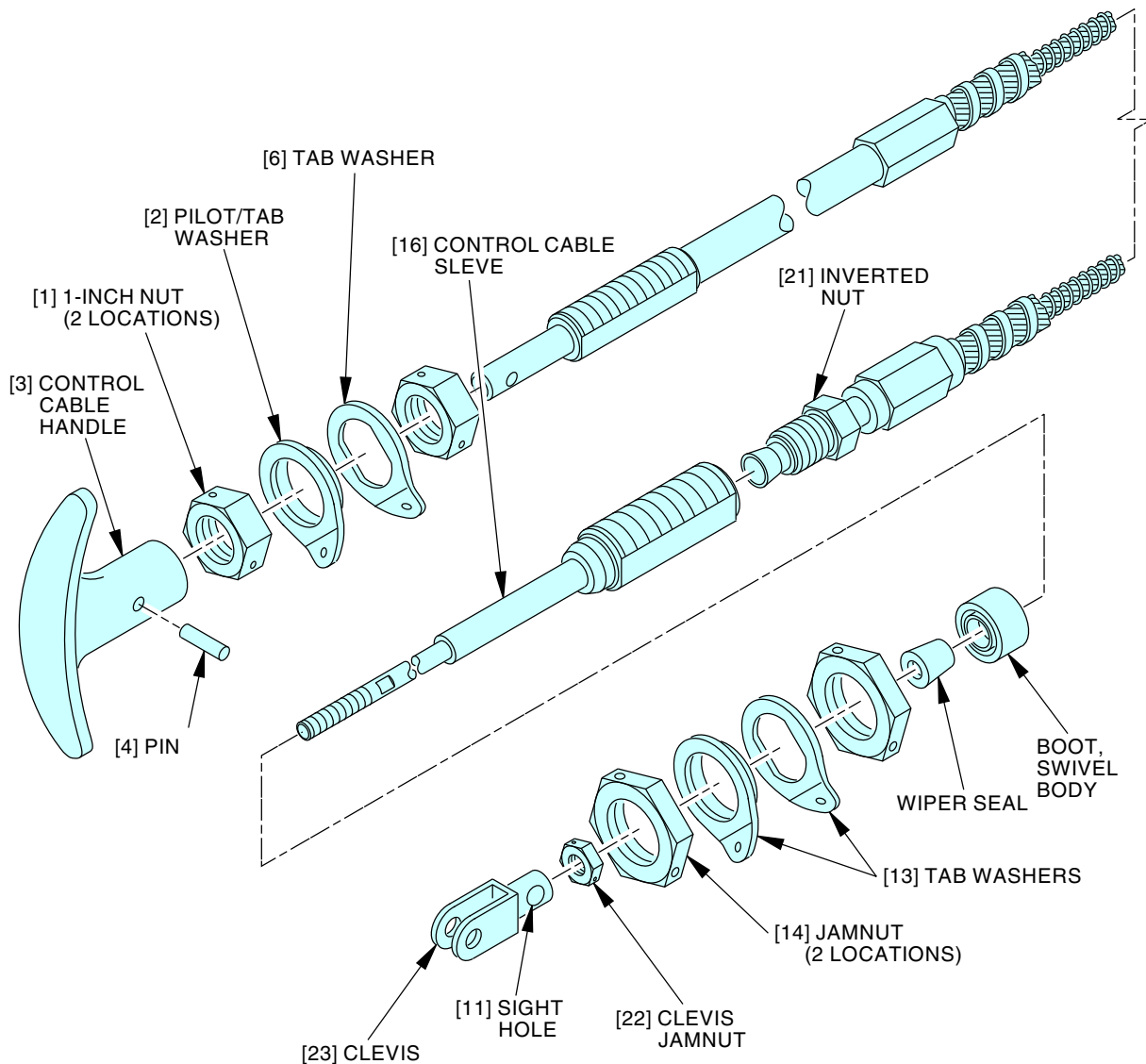
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CONTROL CABLE ASSEMBLY



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FILL/ OVERFLOW VALVE AND CONTROL CABLE - ADJUSTMENT/TEST
Figure 501/38-11-04-990-804 (Sheet 6 of 6)

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Water Filter - Potable Water Fill Line - Maintenance Practices

1. General

- A. This procedure contains scheduled maintenance task data.
- B. The procedure has this task.

TASK 38-11-07-160-802

2. Water Filter - Potable Water Fill Line - Cleaning

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
38-10-00-100-801	Manually Clean the Potable Water Tank (P/B 701)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-11-07-020-802	Water Filter - Potable Water Fill Line - Removal (P/B 401)
38-11-07-400-801	Water Filter - Potable Water Fill Line-Installation (P/B 401)
38-11-15-100-801	Bypass Restrictor - Cleaning (P/B 201)

B. Tools/Equipment

Reference	Description
STD-122	Brush
STD-149	Cap and Plug - NAS834
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG

C. Consumable Materials

Reference	Description	Specification
B50026	Soap - Clear Liquid Dishwashing	
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
G50256	Water, Regular	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Packing	38-11-04-03-360	ARO 001-017

E. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

F. Clean the water filter assembly

SUBTASK 38-11-07-020-003

- (1) Do this task to remove the water filter assembly: Water Filter - Potable Water Fill Line - Removal, TASK 38-11-07-020-802.

SUBTASK 38-11-07-480-001

- (2) Put the protective cap and plug, STD-149 on the filter inlet and outlet ports.

SUBTASK 38-11-07-030-001

- (3) Remove the connector fitting [1] from the filter case [4]. Discard the packing [3].

SUBTASK 38-11-07-030-002

- (4) Remove the spring [2] and filter element [5] from the filter case [4].

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SUBTASK 38-11-07-212-001

- (5) Examine the water filter.
- (a) Make sure that the filter element is serviceable. Replace the filter element if it is corroded, punctured, or damaged.
 - (b) If the filter is blocked or very dirty, then do these steps.
 - 1) Disconnect the pump supply line, then examine the pump inlet. If the pump inlet is dirty, then clean the pump and the pump supply line.
 - 2) Examine the pump bypass restrictor. Clean the bypass restrictor, if it is necessary. This is the Task:
Bypass Restrictor - Cleaning, TASK 38-11-15-100-801
 - 3) Examine the water tank(s). Clean the water tank(s), if it is necessary. These are the Tasks:
Manually Clean the Potable Water Tank, TASK 38-10-00-100-801
Potable Water System - Disinfectant, TASK 38-10-00-600-801

SUBTASK 38-11-07-160-001

- (6) Clean the filter assembly parts using a mild solution of soap, B50026 and clean water, G50256, and a brush, STD-122.

SUBTASK 38-11-07-170-001

- (7) Rinse the filter assembly parts thoroughly with clean water, G50256 to remove all the soap, B50026 solution.

NOTE: Make sure you rinse all the soap solution from the filter. If you leave any soap solution in the filter, the water may taste bad.

SUBTASK 38-11-07-160-002

- (8) Dry the filter parts with 0-50 psig dry filtered regulated air source, STD-1082, or air dry the parts, to remove all the moisture.

SUBTASK 38-11-07-430-001

- (9) Put the filter element [5] and spring [2] in their position inside the filter case.

SUBTASK 38-11-07-640-001

- (10) Put the Molykote 111 Compound, D00189 on the packing [3] and the connector fitting [1] threads, and put the new packing [3] on the connector fitting [1].

NOTE: Use a small quantity of the lubricant. If you use too much lubricant, the water will taste bad.

SUBTASK 38-11-07-430-002

- (11) Install the connector fitting and packing on the filter case. Tighten the fitting to 115 $\pm$ 5 in-lb (13 $\pm$ 1 N·m).

SUBTASK 38-11-07-080-001

- (12) Remove the protective cap and plug, STD-149 on the filter inlet and outlet ports.

SUBTASK 38-11-07-420-003

- (13) Do this task to install the water filter assembly: Water Filter - Potable Water Fill Line-Installation, TASK 38-11-07-400-801

————— **END OF TASK** —————

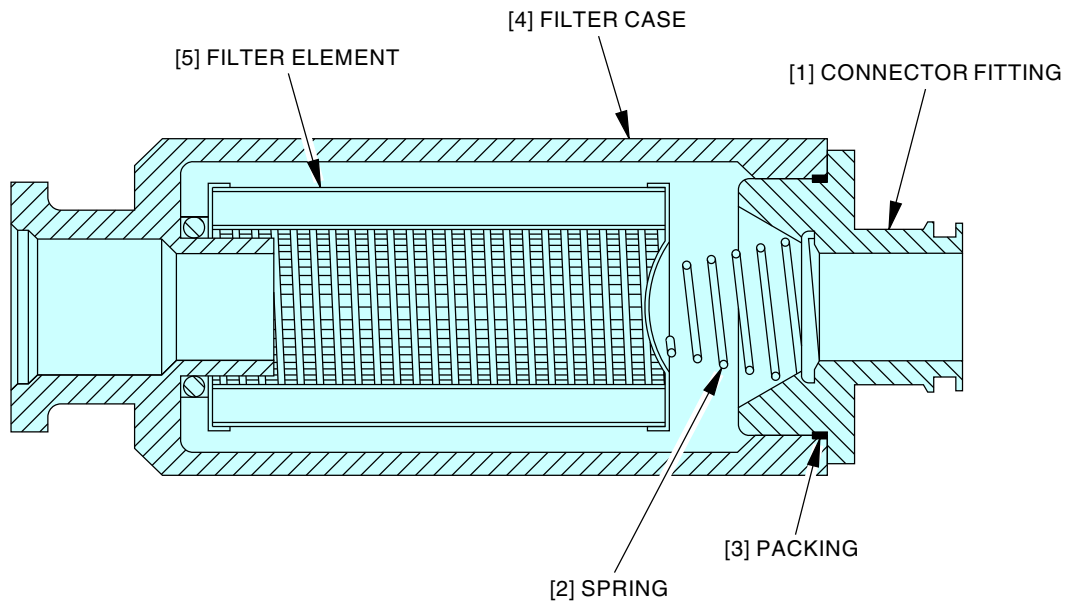
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Water Filter - Potable Water Fill Line - Cleaning
Figure 201/38-11-07-990-803

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WATER FILTER - REMOVAL/INSTALLATION

1. General

A. The procedure has these tasks:

TASK 38-11-07-020-802

2. Water Filter - Potable Water Fill Line - Removal

A. References

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
38-11-07-160-802	Water Filter - Potable Water Fill Line - Cleaning (P/B 201)

B. Tools/Equipment

Reference	Description
STD-149	Cap and Plug - NAS834

C. Consumable Materials

Reference	Description	Specification
G50138	Cloth - Soft Cotton	

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the task.

SUBTASK 38-11-07-865-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-11-07-010-006

(2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-07-010-007

(3) Do this task to remove the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

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G. Remove the water filter

SUBTASK 38-11-07-030-003

- (1) Place the soft cotton cloth, G50138, or other absorbent material under the filter assembly [5] to catch any water that may spill.

SUBTASK 38-11-07-030-004

- (2) Disconnect the clamshell coupling clamp [2] at the top and bottom of the filter.
Move the sleeve away from the filter assembly to disconnect the coupling.
Remove and discard the packings [4] from the filter assembly and the water hose fittings.

SUBTASK 38-11-07-030-005

- (3) Disconnect the clamps [6] clamps that attach the filter to the airplane structure and remove the filter assembly [5].

SUBTASK 38-11-07-913-001

- (4) Place the protective cap and plug, STD-149 over the open water hoses, if you are not installing the filter immediately. Remove the cloths, or other absorbent material, from the airplane.

SUBTASK 38-11-07-160-003

- (5) To clean the filter assembly [5], do this task: : Water Filter - Potable Water Fill Line - Cleaning, TASK 38-11-07-160-802.

————— **END OF TASK** —————

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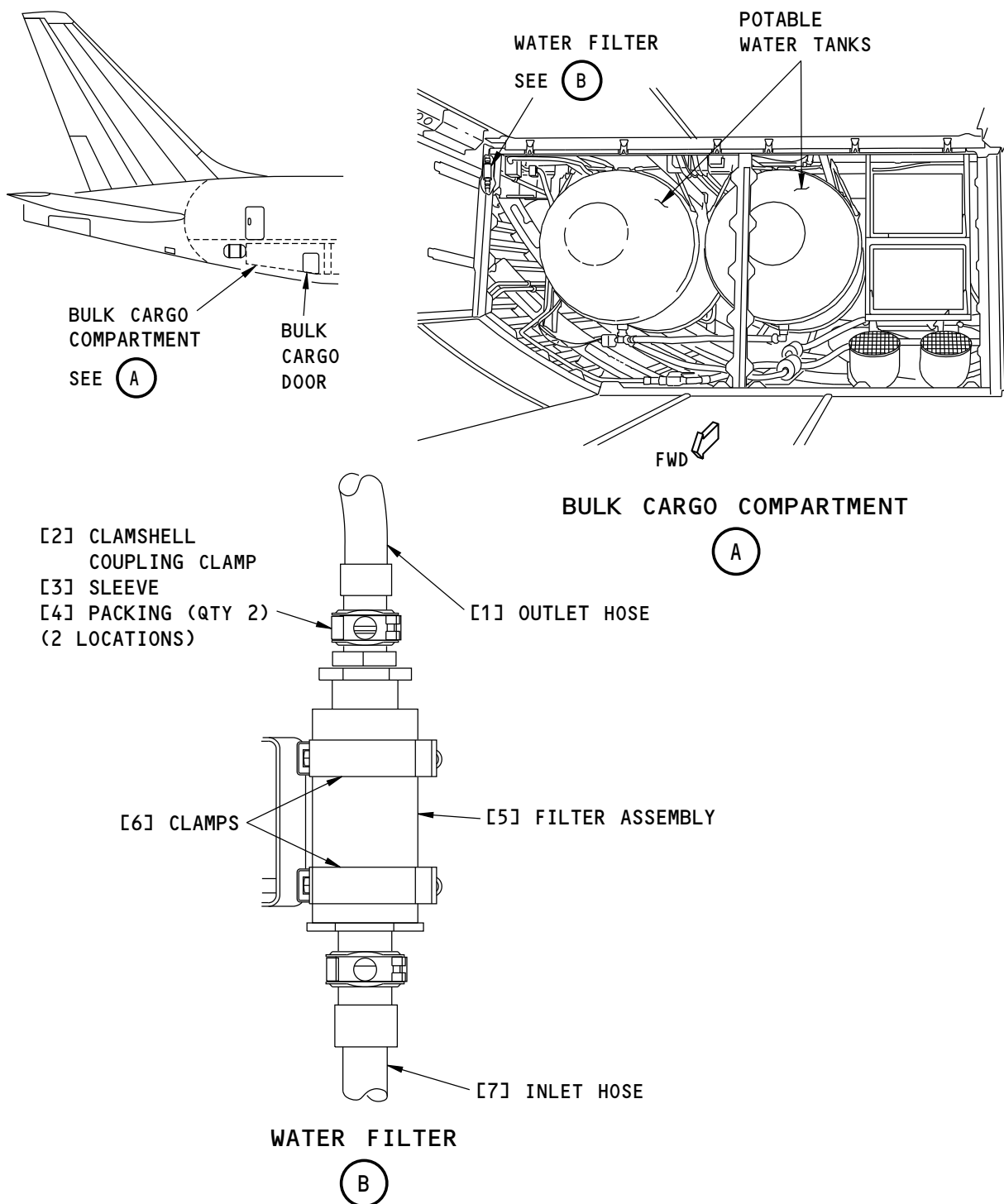
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Water Filter - Potable Water Fill Line - Removal/Installation
Figure 401/38-11-07-990-802

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TASK 38-11-07-400-801

3. Water Filter - Potable Water Fill Line-Installation

(Figure 401)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

B. Tools/Equipment

Reference	Description
STD-149	Cap and Plug - NAS834

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Packing	38-11-04-03-290	ARO ALL
		38-11-04-03-295	ARO ALL
5	Filter assembly	38-11-04-03-350	ARO ALL

E. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

F. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

G. Prepare for the task.

SUBTASK 38-11-07-010-008

- (1) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-07-010-009

- (2) Do this task, as necessary, to remove the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

H. Install the water filter

SUBTASK 38-11-07-160-004

- (1) Remove the protective cap and plug, STD-149 from the water hoses, and clean the fittings.

SUBTASK 38-11-07-420-004

- (2) Place the water filter assembly [5] in its position in the mounting clamps [6] and connect the clamps.

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SUBTASK 38-11-07-420-005

- (3) Put the Molykote 111 Compound, D00189 on the new packings [4]. Then install the packings [4] on the water hose and filter assembly fittings.

SUBTASK 38-11-07-420-006

- (4) Install the sleeve [3] and clamshell coupling clamp [2] on the upper and lower water hose and filter assembly fittings.

SUBTASK 38-11-07-420-007

- (5) Install the clamshell coupling clamp [2] on the upper and lower water hose and filter assembly fittings.

SUBTASK 38-11-07-210-001

- (6) Make sure that the clamshell coupling clamps [2] are latched.

SUBTASK 38-11-07-865-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-11-07-610-002

- (8) Put water pressure in the potable water fill line. Do this task to pressurize the fill line: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-11-07-790-001

- (9) Make sure that there are no water leaks at the filter assembly [5], or the clamshell couplings at the outlet hose [1] and inlet hose [7] connections.

I. Restore the airplane to its usual condition.

SUBTASK 38-11-07-410-006

- (1) Do this task to install the bulk cargo compartment endwall panels: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-07-410-007

- (2) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

————— **END OF TASK** —————

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LAVATORY FAUCET - MAINTENANCE PRACTICES

1. **General**

- A. This procedure has these tasks:
- (1) A removal of the faucet assembly.
 - (2) An installation of the faucet assembly.
 - (3) The cartridge valve assembly replacement.
 - (4) The hydraulic timer replacement.
 - (5) A removal of the drain valve assembly.
 - (6) An installation of the drain valve assembly.
 - (7) An adjustment of the water flow.
 - (8) An adjustment of the drain valve assembly.

TASK 38-11-08-000-801

2. **Faucet Assembly Removal (Adams Rite)**

(Figure 201)

A. **References**

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

C. **Prepare for the Faucet Assembly Removal**

SUBTASK 38-11-08-010-012

- (1) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).
 - (a) Main Deck Lavatories:
 - 1) Open the cabinet door below the sink

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-860-001

- (2) Turn the water shutoff valve to the OFF position.

SUBTASK 38-11-08-680-001

- (3) Push each of the push buttons [2] to drain the water from the lines.

SUBTASK 38-11-08-010-002

- (4) Remove the access door for the water system.

D. **Faucet Assembly Removal**

SUBTASK 38-11-08-670-003

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

 - Use rubber or latex gloves.
 - Replace gloves after you touch drain parts and before you touch the waterlines or faucets.

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- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-08-020-001

- (2) Remove the reducer [5] that attaches the faucet cover [6].
 - (a) Remove and then discard the packing [12] from the reducer [5].

SUBTASK 38-11-08-020-002

- (3) Remove the faucet cover [6].

SUBTASK 38-11-08-020-003

- (4) Remove the screws [4] for the faucet [9].

SUBTASK 38-11-08-020-005

- (5) Disconnect the drain rod [7] from the drain valve assembly.

SUBTASK 38-11-08-020-004

- (6) Disconnect the water hoses [8].

SUBTASK 38-11-08-020-006

- (7) Remove the faucet [9].

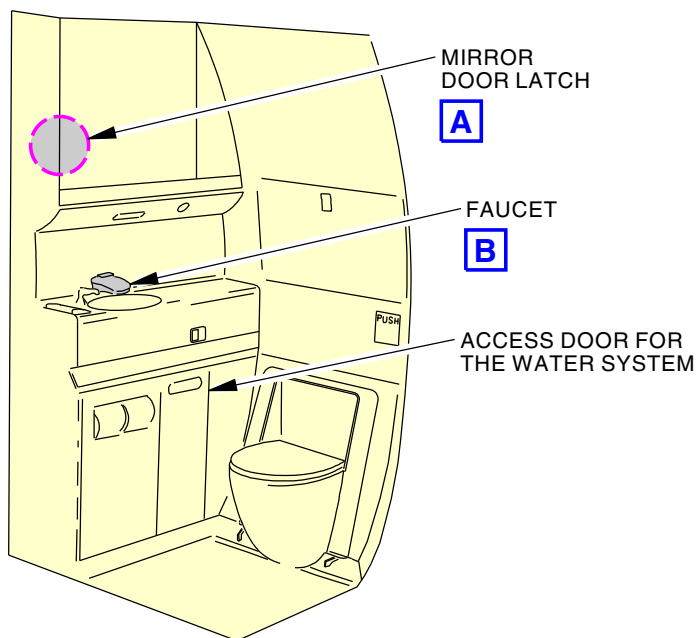
————— **END OF TASK** —————

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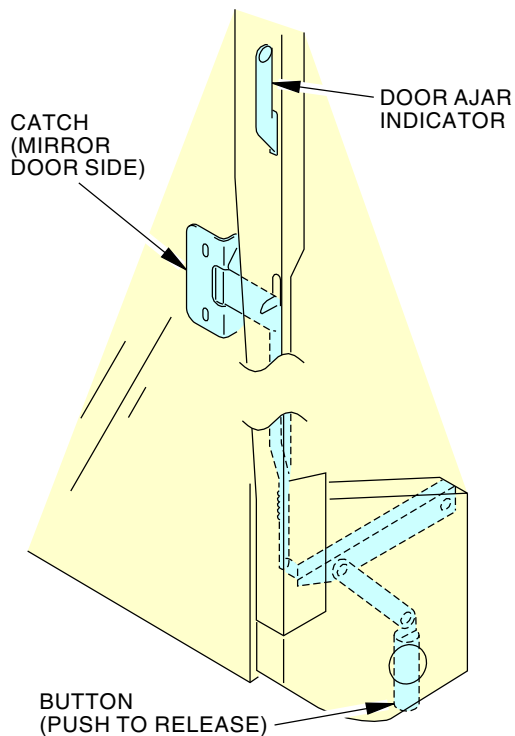
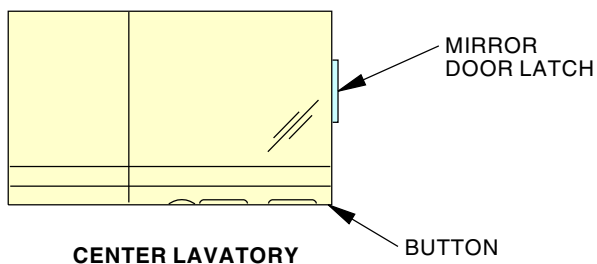
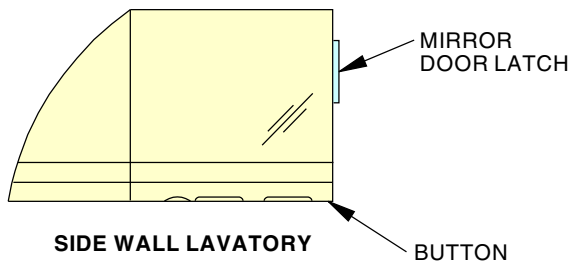
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**LAVATORY
(EXAMPLE)**



MIRROR DOOR LATCH

A

D12399 S0006422521_V2

**Faucet - Lavatory
Figure 201/38-11-08-990-805 (Sheet 1 of 3)**

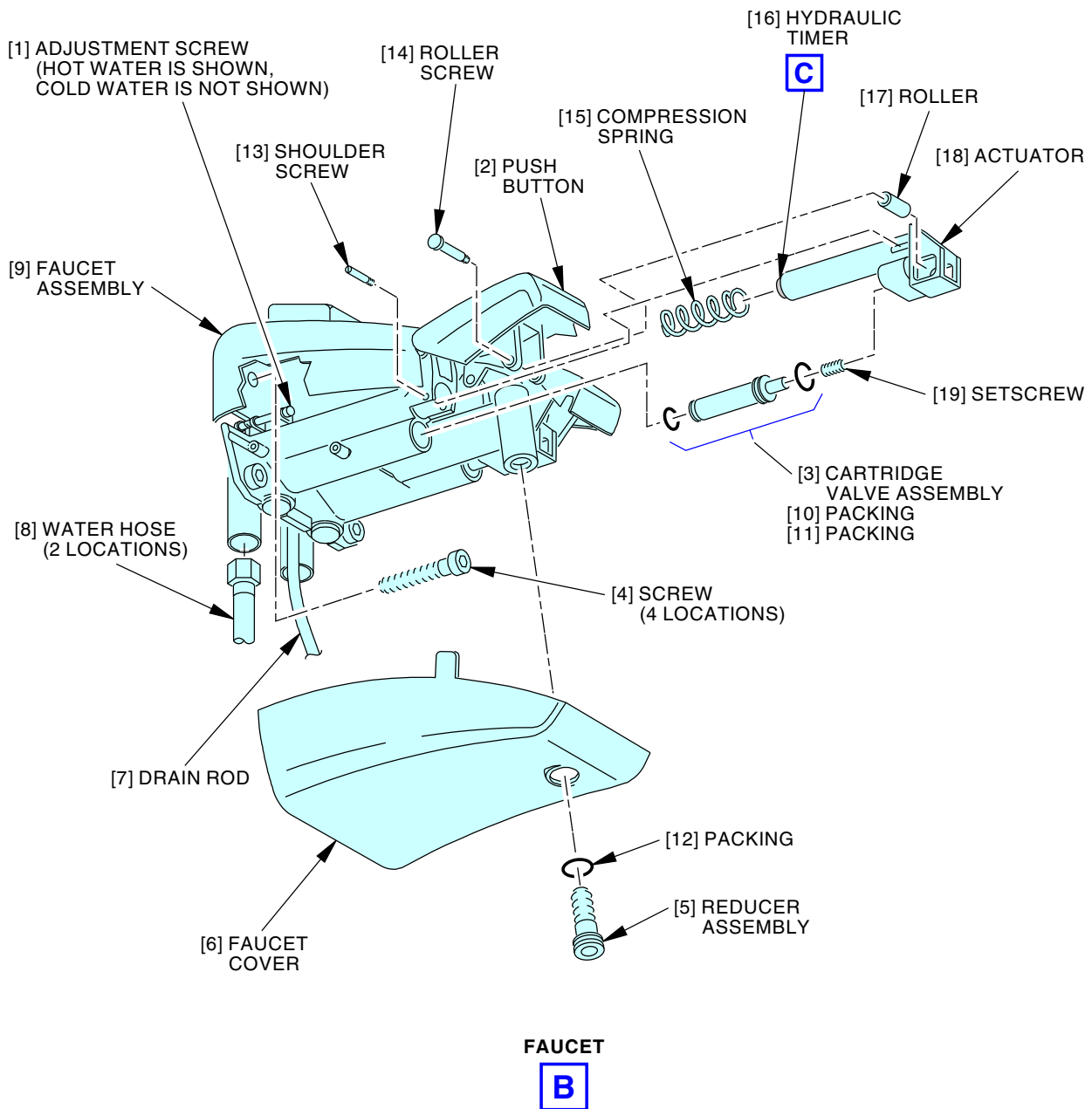
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F88383 S0006422522_V2

Faucet - Lavatory
Figure 201/38-11-08-990-805 (Sheet 2 of 3)

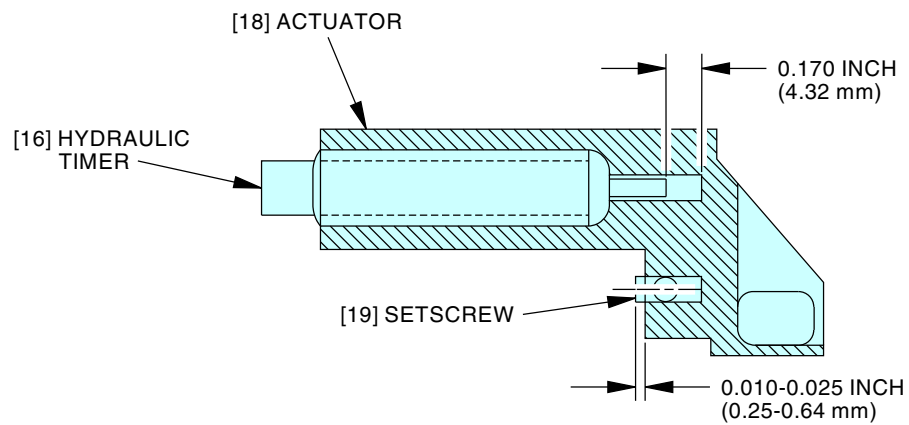
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HYDRAULIC TIMER

C

M66703 S0006422523_V2

Faucet - Lavatory
Figure 201/38-11-08-990-805 (Sheet 3 of 3)

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TASK 38-11-08-400-801

3. **Faucet Assembly Installation (Adams Rite)**

(Figure 201)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Faucet	Not Specified	

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Faucet Assembly Installation

SUBTASK 38-11-08-670-004

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-08-420-001

- (2) Make sure the drain rod [7] is threaded into the back of the faucet [9] and put the faucet [9] in its position.

SUBTASK 38-11-08-420-003

- (3) Remove the caps and connect the water hoses [8] to the faucet [9].

SUBTASK 38-11-08-420-004

- (4) Install the screws [4] for the faucet [9].

SUBTASK 38-11-08-020-007

- (5) Put the faucet cover [6] in its position.

SUBTASK 38-11-08-020-008

- (6) Install the reducer [5] and packing [12] for the faucet cover [6].

SUBTASK 38-11-08-420-002

- (7) Connect the drain rod [7] from the faucet [9] to the drain valve assembly.

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E. Faucet Assembly Installation Test

SUBTASK 38-11-08-860-002

- (1) Turn the water shutoff valve to the ON position.

SUBTASK 38-11-08-790-002

- (2) Make sure that the water hose connections do not have a leak.

SUBTASK 38-11-08-710-001

- (3) Make a selection of the time the water flows from 5 second to 10 seconds, then do this test.
 - (a) Push each of the push buttons [2] to make sure the time the water flows is satisfactory.
 - (b) If the length of time the water flows is not satisfactory, do this task: Water Faucet Adjustment (Adams Rite), TASK 38-11-08-820-801.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-08-670-001

- (1) If you have not followed all of the procedures to prevent contamination, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-08-410-001

- (2) Install the access door for the water system.

SUBTASK 38-11-08-010-013

- (3) Turn the water shutoff valve to the ON position.
 - (a) Main Deck Lavatories:
 - 1) Close the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-410-003

- (4) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— END OF TASK —————

TASK 38-11-08-000-802

4. Drain Valve Assembly Removal (Adams Rite)

(Figure 202)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-11-08-010-014

- (1) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).
 - (a) Main Deck Lavatories:
 - 1) Open the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

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SUBTASK 38-11-08-860-005

- (2) Turn the water shutoff valve to the OFF position.

SUBTASK 38-11-08-010-006

- (3) Remove the access door for the water system.

D. Drain Valve Assembly Removal

SUBTASK 38-11-08-020-015

- (1) Loosen the screw [25] and nut [24] that attaches the drain valve link [26] to the drain rod [7].

SUBTASK 38-11-08-020-016

- (2) Disconnect the drain valve link [26] from the drain rod [7].

SUBTASK 38-11-08-020-017

- (3) Loosen the drain valve nut [28] to remove the rod assembly [27] from the drain valve body [29].

SUBTASK 38-11-08-020-018

- (4) Remove the drain plug [22] and packing [21] from the collar [23].

NOTE: Discard the packing [21].

SUBTASK 38-11-08-020-019

- (5) Disconnect the drain valve body [29] from the collar [23].

SUBTASK 38-11-08-020-020

- (6) Remove the collar [23] and gasket [30] from the lavatory sink.

SUBTASK 38-11-08-020-024

- (7) Make sure you keep the loose parts of the drain valve assembly [20].

————— END OF TASK —————

TASK 38-11-08-400-802

5. Drain Valve Assembly Installation (Adams Rite)

(Figure 202)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
21	Packing	Not Specified	

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Drain Valve Assembly Installation

SUBTASK 38-11-08-020-025

- (1) Put the drain valve assembly in its position.

NOTE: It is necessary to remove some of the parts of the drain valve assembly for the installation.

SUBTASK 38-11-08-420-009

- (2) Put the collar [23] and gasket [30] in position.

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SUBTASK 38-11-08-420-010

- (3) Connect the drain valve body [29] to the collar [23].

SUBTASK 38-11-08-420-011

- (4) Put the packing [21] on the drain plug [22] and then install the drain plug [22] in the drain valve body [29].

SUBTASK 38-11-08-420-012

- (5) Install the rod assembly [27] into the drain plug [22] in the drain valve body [29].
 - (a) Loosely install the drain valve nut [28].

SUBTASK 38-11-08-020-021

- (6) Install the drain valve link [26], screw [25] and nut [24] to connect the rod assembly [27] to the drain rod [7].

SUBTASK 38-11-08-020-022

- (7) Tighten the screw [25] and nut [24] to hold the drain valve link [26] in its position and then tighten the drain valve nut [28].

E. Drain Valve Assembly Installation Test

SUBTASK 38-11-08-860-006

- (1) Turn the water shutoff valve to the ON position.

SUBTASK 38-11-08-790-003

- (2) Push the push button assemblies to fill the lavatory sink approximately half full.
 - (a) Make sure there is no leakage under the lavatory sink.

SUBTASK 38-11-08-710-004

- (3) Push the button for the drain valve on the water faucet.
 - (a) Make sure the drain valve opens between 0.04 in. (1.0 mm) and 0.06 in. (1.5 mm) and that the operation of the lavatory sink drain is satisfactory.
 - (b) If the length of time for the water to drain is not satisfactory, do this task: Drain Valve Adjustment (Adams Rite), TASK 38-11-08-820-802.

SUBTASK 38-11-08-410-008

- (4) Install the access door for the water system.

SUBTASK 38-11-08-010-015

- (5) Confirm that the water shutoff valve is in the ON position.
 - (a) Main Deck Lavatories:
 - 1) Close the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-410-010

- (6) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— **END OF TASK** —————

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TASK 38-11-08-960-801

6. Cartridge Valve Assembly Replacement (Adams Rite)

(Figure 201)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-8354	Wrench - Adams Rite Lavatory Faucet Cartridge Part #: 60036 Supplier: 80477

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Prepare to Replace the Cartridge Valve Assembly

SUBTASK 38-11-08-010-016

(1) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).

(a) Main Deck Lavatories:

1) Open the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-860-008

(2) Turn the water shutoff valve to the OFF position.

SUBTASK 38-11-08-680-002

(3) Push each of the push buttons [2] to drain the water from the lines.

E. Cartridge Valve Assembly Removal

SUBTASK 38-11-08-020-009

(1) Remove the reducer [5] and packing [12] that attaches the faucet cover [6].

(a) Remove and then discard the packing [12].

SUBTASK 38-11-08-020-010

(2) Remove the faucet cover [6].

SUBTASK 38-11-08-020-011

(3) Disconnect the push button [2] from the cartridge valve assembly [3].

SUBTASK 38-11-08-020-012

(4) Pull the cartridge valve assembly [3] from the faucet assembly.

NOTE: You can use the faucet wrench, SPL-8354 for easier removal of the cartridge.

(a) Remove and then discard the packing [10] and packing [11].

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F. Cartridge Valve Assembly Installation

SUBTASK 38-11-08-420-005

- (1) Install the cartridge valve assembly [3], packing [10], and packing [11] in the faucet assembly.

NOTE: You can use the TOOL for easier removal of the cartridge.

SUBTASK 38-11-08-420-006

- (2) Connect the push button [2].

NOTE: Make sure you install the compression spring between the faucet body and the push button assembly.

SUBTASK 38-11-08-410-004

- (3) Put the faucet cover [6] in its position.

SUBTASK 38-11-08-420-007

- (4) Install the reducer [5] and packing [12] that attaches the faucet cover [6].

G. Cartridge Valve Assembly Installation Test

SUBTASK 38-11-08-860-004

- (1) Turn the water shutoff valve to the ON position.

SUBTASK 38-11-08-710-002

- (2) Make a selection of the time the water flows from 5 second to 10 seconds, then do this test.

- (a) Push the push button [2] to make sure the time the water flows is satisfactory.
- (b) If the length of time the water flows is not satisfactory, do this task: Water Faucet Adjustment (Adams Rite), TASK 38-11-08-820-801.

SUBTASK 38-11-08-790-001

- (3) Make sure that the cartridge does not have a leak.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-08-010-017

- (1) Turn the water shutoff to the ON position.

- (a) Main Deck Lavatories:

- 1) Close the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-410-006

- (2) Close the access to the lavatory module, (TASK 06-41-00-800-801).

————— END OF TASK —————

TASK 38-11-08-960-802

7. Hydraulic Timer Replacement (Adams Rite)

(Figure 201)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G02356	Tape - Saint Gobain Rulon J Tape	

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C. Prepare to Replace the Hydraulic Timer

SUBTASK 38-11-08-010-018

(1) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).

(a) Main Deck Lavatories:

1) Open the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-860-009

(2) Turn the water shutoff valve to the OFF position.

SUBTASK 38-11-08-680-003

(3) Push each of the push buttons [2] to drain the water from the lines.

D. Cartridge Valve Assembly Removal

SUBTASK 38-11-08-020-026

(1) Remove the reducer [5] and packing [12] that attaches the faucet cover [6].

(a) Remove and then discard the packing [12].

SUBTASK 38-11-08-020-027

(2) Remove the faucet cover [6].

SUBTASK 38-11-08-020-028

(3) Disconnect the push button [2] from the cartridge valve assembly [3].

SUBTASK 38-11-08-020-029

(4) Remove the captive screw roller [14] and roller [17] securing push button [2] to actuator [18].

SUBTASK 38-11-08-020-030

(5) Lift up push button [2].

SUBTASK 38-11-08-020-031

(6) Remove shoulder screw [13].

SUBTASK 38-11-08-020-032

(7) Remove actuator [18] and compression spring [15] from the faucet assembly [9].

SUBTASK 38-11-08-020-033

(8) Remove hydraulic timer [16] from actuator [18].

E. Hydraulic Timer Installation

SUBTASK 38-11-08-420-015

(1) Wrap multiple layers of Rulon J tape, G02356 around threaded area of hydraulic timer [16].

SUBTASK 38-11-08-420-016

(2) Thread hydraulic timer [16] into actuator [14] until shaft of timer [16] is 0.170in (4.33mm) away from bottom of actuator [18].

SUBTASK 38-11-08-420-017

(3) Install actuator [18] in faucet assembly [9] using shoulder screw [13].

SUBTASK 38-11-08-420-018

(4) Install roller [17] and captive screw roller [14] onto push button [2].

SUBTASK 38-11-08-410-014

(5) Put the faucet cover [6] in its position.

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SUBTASK 38-11-08-420-019

- (6) Install the reducer [5] and packing [12] that attaches the faucet cover [6].

F. Cartridge Valve Assembly Installation Test

SUBTASK 38-11-08-860-010

- (1) Turn the water shutoff valve to the ON position.

SUBTASK 38-11-08-710-006

- (2) Make a selection of the time the water flows from 5 second to 10 seconds, then do this test.
 - (a) Push the push button [2] to make sure the time the water flows is satisfactory.
 - (b) If the length of time the water flows is not satisfactory, do this task: Water Faucet Adjustment (Adams Rite), TASK 38-11-08-820-801.

SUBTASK 38-11-08-790-004

- (3) Make sure that the faucet assembly does not have a leak.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-08-010-019

- (1) Turn the water shutoff to the ON position.
 - (a) Main Deck Lavatories:
 - 1) Close the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-410-015

- (2) Close the access to the lavatory module, (TASK 06-41-00-800-801).

————— END OF TASK —————

TASK 38-11-08-820-802

8. Drain Valve Adjustment (Adams Rite)

(Figure 202)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Drain Valve Adjustment

SUBTASK 38-11-08-010-007

- (1) If it is necessary, get access to the lavatory module (TASK 06-41-00-800-801).

SUBTASK 38-11-08-010-008

- (2) If it is necessary, remove the access door for the water system.

SUBTASK 38-11-08-020-023

- (3) Loosen the screw [25] and nut [24] that attaches the drain valve link [26] to the drain rod [7].

SUBTASK 38-11-08-860-007

- (4) Push the end of the rod assembly [27] up to make sure the drain plug [22] is fully engaged against the collar [23].

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SUBTASK 38-11-08-420-013

- (5) Tighten the screw [25] and nut [24] that attaches the drain valve link [26] to the drain rod [7].

SUBTASK 38-11-08-710-005

- (6) Push the buttons for the water supply to fill the lavatory sink approximately half full.
(a) Make sure the water stays in the lavatory sink.

SUBTASK 38-11-08-420-014

- (7) Push the button for the drain valve on the water faucet.
(a) Make sure the drain valve opens to a minimum of 0.15 in. (3.81 mm) and that the operation of the lavatory sink drain is satisfactory.

SUBTASK 38-11-08-410-012

- (8) Install the access door for the water system.

SUBTASK 38-11-08-410-013

- (9) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— **END OF TASK** —————

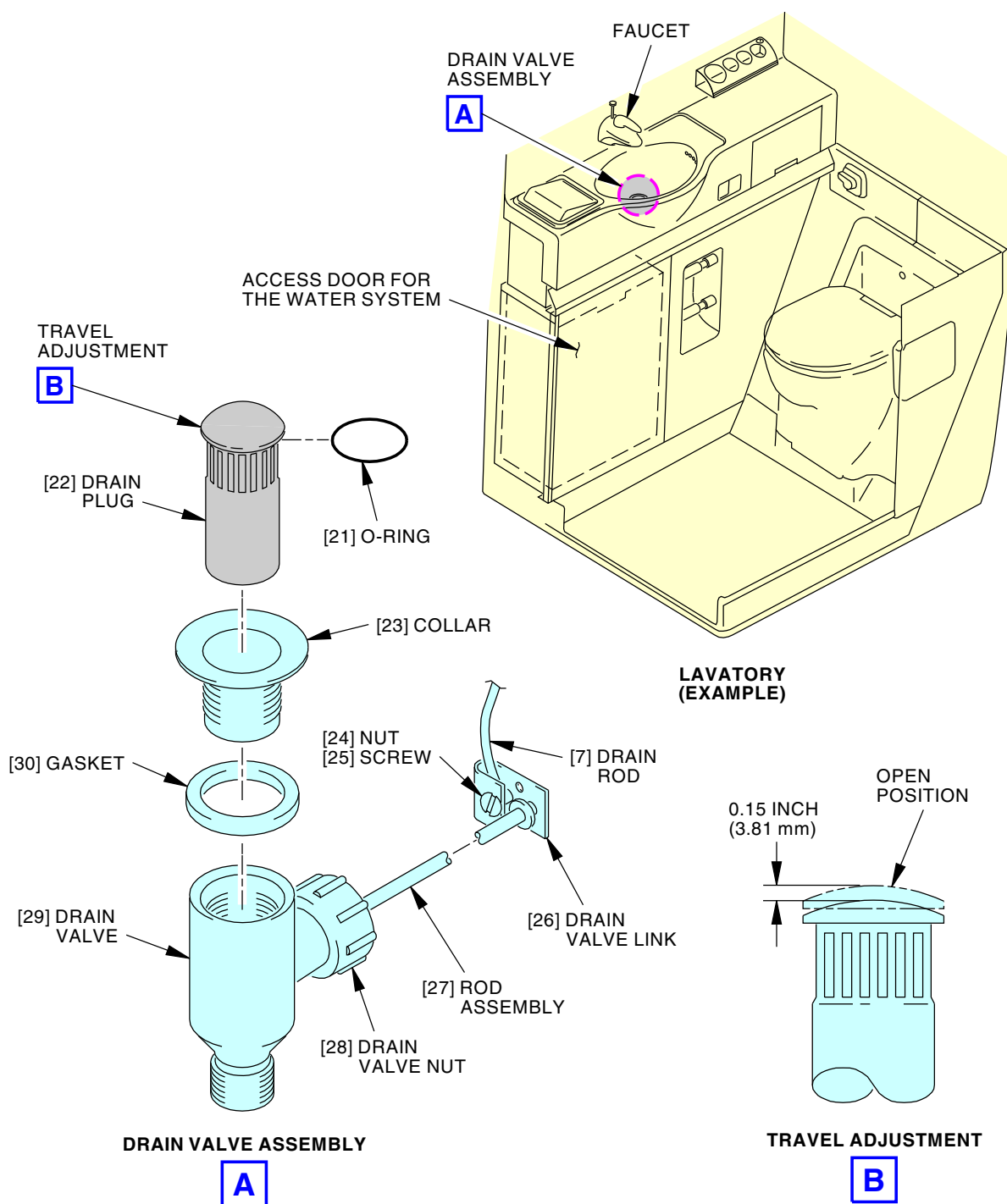
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Faucet Drain Installation
Figure 202/38-11-08-990-802

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TASK 38-11-08-820-801

9. Water Faucet Adjustment (Adams Rite)

(Figure 201)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00026	Compound - Sealing, Locking And Retaining, Single Component	ASTM D5363

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Water Faucet Adjustment

SUBTASK 38-11-08-010-004

(1) Get access to the lavatory module (TASK 06-41-00-800-801).

SUBTASK 38-11-08-020-013

(2) Remove the reducer [5] and packing [12] that attaches the faucet cover [6].

SUBTASK 38-11-08-020-014

(3) Remove the faucet cover [6].

SUBTASK 38-11-08-710-003

(4) Make a selection of the time the water flows from 5 second to 10 seconds, then do this test.

(a) Push each of the push button [2] to make sure the time the water flows is satisfactory.

(b) If the length of time the water flows is more than necessary, then do these steps:

1) Turn the adjustment screw [1] clockwise.

2) Push the push button [2] again to make sure the time the water flows is satisfactory.

3) If the length of time the water flows is not satisfactory, then do this step again:

(c) If the length of time the water flows is less than necessary, then do these steps:

1) Turn the adjustment screw [1] counterclockwise.

2) Push the push button [2] again to make sure the time the water flows is satisfactory.

3) If the length of time the water flows is not satisfactory, then do this step again:

(d) If the length of time the water flows is satisfactory, put compound, A00026 grade C, on the threads of the adjustment screw [1], then continue.

SUBTASK 38-11-08-410-007

(5) Put the faucet cover [6] in its position.

SUBTASK 38-11-08-420-008

(6) Install the reducer [5] and packing [12] for the faucet cover [6].

SUBTASK 38-11-08-410-011

(7) Close the access to the lavatory module, (TASK 06-41-00-800-801).

————— END OF TASK —————

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TASK 38-11-08-000-803

10. Faucet Assembly Removal (JAMCO)

Figure 203

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Faucet Assembly Removal

SUBTASK 38-11-08-010-022

(1) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).

(a) Main Deck Lavatories:

1) Open the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-860-017

(2) Turn the water shutoff valve to the OFF position.

SUBTASK 38-11-08-680-005

(3) Push down and lift up on the handle assembly [46] to drain the water from the lines.

SUBTASK 38-11-08-010-023

(4) Remove the access door for the water system.

D. Faucet Assembly Removal

SUBTASK 38-11-08-670-005

(1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-08-020-058

(2) Remove the drain rod assembly [37] and bushing [38].

SUBTASK 38-11-08-020-059

(3) Remove the handle assembly [46] by removing the shaft [45].

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SUBTASK 38-11-08-020-060

- (4) Remove the nozzle [36], use an S-shaped spanner wrench.

SUBTASK 38-11-08-020-061

- (5) Remove the sleeve [42] by removing the screws [50].

SUBTASK 38-11-08-020-062

- (6) Remove the end cap [41] with a pull and twist.

SUBTASK 38-11-08-020-063

- (7) Remove the injection case [39] by removing the screws [40].

SUBTASK 38-11-08-020-064

- (8) Disconnect the drain rod [51] from the faucet.

SUBTASK 38-11-08-020-065

- (9) Remove the mounting screws [49] for the faucet assembly.

SUBTASK 38-11-08-020-066

- (10) Remove bracket [53] and drain rod [51] by removing the screws [52].

SUBTASK 38-11-08-020-067

- (11) Pull out the faucet assembly with connected pipes, hoses and drain rod from splash guard.

SUBTASK 38-11-08-020-068

- (12) Disconnect the water hoses [8].

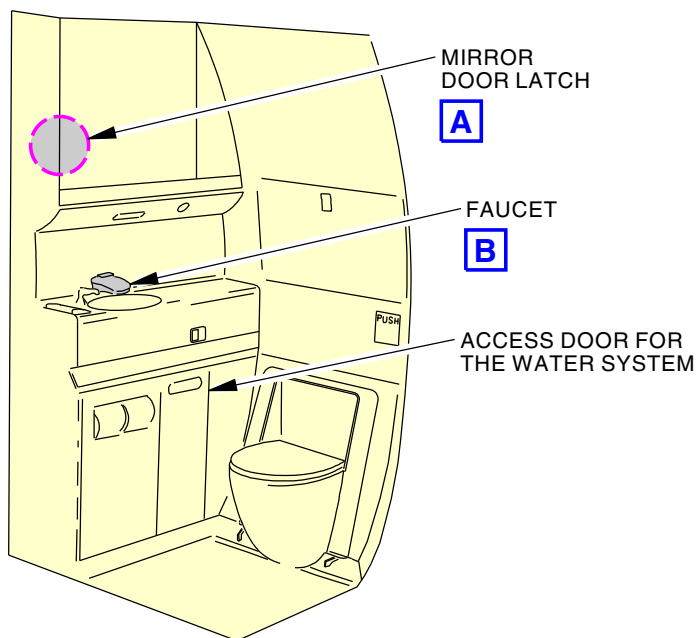
————— **END OF TASK** —————

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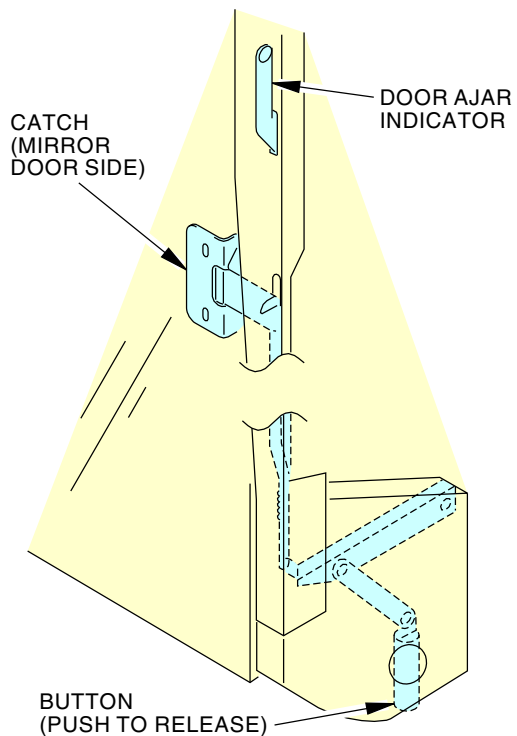
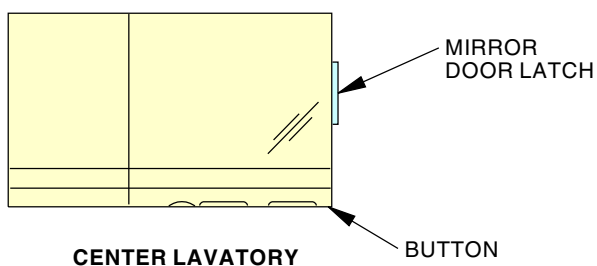
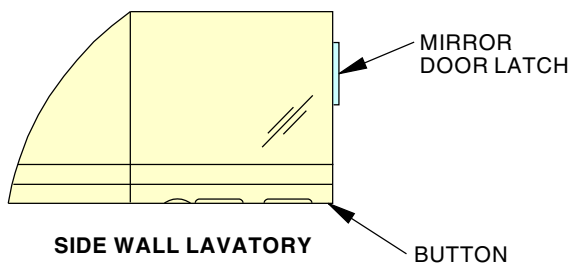
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**LAVATORY
(EXAMPLE)**



MIRROR DOOR LATCH

A

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**Faucet - Lavatory
Figure 203/38-11-08-990-804 (Sheet 1 of 2)**

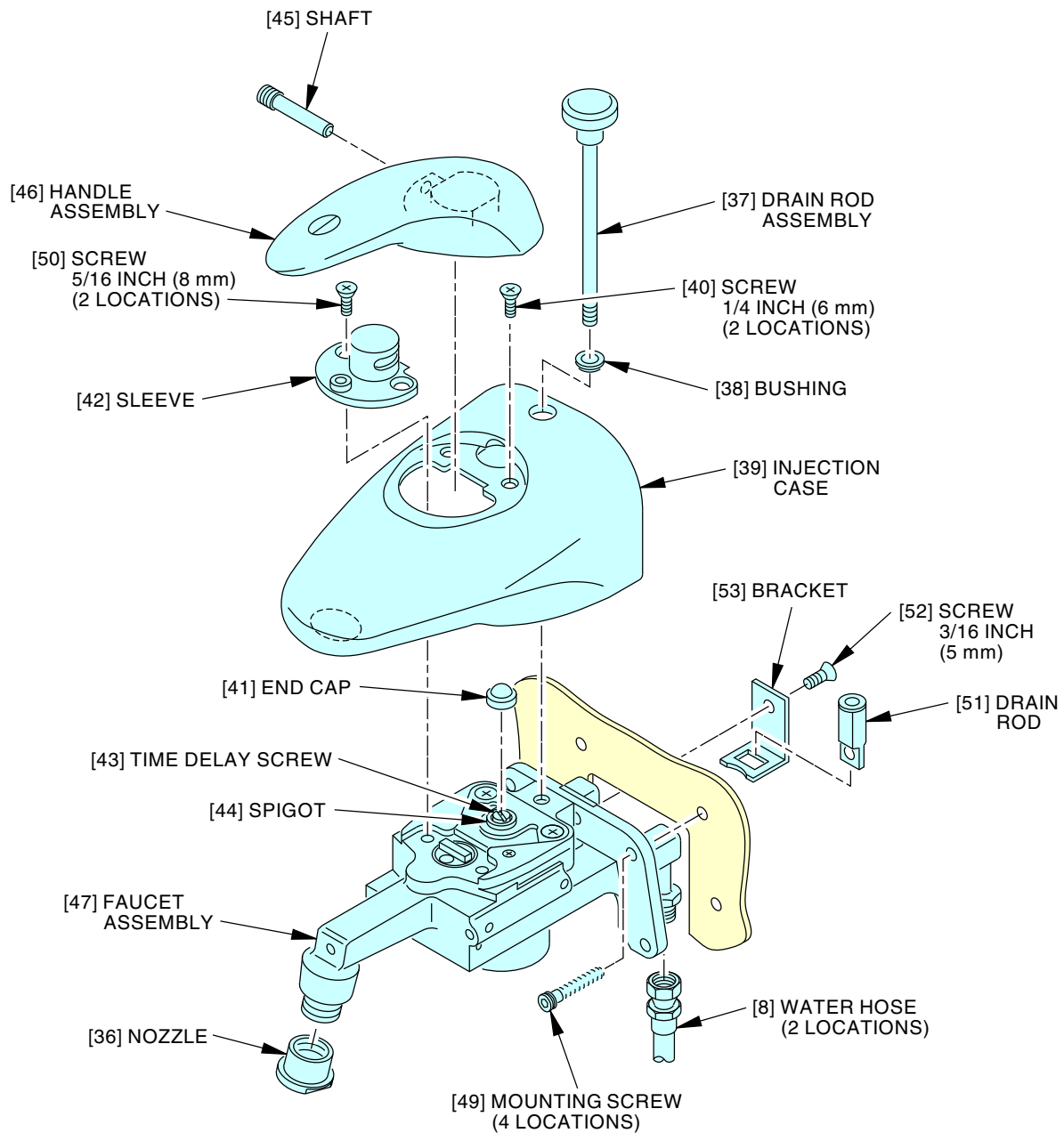
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JAMCO FAUCET

B

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**Faucet - Lavatory
Figure 203/38-11-08-990-804 (Sheet 2 of 2)**

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TASK 38-11-08-400-803

11. Faucet Assembly Installation (JAMCO)

Figure 203

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Faucet Assembly Installation

SUBTASK 38-11-08-670-006

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-08-420-040

- (2) Connect the water hoses [8] to the faucet assembly.

SUBTASK 38-11-08-420-041

- (3) Put the faucet assembly with pipes, hoses, and the drain rod into the splash guard.

SUBTASK 38-11-08-420-042

- (4) Install bracket [53], drain rod [51] and screws [52].

- (a) Make sure to use the correct length screw. Install tightly.

SUBTASK 38-11-08-420-043

- (5) Install the mounting screws [49] for the faucet assembly.

SUBTASK 38-11-08-420-044

- (6) Connect the drain rod [51] to the faucet.

SUBTASK 38-11-08-420-045

- (7) Install the injection case [39] and screws [40].

- (a) Make sure to use the correct length screw. Install tightly.

SUBTASK 38-11-08-420-046

- (8) Install the end cap [41].

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SUBTASK 38-11-08-420-047

- (9) Install the sleeve [42] and screws [50].
 - (a) Make sure to use the correct length screw. Install tightly.

SUBTASK 38-11-08-420-048

- (10) Install the nozzle [36] using an S-shaped spanner wrench.

SUBTASK 38-11-08-420-049

- (11) Install the handle assembly [46] and shaft [45].

SUBTASK 38-11-08-420-050

- (12) Install the drain rod assembly [37] and bushing [38].

D. Faucet Assembly Installation Test

SUBTASK 38-11-08-860-018

- (1) Turn the water shutoff valve to the ON position.

SUBTASK 38-11-08-790-005

- (2) Make sure that the water hose connections do not have a leak.

SUBTASK 38-11-08-710-010

- (3) Make a selection of the time the water flows from 3 to 15 seconds, then do this test.
 - (a) Push down and lift up on the handle assembly [46] to make sure the time the water flows is satisfactory.
 - (b) If the length of time the water flows is not satisfactory, do this task: Water Faucet Adjustment (JAMCO), TASK 38-11-08-820-803

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-08-670-002

- (1) If you have not followed all of the procedures to prevent contamination, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-08-410-018

- (2) Install the access door for the water system.

SUBTASK 38-11-08-410-019

- (3) Turn the water shutoff valve to the ON position.
 - (a) Main Deck Lavatories:
 - 1) Close the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-08-410-020

- (4) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— END OF TASK —————

TASK 38-11-08-820-803

12. Water Faucet Adjustment (JAMCO)

Figure 203

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

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B. Consumable Materials

Reference	Description	Specification
A00026	Compound - Sealing, Locking And Retaining, Single Component	ASTM D5363

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Water Faucet Adjustment

SUBTASK 38-11-08-010-024

- (1) Get access to the lavatory module Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801.

SUBTASK 38-11-08-020-069

- (2) Remove the shaft [45] that attaches the handle assembly [46].

SUBTASK 38-11-08-020-070

- (3) Remove the handle assembly [46].

SUBTASK 38-11-08-020-071

- (4) Remove the end cap [41].

NOTE: If it is difficult to remove the end cap [41], removal of the injection case [39] is recommended.

SUBTASK 38-11-08-420-051

- (5) Temporarily attach the handle assembly [46] to the sleeve [42], by installing the shaft [45].

SUBTASK 38-11-08-710-011

- (6) Make a selection of the time the water flows from 3 seconds to 15 seconds, then do this test.

- (a) Push down and lift up on the handle assembly [46] to make sure the time the water flows is satisfactory.

- (b) If the length of time the water flows is more than necessary, then do these steps:

- 1) Turn the time delay screw [43] counterclockwise.

NOTE: While adjusting the time delay screw [43] make sure the spigot [44] does not rotate.

NOTE: If necessary remove the handle assembly [46] to gain better access to the time delay screw [43], but make sure and reattach the handle assembly [46] to continue with the time delay adjustment.

- 2) Push down and lift up on the handle assembly [46] again to make sure the time the water flows is satisfactory.

- 3) If the length of time the water flows is not satisfactory, then do these steps again.

- (c) If the length of time the water flows is less than necessary, then do these steps:

- 1) Turn the time delay screw [43] clockwise.

NOTE: While adjusting the time delay screw [43] make sure the spigot [44] does not rotate.

NOTE: If necessary remove the handle assembly [46] to gain better access to the time delay screw [43], but make sure and reattach the handle assembly [46] to continue with the time delay adjustment.

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- 2) Push down and lift up on the handle assembly [46] again to make sure the time the water flows is satisfactory.
- 3) If the length of time the water flows is not satisfactory, then do these steps again.
- (d) If the length of time the water flows is satisfactory, put compound, A00026, on the threads of the time delay screw [43], then continue.

SUBTASK 38-11-08-020-072

- (7) Remove the handle assembly [46] from the sleeve [42] by removing the shaft [45].

SUBTASK 38-11-08-420-052

- (8) Install the end cap [41].

SUBTASK 38-11-08-420-053

- (9) Install the handle assembly [46] and shaft [45].

SUBTASK 38-11-08-410-021

- (10) Close the access to the lavatory module, Finding an Access Door or Panel on the Fuselage, TASK 06-41-00-800-801.

———— **END OF TASK** ————

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LAVATORY ELECTRONIC FAUCET - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) A removal of the faucet assembly.
 - (2) An installation of the faucet assembly.
 - (3) A removal of the drain valve assembly.
 - (4) An installation of the drain valve assembly.
 - (5) An adjustment of the drain valve assembly.

TASK 38-11-09-000-808

2. Electronic Faucet Assembly Removal

Figure 201

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Prepare for the Removal

SUBTASK 38-11-09-670-006

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-09-010-019

- (2) Get access to the lavatory module (TASK 06-41-00-800-801).

SUBTASK 38-11-09-010-020

- (3) Open the mirror cabinet door.

SUBTASK 38-11-09-040-001

- (4) Turn the water shutoff valve to the OFF position.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

SUBTASK 38-11-09-010-021

- (5) Remove the access door for the water system.

SUBTASK 38-11-09-010-022

- (6) Open the access door for the lower cabinet.

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SUBTASK 38-11-09-010-023

- (7) Put your hands in front of the faucet until the faucet drains.
 - (a) If the faucet is not serviceable, do these steps.
 - 1) Open the access door for the water system below the sink.
 - 2) Open the lavatory drain valve to release the pressure in the water system.

SUBTASK 38-11-09-040-002

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	4	C25617	LAV ELEC FAUCET

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	27	C38400	LAV WTR HTR 3

C. Faucet Assembly Removal

SUBTASK 38-11-09-020-042

- (1) Do these steps to remove the faucet [14].
 - (a) Disconnect faucet electrical connector [27] from the power connector under the sink area.
 - (b) Disconnect the nut [21], placard [20], ring [18], spring washer [17], nut [16], and selector switch [15] from the bracket [19].
 - (c) Disconnect the screws [23], washers [24] and clamps [23] that attach the wires [22] for the selector switch [15] and connector [27] to the back wall of the lavatory cabinet.
 - (d) Disconnect the drain rod [4] from the drain valve assembly.
 - (e) Open the bottom cover [10] of the faucet [14] by removing the nozzle [12] and packing [11] with an allen wrench.
 - (f) Remove the screws [13] that attach the faucet [14] to the backsplash.
 - (g) Disconnect the faucet [14] from the backsplash [1].
 - (h) Loosen the coupling nuts [2] and disconnect the water hoses [3].
 - (i) Pull the attached wires [22] for the selector switch [8] and connector [9] through the opening in the backsplash [1].
 - (j) Remove the faucet [14].

————— END OF TASK —————

TASK 38-11-09-400-808

3. Electronic Faucet Assembly Installation

(Figure 201)

A. References

<u>Reference</u>	<u>Title</u>
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

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B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Faucet Assembly Installation

SUBTASK 38-11-09-670-007

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-09-400-001

- (2) Do these steps to install the faucet [14] assembly:

- Open the bottom cover [10] of the faucet [14] by removing the nozzle [12] and packing [11] with an allen wrench.
- Connect the water hoses [3] to the faucet [14] by tightening hose coupling nuts [2].
- Insert faucet wires [22] through the hole of the backsplash [1].
- Insert the bottom end of the drain rod [4] through the hole of the back splash [1] and insert the top end through the drain rod hole of the faucet [14].
- Position the faucet [14] against the backsplash [1].
- Install the screws [13] for the faucet [14].
- Install the bottom cover [10], nozzle [12] and packing [11] to the faucet [14] using an allen wrench .
- Apply sealant (SH780: AR) between the gap around the faucet [14] and the backsplash [1].
- Connect to the drain rod [4] to the drain valve assembly [5] with the screw [7] and nut [6] (Drain Valve Adjustment AMM 38-11-09/201).
- Connect the switch [8] and placard [20] to the bracket [19] with the nut [21], spring washer [17], ring [18], and nut [21].
- Attach the wires [22] for the faucet [14] to the back wall as necessary with clamps [23] , washers [24] and screws [25].
- Coil and stow the remaining wire [22] as necessary with tie wraps [26] .
- Connect Electrical Faucet connector [27] to the power connector under the sink area.

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D. Faucet Assembly Installation Test

SUBTASK 38-11-09-200-001

(1) Do these step to test the faucet:

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C38401	LAV WTR HTR 1
L	4	C25617	LAV ELEC FAUCET

(b) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

(c) Turn the water shutoff valve to the ON position.

(d) Make sure that the water hose connections do not have a leak.

(e) Place the selector switch [15] in the off position.

(f) Put your hand under the faucet sensor and move as washing hands. Make sure the water does not flow.

(g) Place selector switch [15] in the on position.

(h) Put your hand under the faucet sensor and move as washing hands. Make sure the water flows for a maximum of 32 seconds.

(i) Adjust the temperature knob from cold to hot (blue to red). Make sure the water temperature changes in relation with the temperature knob.

(j) Stop the movement of your hand. Make sure the water flow stops completely.

(k) Push the drain knob. Make sure the water drains from the sink bowl.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-09-670-002

(1) If you have not followed all of the procedures to prevent contamination, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-09-410-019

(2) Install the access door for the water system.

SUBTASK 38-11-09-410-020

(3) Close the access door for the lower cabinet.

SUBTASK 38-11-09-410-021

(4) Close the mirror cabinet door.

SUBTASK 38-11-09-410-022

(5) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— END OF TASK —————

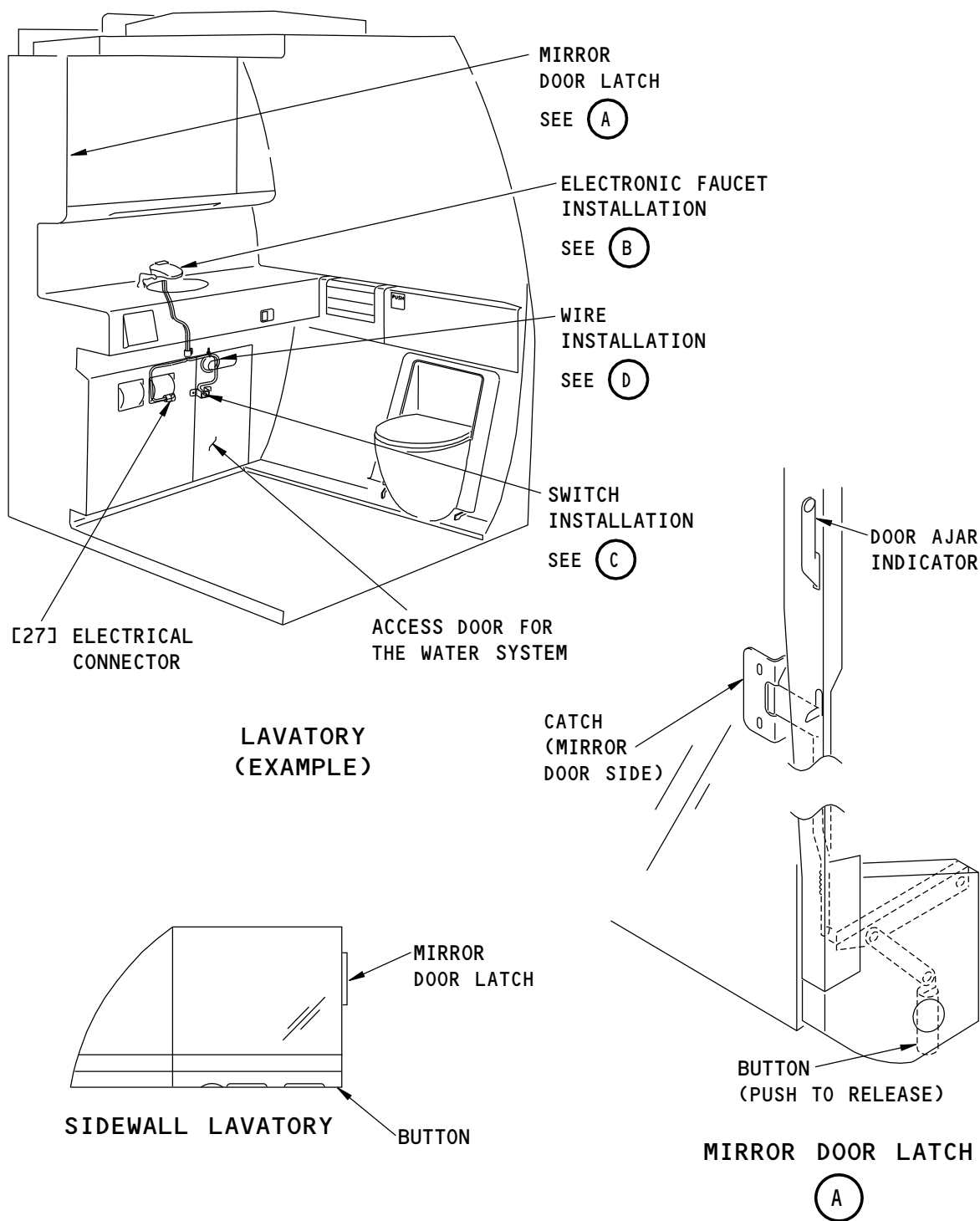
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**Electronic Faucet Installation
Figure 201/38-11-09-990-806 (Sheet 1 of 3)**

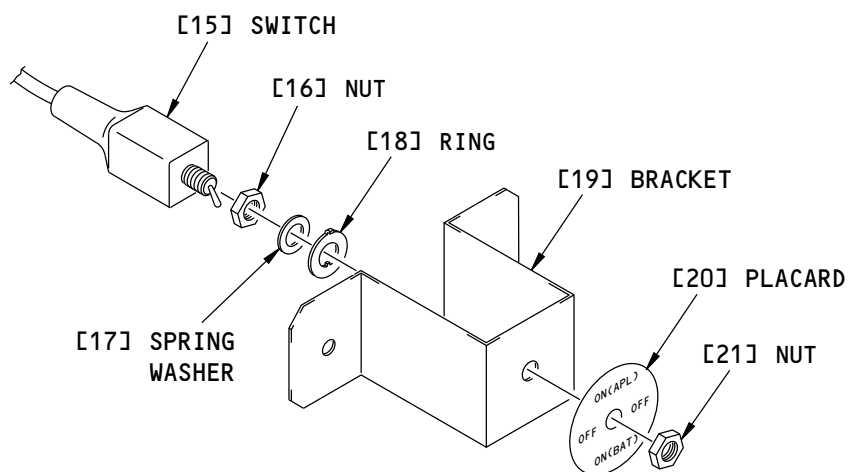
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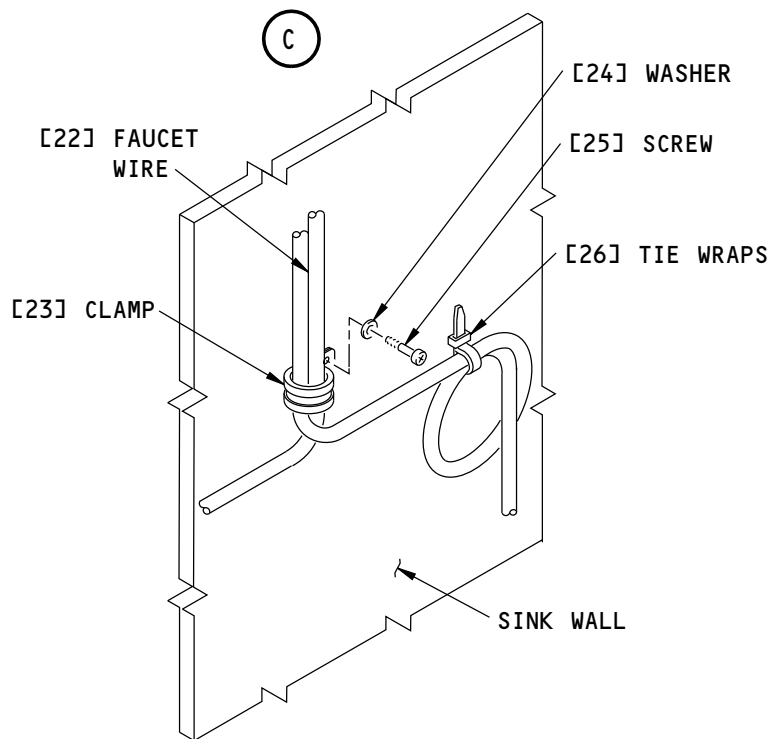
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**SWITCH INSTALLATION
(EXAMPLE)**



**WIRE INSTALLATION
(EXAMPLE)**

(D)

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**Electronic Faucet Installation
Figure 201/38-11-09-990-806 (Sheet 2 of 3)**

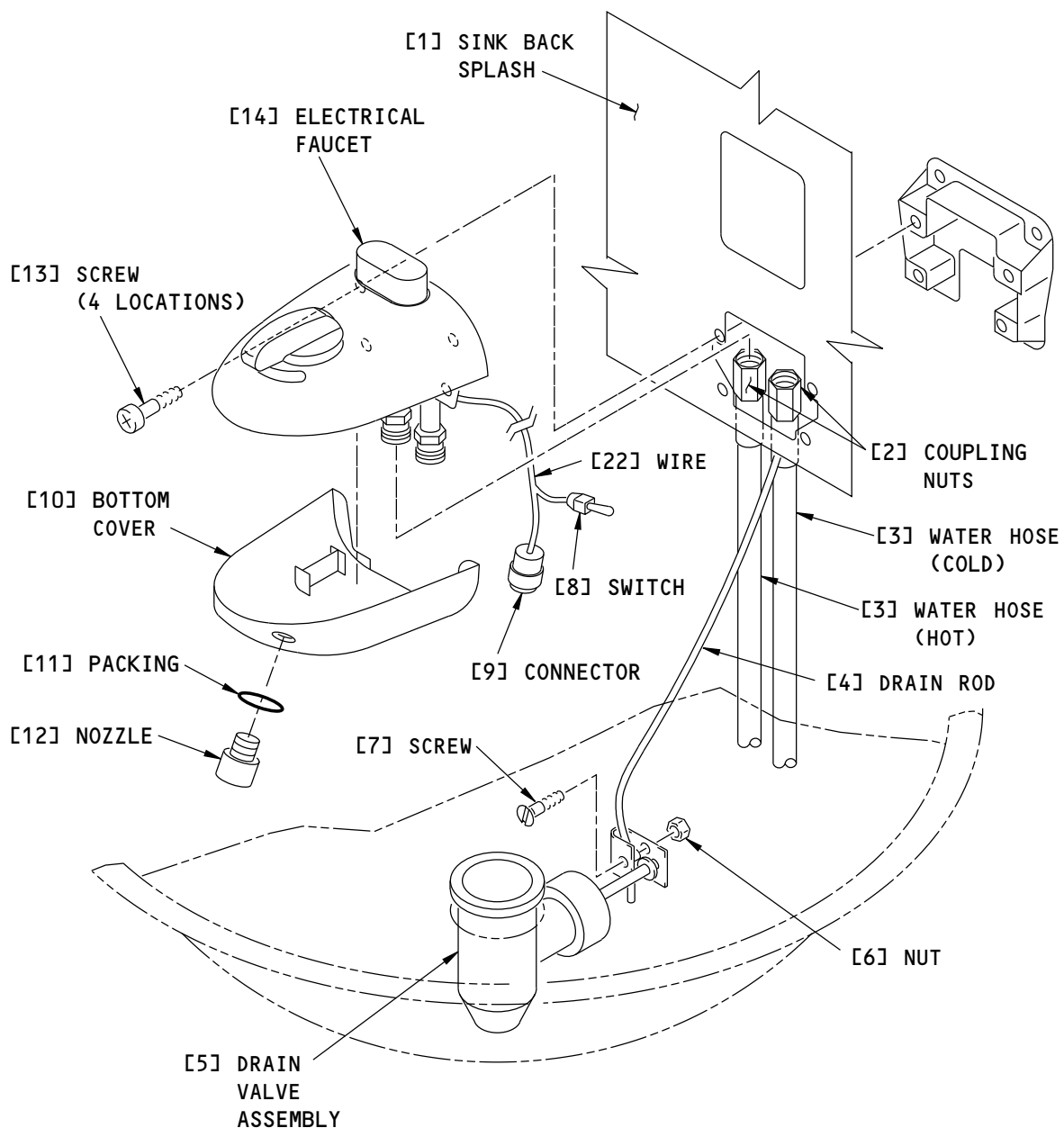
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ELECTRONIC FAUCET INSTALLATION

B

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**Electronic Faucet Installation
Figure 201/38-11-09-990-806 (Sheet 3 of 3)**

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TASK 38-11-09-000-809

4. Drain Valve Assembly Removal

(Figure 202)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-11-09-010-024

- (1) Access the lavatory module, (TASK 06-41-00-800-801).

SUBTASK 38-11-09-010-025

- (2) Open the mirror cabinet door.

SUBTASK 38-11-09-040-003

- (3) Turn the water shutoff valve to the OFF position.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

SUBTASK 38-11-09-010-026

- (4) Remove the access door for the water system.

D. Drain Valve Assembly Removal

SUBTASK 38-11-09-030-001

- (1) Loosen the nut [6] and screw [7] that attaches the drain valve link [31] to the drain rod [4].

SUBTASK 38-11-09-030-002

- (2) Disconnect the drain valve link [31] from the drain rod [4].

SUBTASK 38-11-09-030-003

- (3) Loosen the drain valve nut [33] to remove the rod assembly [32] from the drain valve body [39].

SUBTASK 38-11-09-020-043

- (4) Remove the drain plug [29] with the o-ring [28] from the collar [30].

SUBTASK 38-11-09-020-044

- (5) Remove the collar [30] and gasket [35] from the valve assembly [34].

SUBTASK 38-11-09-020-045

- (6) Remove the valve assembly [34].

————— END OF TASK —————

TASK 38-11-09-400-809

5. Drain Valve Assembly Installation

(Figure 202)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

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B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Drain Valve Assembly Installation

SUBTASK 38-11-09-420-032

- (1) Put the drain valve assembly [34] in its position.

NOTE: For this installation, you must disassemble the drain valve assembly [34].

SUBTASK 38-11-09-430-001

- (2) Install the collar [30] with the gasket [35] in the drain valve [34].

SUBTASK 38-11-09-420-034

- (3) Install the drain plug [29] with the o-ring [28] in the drain valve [34].

SUBTASK 38-11-09-420-035

- (4) Loosen the drain valve nut [33] to install the rod assembly [32].

SUBTASK 38-11-09-420-036

- (5) Install the drain valve link [31] and the drain rod [4] to connect the rod assembly [32].

SUBTASK 38-11-09-420-037

- (6) Install the screw [7] and nut [6] to hold the drain valve link [31] in its position.

D. Drain Valve Assembly Installation Test

SUBTASK 38-11-09-440-001

- (1) Turn the water shutoff valve to the ON position.

SUBTASK 38-11-09-212-001

- (2) Put your hands in front of the faucet until the water fills the lavatory basin to approximately half full.
 - (a) Make sure that there is no leakage below the lavatory sink.

SUBTASK 38-11-09-212-002

- (3) Push the button for the drain valve on the water faucet.
 - (a) Make sure that the drain valve opens a minimum of 0.15 inches (3.8 mm) and that the operation of the drain is satisfactory.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-09-410-023

- (1) Install the access door for the water system.

SUBTASK 38-11-09-410-024

- (2) Close the mirror cabinet door.

SUBTASK 38-11-09-410-025

- (3) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— END OF TASK —————

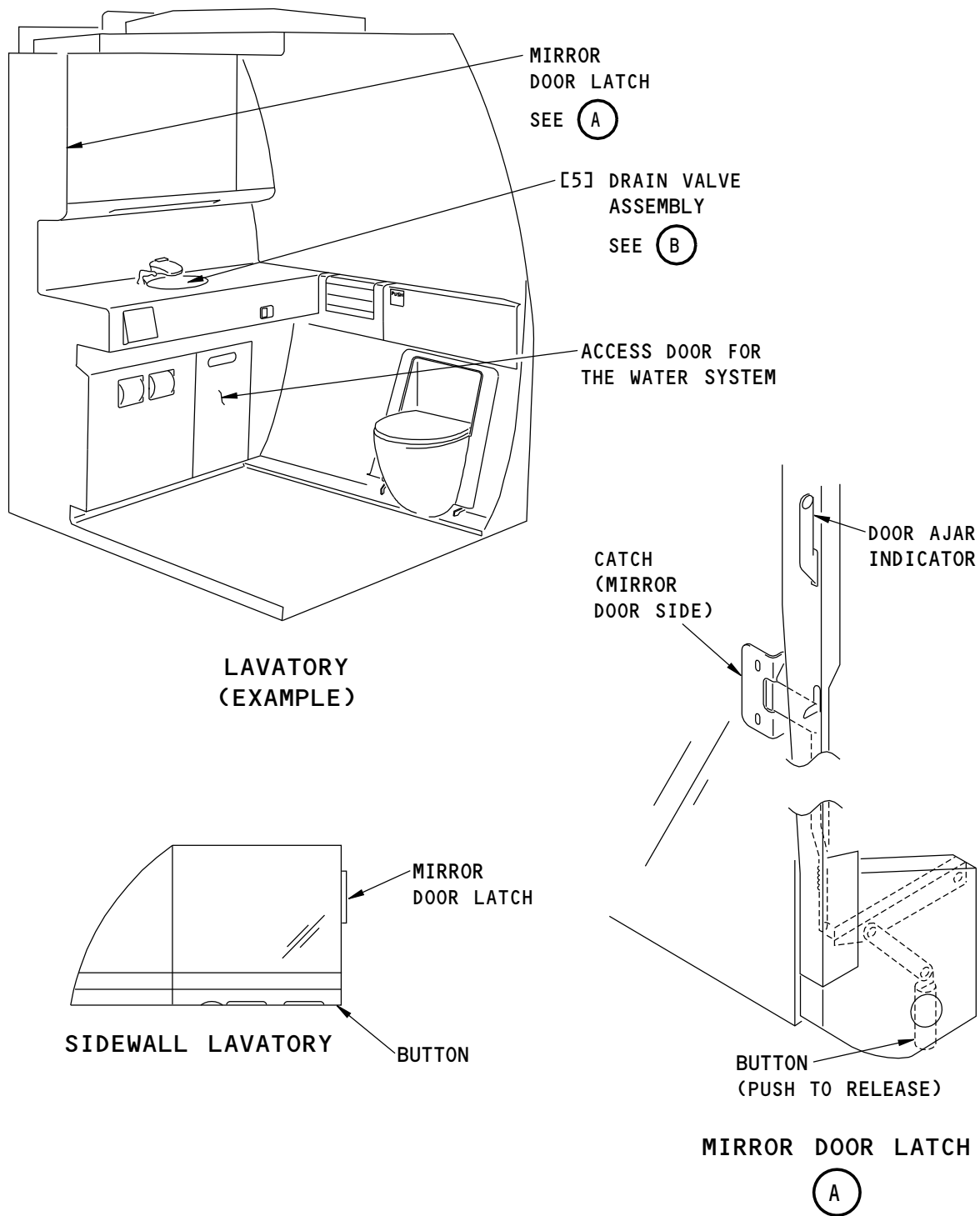
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**Faucet Drain Installation
Figure 202/38-11-09-990-807 (Sheet 1 of 2)**

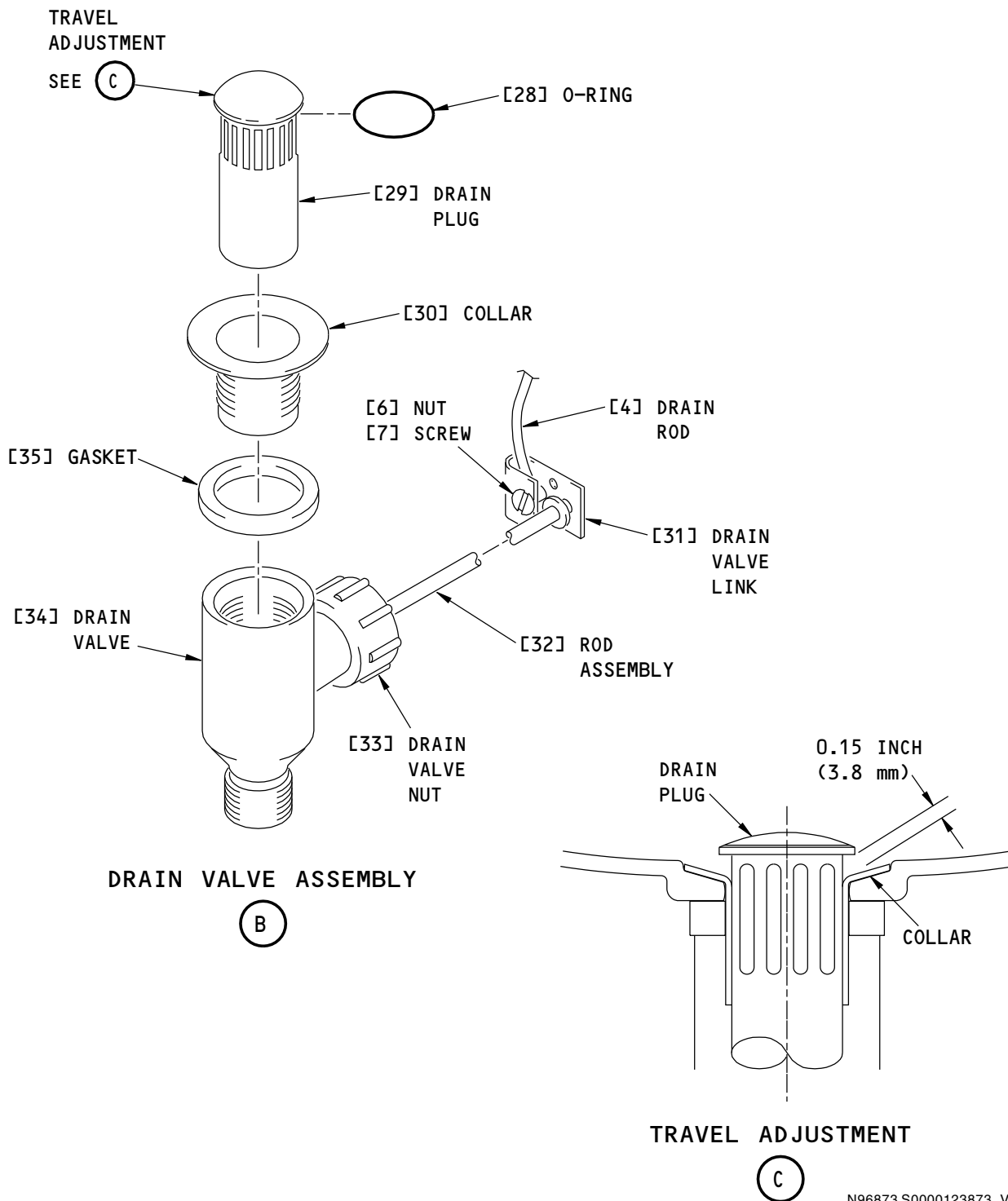
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**Faucet Drain Installation
Figure 202/38-11-09-990-807 (Sheet 2 of 2)**

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LAVATORY ELECTRONIC FAUCET - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) A removal of the faucet assembly.
 - (2) An installation of the faucet assembly.
 - (3) A removal of the drain valve assembly.

TASK 38-11-09-000-810

2. Electronic Faucet Assembly Removal

A. **References**

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)

B. **Tools/Equipment**

Reference	Description
STD-149	Cap and Plug - NAS834

C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

D. **Prepare for the Removal**

Figure 201

SUBTASK 38-11-09-010-027

- (1) Get access to the lavatory module.

SUBTASK 38-11-09-010-028

- (2) Open the mirror cabinet door.

SUBTASK 38-11-09-860-031

- (3) Turn the water shutoff valve to the OFF position.

- (a) Main Deck Lavatories:

- 1) Open the mirror cabinet door.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

SUBTASK 38-11-09-680-003

- (4) Put your hands in front of the faucet until the faucet drains.

- (a) If the faucet is not serviceable, do these steps.

- 1) Open the access door for the water system below the sink.

- 2) Open the lavatory drain valve to release the pressure in the water system.

NOTE: The lavatory drain valve behind the cabinet door below the sink in the lavatory, near the floor.

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SUBTASK 38-11-09-860-032

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	4	C25617	LAV ELEC FAUCET

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	11	C25615	LAV ELEC FAUCET

SUBTASK 38-11-09-010-029

- (6) Remove the access door for the water system.

SUBTASK 38-11-09-010-030

- (7) Open the access door for the lower cabinet.

SUBTASK 38-11-09-020-046

- (8) Cut the tie wraps [13] from the cable tie mounts [12].

- (a) Discard the tie wraps [13].

SUBTASK 38-11-09-020-047

- (9) Disconnect the electrical connector [10] of the wire [14].

SUBTASK 38-11-09-020-048

- (10) Disconnect the water outlet hose [2] from the fitting [3] at the top of the control module [4].

- (a) Use a bucket or a rag to catch the water from the waterlines.

E. Control Module Removal

SUBTASK 38-11-09-020-049

- (1) Disconnect the electrical connector [11] from the control module [4].

SUBTASK 38-11-09-020-050

- (2) Remove the couplings [7] from the water inlet .

SUBTASK 38-11-09-020-051

- (3) Disconnect the two water inlet water supply hoses [9] from the control module [4].

- (a) Discard the packings [8].

- (b) Use a bucket or a rag to catch the water from the waterlines.

SUBTASK 38-11-09-020-052

- (4) Remove the three screws [6] and washers [5] from the control module [4].

SUBTASK 38-11-09-020-053

- (5) Remove the control module [4].

SUBTASK 38-11-09-480-001

- (6) If you will not install a replacement immediately, do these steps:

- (a) Install clean protective caps and plugs, STD-149, on the open ends of hoses, tubing or other water openings.

NOTE: This will prevent unwanted object entry, and contamination, of the potable water system and components.

- (b) Make sure that you remove power from the applicable lavatory water heater(s). See (Potable Water System - Drain, TASK 12-14-01-616-802).

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F. Faucet Removal

SUBTASK 38-11-09-670-004

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-09-020-054

- (2) To remove the nozzle cap [15], turn counterclockwise with a spanner wrench.

NOTE: Remove the nozzle cap with its gasket from the nozzle-spout.

SUBTASK 38-11-09-020-055

- (3) To remove the lower cover, do these steps:

- (a) Put a screw driver into the clearance between lower cover [18] and the frame [17].
- (b) Push the screwdriver up until the lower cover [18] is released.

SUBTASK 38-11-09-020-056

- (4) Remove the screws [20].

SUBTASK 38-11-09-020-057

- (5) If necessary, cut sealant from around body [16].

SUBTASK 38-11-09-020-058

- (6) Remove the body [16] with the hose [2] and the wire [14] from the mount [19].

SUBTASK 38-11-09-480-002

- (7) If you will not install a replacement immediately, do these steps:

- (a) Install clean protective caps and plugs, STD-149, on the open ends of hoses, tubing or other water openings.

NOTE: This will prevent unwanted object entry, and contamination, of the potable water system and components.

- (b) Make sure that you remove power from the applicable lavatory water heater(s). See (Potable Water System - Drain, TASK 12-14-01-616-802).

————— **END OF TASK** —————

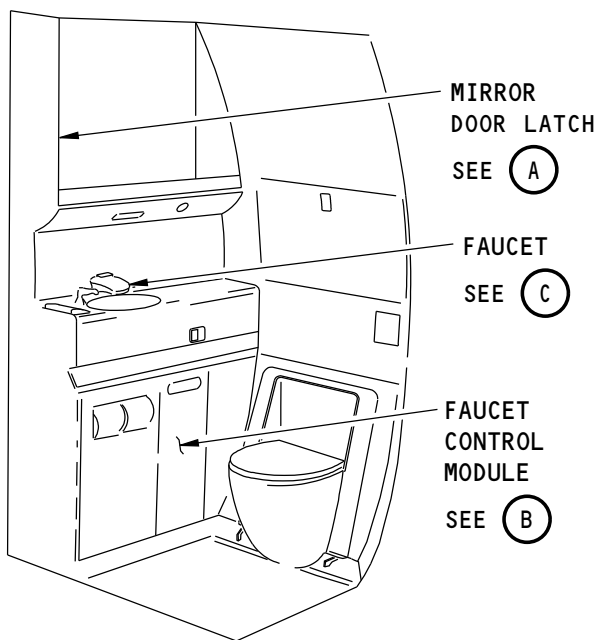
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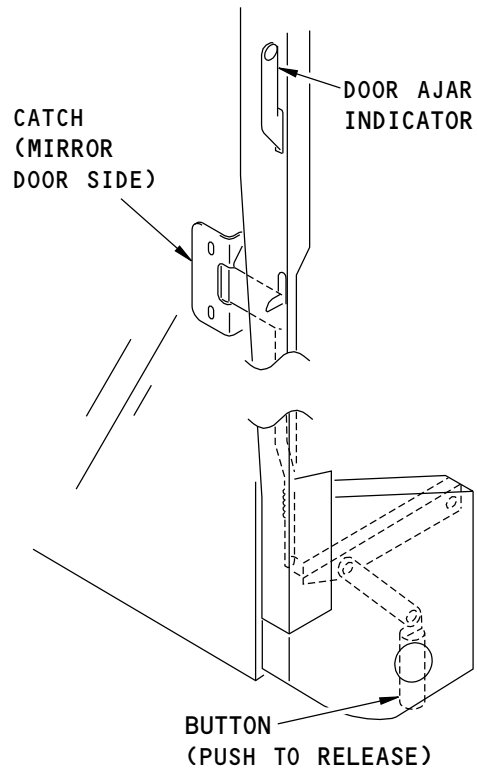
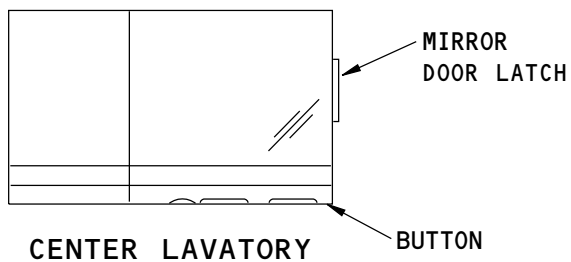
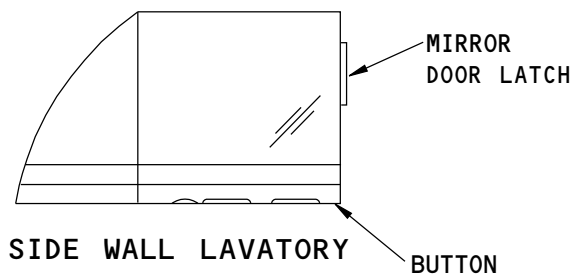
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LAVATORY
(EXAMPLE)



MIRROR DOOR LATCH

(A)

2018704 S0000399436_V1

Electronic Faucet Assembly Installation
Figure 201/38-11-09-990-808 (Sheet 1 of 4)

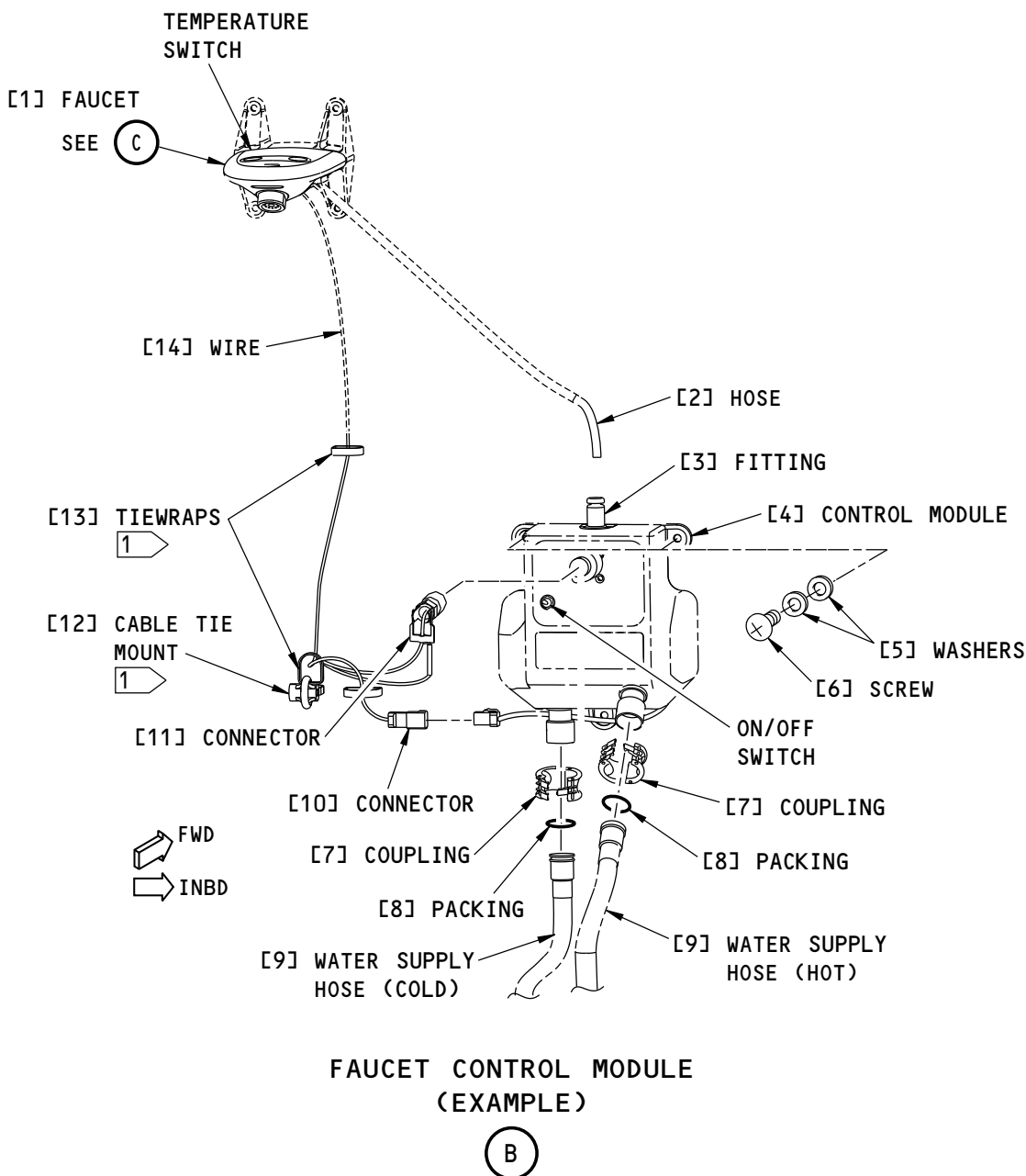
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**Electronic Faucet Assembly Installation
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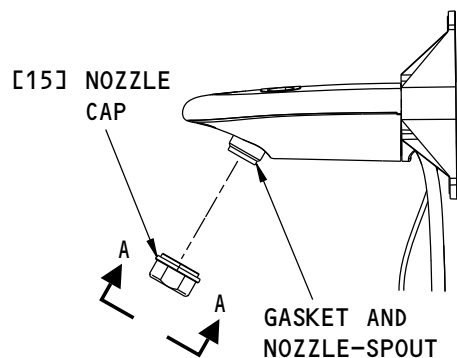
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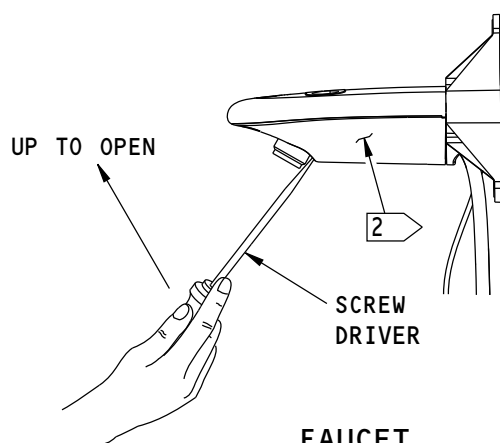
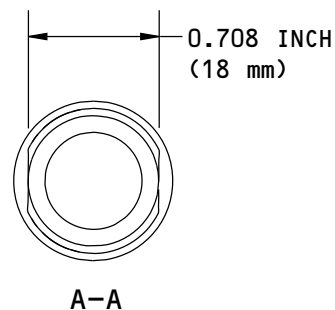
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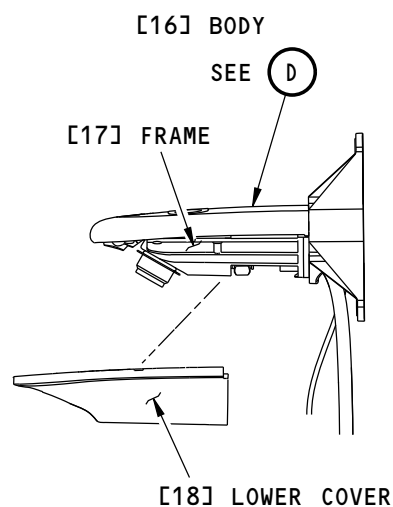
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(C)



FAUCET

(C)



FAUCET

(C)

- 2 REMOVE LOWER COVER TO SLIDE-BACKWARD AND LIFT UP SLIGHTLY SO THAT LOWER COVER DOES NOT INTERFERE WITH FRAME

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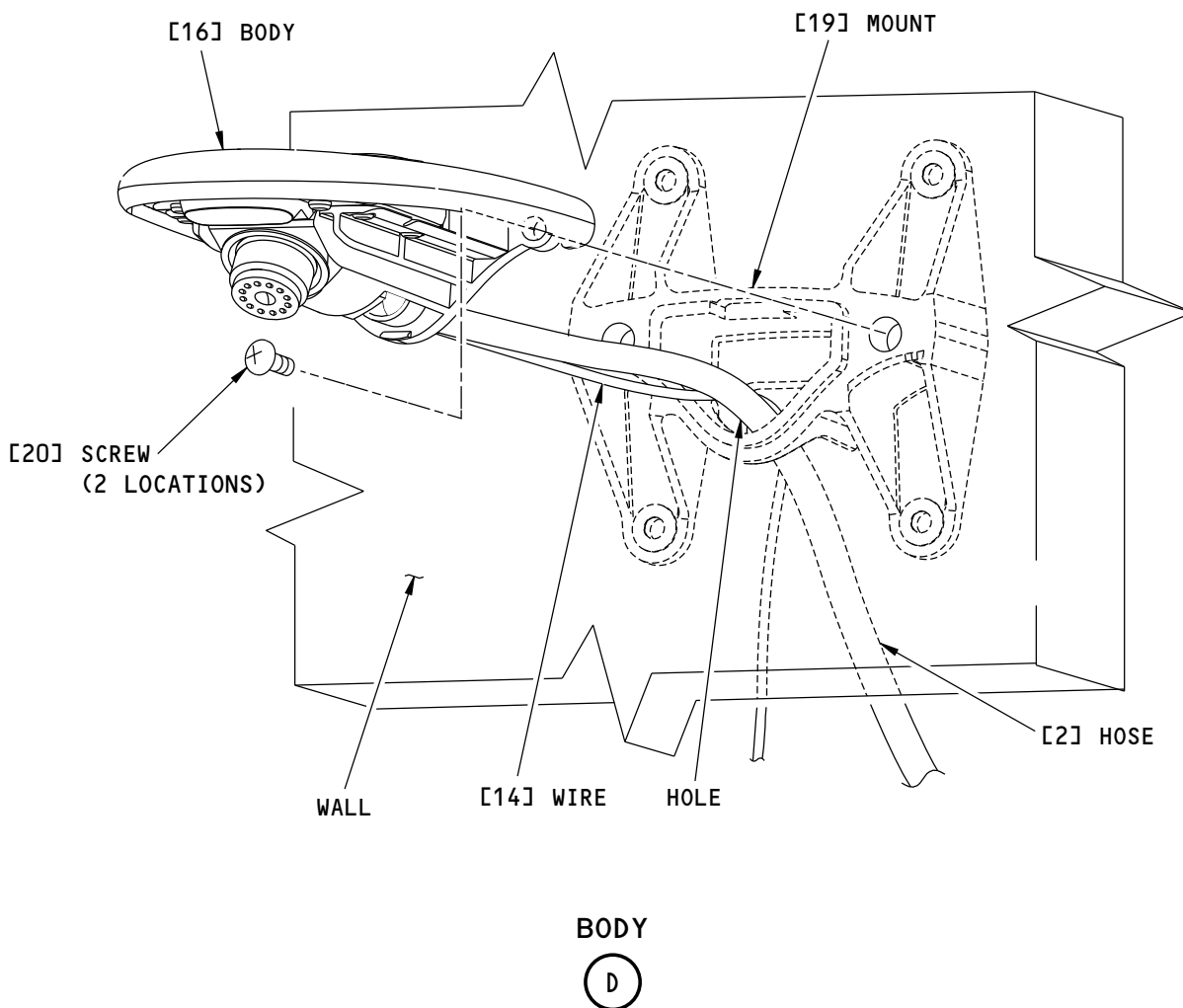
**Electronic Faucet Assembly Installation
Figure 201/38-11-09-990-808 (Sheet 3 of 4)**

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**Electronic Faucet Assembly Installation
Figure 201/38-11-09-990-808 (Sheet 4 of 4)**

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TASK 38-11-09-400-810

3. Electronic Faucet Assembly - Installation

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

B. Tools/Equipment

Reference	Description
STD-149	Cap and Plug - NAS834

C. Consumable Materials

Reference	Description	Specification
A50047	Sealant - Silicone Sealant - JMS0906-4W	
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D50011	Grease - Perfluoropolyether - Christo-lube MCG111	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Prepare for Installation

Figure 201

SUBTASK 38-11-09-860-033

- (1) Make sure that the lavatory water shutoff valve is in the CLOSE position.

SUBTASK 38-11-09-080-001

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

Left Power Management Panel, P110

Row	Col	Number	Name
L	4	C25617	LAV ELEC FAUCET

Right Power Management Panel, P210

Row	Col	Number	Name
J	11	C25615	LAV ELEC FAUCET

SUBTASK 38-11-09-080-002

- (3) If installed, remove the protective caps and plugs, STD-149.

F. Faucet Installation

SUBTASK 38-11-09-670-005

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the faucet installation.

- Use rubber or latex gloves.

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- Replace gloves after you touch drain parts and before you touch the waterlines or faucets.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the faucet removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the faucet, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch with the waterline or faucet connections.
- Clean the waterline and faucet connections before installation.
- Clean the faucet nozzle and faucet body after faucet installation
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-09-420-038

- (2) Put hose [2] and wire [14] through the hole in the mount [19].

NOTE: Put the wire through the hole first and then put the hose through the hole.

SUBTASK 38-11-09-410-026

- (3) Install the body [16] to the mount [19] with screws [20].

SUBTASK 38-11-09-410-027

- (4) Install lower cover [18] to the body [16].

SUBTASK 38-11-09-410-028

- (5) Install the nozzle cap [15] with the gasket and the nozzle-spout to the frame [17] with the spanner wrench.

SUBTASK 38-11-09-410-029

- (6) Install a fillet seal of JMS0906-4W silicone sealant, A50047, around the body [16].

G. Control Module Installation

SUBTASK 38-11-09-410-030

- (1) Put the control module [4] in its position.

SUBTASK 38-11-09-410-031

- (2) Install the control module [4] with the screws [6] and the washers [5].

SUBTASK 38-11-09-410-032

- (3) For the water supply hoses [9] male-female connections on the control module [4], do these steps to prepare the components:
- (a) Make sure that the packing groove and adjacent flat surfaces are free of:
 - Cuts
 - Scratches
 - Dents
 - Distortions
 - Particles of unwanted material
 - (b) Clean the areas that seal with a lint-free gauze cotton wiper, G00034.
 - (c) Clean the new packings [8] with a clean, dry, lint-free gauze cotton wiper, G00034.
 - (d) Lubricate the packings [8] with Molykote 111 Compound, D00189, or Christo-lube MCG111 grease, D50011.
 - (e) Install the packings [8] on the male ferrules.

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- (f) Lubricate the inner diameter of the female ferrule with Molykote 111 Compound, D00189, or Christo-lube MCG111 grease, D50011.

SUBTASK 38-11-09-410-033

- (4) To attach each water supply hoses [9] male-female connection, do these steps:
 - (a) Install the male ferrule for the water supply hose [9] on the female ferrule of the control module [4] to include the new packing.
NOTE: Make sure that the new packing stays in its related position on the male ferrule when you install the female ferrule.
 - (b) Examine the retainer clamp (coupling [7]) to make sure that the hinge pin is correctly installed and rivets are tight.
 - (c) Install the couplings [7] to include the end flanges of the ferrules.
NOTE: Turn the coupling (before you latch it) to put it in a position that will give the easiest access to the latch.
 - (d) Push each latch down on the coupling.
 - (e) Make sure that all of the latches are at the same level.

NOTE: The correct installation can have these tolerances:

A 2 degree maximum angular misalignment between centerlines, a 0.06 in. (1.52 mm) maximum axial misalignment, and a distance between tubes of 0.01 in. (0.25 mm) to 0.28 in. (7.11 mm).

On flexible hoses, the female ferrule is designed to prevent the coupling from angular misalignment to prevent leakage, and thus gives no distance between hoses.

H. Complete the Faucet Assembly Installation

SUBTASK 38-11-09-410-034

- (1) To prepare to connect the hose [2] to the fitting [3], do these steps:
 - (a) Clean the areas that seal with a lint-free gauze cotton wiper, G00034.
 - (b) Clean the fitting [3] with a clean, dry, lint-free gauze cotton wiper, G00034.
 - (c) Lubricate the fitting [3] with Molykote 111 Compound, D00189, or Christo-lube MCG111 grease, D50011.

SUBTASK 38-11-09-420-039

- (2) To connect the hose [2] from the faucet [1] to the control module [4], push on the top part of the fitting [3] flange.

SUBTASK 38-11-09-420-040

- (3) Connect the electrical connector [10] to the control module [4] plug.

SUBTASK 38-11-09-420-041

- (4) Connect the electrical connector [11] to the control module [4].

SUBTASK 38-11-09-420-042

- (5) Attach the wire [14] with tie wraps [13] to the cable tie mounts [12].

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I. Faucet Assembly InstallationTest

SUBTASK 38-11-09-410-035

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	4	C25617	LAV ELEC FAUCET

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	11	C25615	LAV ELEC FAUCET

SUBTASK 38-11-09-860-034

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-09-860-035

- (3) Make sure the lavatory drain valve is closed.

SUBTASK 38-11-09-860-036

- (4) Turn the water shutoff valve to the OPEN position.

SUBTASK 38-11-09-710-007

- (5) Do these steps to test the faucet:

- Make sure that the water hose connections do not have a leak.
- Place the control module selector switch in the OFF position.
- Put your hand under the faucet sensor and move as washing hands. Make sure the water does not flow.
- Place the control module selector switch in the ON position.
- Put your hand under the faucet sensor and move as washing hands. Make sure the water flows for a maximum of 15 seconds.
- Adjust the faucet temperature control switch from cold to hot (blue to red). Make sure the water temperature changes in relation with the temperature switch.
- Stop the movement of your hand. Make sure the water flow stops completely.
- Push the drain knob. Make sure the water drains from the sink bowl.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-09-670-003

- (1) If you have not followed all of the procedures to prevent contamination, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-09-410-036

- (2) Install the access door for the water system.

SUBTASK 38-11-09-410-037

- (3) Close the access door for the lower cabinet.

SUBTASK 38-11-09-410-038

- (4) Close the mirror cabinet door.

SUBTASK 38-11-09-410-039

- (5) Close the access to the lavatory module (TASK 06-41-00-800-801).

————— END OF TASK —————

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ISOLATION, DRAIN, ISOLATION/DRAIN VALVES AND CONTROL CABLES - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

ARO 001-005

- (1) A removal of the isolation/drain valve.
- (2) An installation of the isolation/drain valve.

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- (3) A removal of the forward drain valve.
- (4) An installation of the forward drain valve.
- (5) A removal of the aft drain valve.
- (6) An installation of the aft drain valve.
- (7) A removal of the drain valve for the water tank.
- (8) An installation of the drain valve for the water tank.

ARO 001-005

- (9) A removal of the control cable for the isolation/drain valve.
- (10) An installation of the control cable for the isolation/drain valve.

ARO ALL

- (11) A removal of the control cable for the forward drain valve.
- (12) An installation of the control cable for the forward drain valve.
- (13) A removal of the control cable for the aft drain valve.
- (14) An installation of the control cable for the aft drain valve.
- (15) A removal of the control cable for the drain valve at the water tank.
- (16) An installation of the control cable for the drain valve at the water tank.

ARO 001-005

TASK 38-11-10-000-801

2. Isolation/Drain Valve Removal

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

B. Location Zones

Zone	Area
233	Area Above Passenger Compartment Ceiling, Left - Section 43

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ARO 001-005 (Continued)

C. Prepare for the Isolation/Drain Valve Removal

SUBTASK 38-11-10-860-002

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-11-10-010-003

- (2) Get access to the passenger cabin at the No. 2 entry door (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-004

- (3) To remove the main ceiling panels on the left inboard side 15 to 20 feet aft of the No. 2 entry door, do this task: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

SUBTASK 38-11-10-010-005

- (4) Get access to the isolation/drain valve.

D. Isolation/Drain Valve Removal

SUBTASK 38-11-10-020-013



DO NOT APPLY A TORQUE TO THE HOSES ON THE ISOLATION/DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE ISOLATION/DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (1) Remove the couplings [15] to disconnect the water hoses from the isolation/drain valve [5].

SUBTASK 38-11-10-020-068

- (2) Remove and discard the packings [16].

SUBTASK 38-11-10-020-069

- (3) Remove the nuts [8], washers [7] and bolts [6].

SUBTASK 38-11-10-020-075

- (4) Loosen the B-nuts [11] to disconnect the drain hose [12] from the isolation/drain valve [5].

SUBTASK 38-11-10-020-002

- (5) Remove the isolation/drain valve [5].

SUBTASK 38-11-10-020-074

- (6) Loosen the B-nuts [14] and remove the tube assemblies [13] from the isolation/drain valve [5]. Retain the tube assemblies [13] for the installation.

— END OF TASK —

TASK 38-11-10-400-801

3. Isolation/Drain Valve Installation

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)

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ARO 001-005 (Continued)

(Continued)

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
5	Isolation/drain valve	38-11-59-02A-075	ARO 001-005
16	Packing	38-11-59-02A-060	ARO 001-005

D. Location Zones

Zone	Area
233	Area Above Passenger Compartment Ceiling, Left - Section 43

E. Isolation/Drain Valve Installation

SUBTASK 38-11-10-860-003

- (1) Make sure the isolation/drain valve [5] is in the CLOSED position.

SUBTASK 38-11-10-410-058

- (2) Attach the tube assemblies [13] to the isolation/drain valve [5] with the B-nuts [14].

SUBTASK 38-11-10-420-009



CAUTION

DO NOT APPLY A TORQUE TO THE HOSES ON THE ISOLATION/DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE ISOLATION/DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (3) Attach the drain hose [12] to the isolation/drain valve [5] with the B-nut [11].

SUBTASK 38-11-10-420-002

- (4) Put the isolation/drain valve [5] in its position.
 - (a) Install the bolts [6], washers [7], and nuts [8] for the isolation/drain valve [5].
 - (b) Make sure the shaft from the gear box on the control cable assembly goes into the isolation/drain valve [5].

SUBTASK 38-11-10-640-001

- (5) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packings [16].

SUBTASK 38-11-10-420-060

- (6) Install the new packings [16].

SUBTASK 38-11-10-420-061

- (7) Install the couplings [15] to connect the water hoses to the isolation/drain valve [5].

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ARO 001-005 (Continued)

F. Isolation/Drain Valve Installation Test

SUBTASK 38-11-10-860-008

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-11-10-860-009

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-10-860-010

- (3) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-10-790-001

- (4) Examine the water hose connections at the isolation/drain valve for water leaks.

SUBTASK 38-11-10-670-001

- (5) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

G. Put the Airplane Back to its Usual Condition

SUBTASK 38-11-10-410-001

- (1) Do this task: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 38-11-10-410-002

- (2) Close the access to the passenger cabin at the No. 2 entry door (TASK 06-46-00-800-801).

————— **END OF TASK** —————

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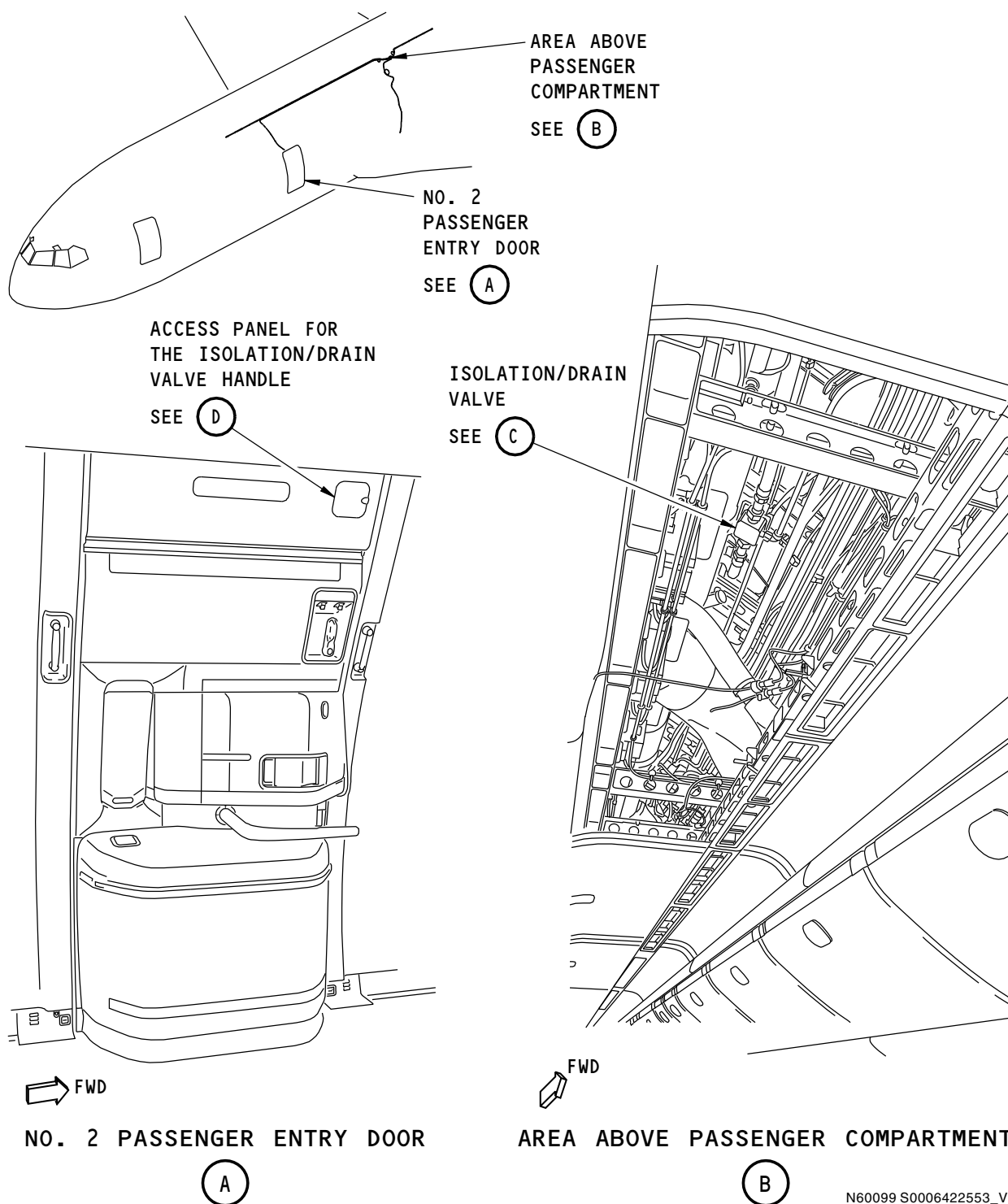
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Isolation/Drain Valve Installation
Figure 401/38-11-10-990-801 (Sheet 1 of 2)

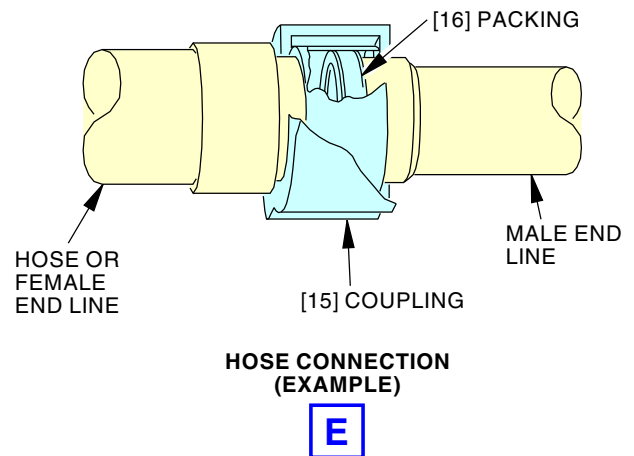
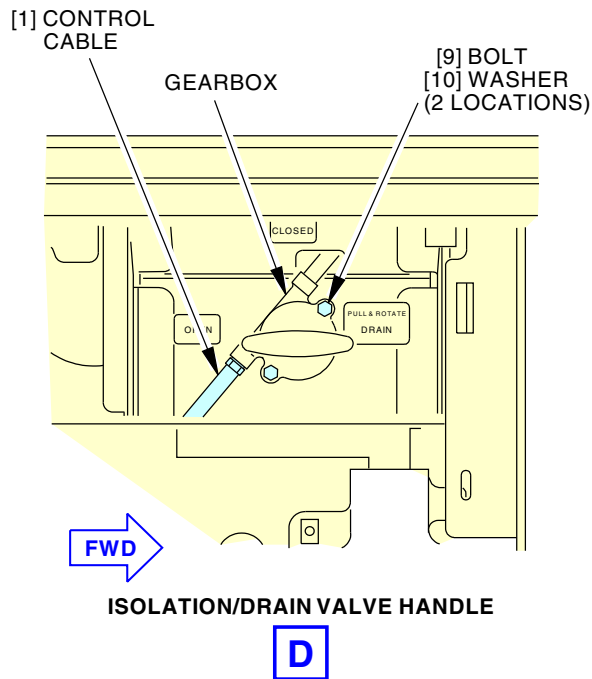
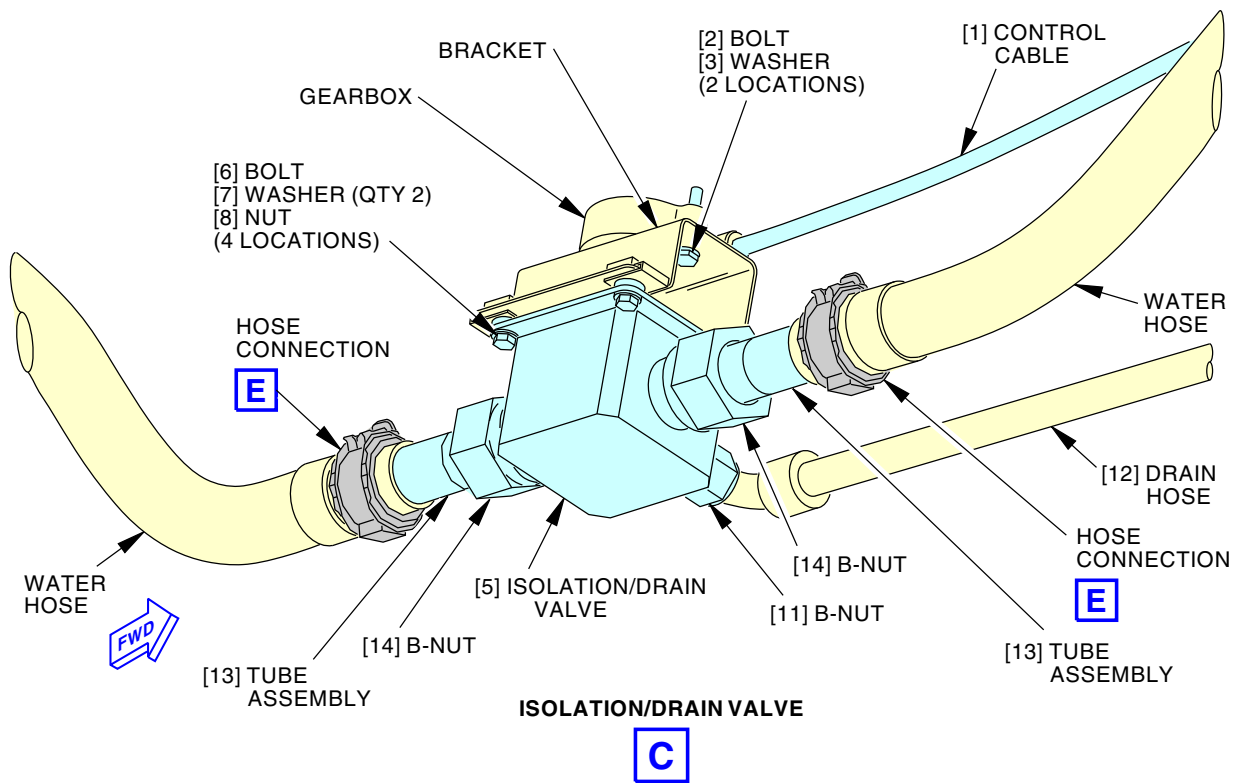
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Isolation/Drain Valve Installation
Figure 401/38-11-10-990-801 (Sheet 2 of 2)

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TASK 38-11-10-000-803

4. Forward Drain Valve Removal

(Figure 402)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

Zone	Area
124	Area Below Forward Cargo Compartment, Right

C. Access Panels

Number	Name/Location
122CR	Potable Water Drain Valve Door

D. Prepare for the Forward Drain Valve Removal

SUBTASK 38-11-10-480-001

- (1) Attach a hose to the forward drain port.

SUBTASK 38-11-10-860-018

- (2) Close the valves that follow:

- (a) For the lavatory modules forward of the wings, do these steps:

- 1) Get access to the lavatory module (TASK 06-41-00-800-801).
- 2) Turn the water shutoff valve to the OFF position.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

ARO 001-005

- (b) For the isolation/drain valve at the No. 2 entry door, make sure the handle is in the flight position.

ARO ALL

SUBTASK 38-11-10-010-008

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

SUBTASK 38-11-10-860-005

- (4) Pull the handle for the forward system drain valve to drain the forward water system.

SUBTASK 38-11-10-010-001

- (5) Get access to the forward cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-002

- (6) To remove the floor panel (121CG), do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

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SUBTASK 38-11-10-010-009

- (7) Get access to the forward drain valve.

E. Forward Drain Valve Removal

SUBTASK 38-11-10-020-006

- (1) Remove the pin [58], washer [57], and cotter pin [56] to disconnect the control cable assembly [59].

SUBTASK 38-11-10-020-016



CAUTION

DO NOT APPLY A TORQUE TO THE HOSES ON THE DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (2) Remove the screws [53] and washers [54].

SUBTASK 38-11-10-020-007

- (3) Loosen the B-nuts to disconnect the hoses from the forward drain valve [55].

SUBTASK 38-11-10-020-008

- (4) Remove the forward drain valve [55].

————— END OF TASK —————

TASK 38-11-10-400-803

5. Forward Drain Valve Installation

(Figure 402)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
55	Valve	38-31-02-81-005	ARO 001-005
56	Pin	38-11-10-01-165	ARO ALL
		38-11-10-06-015	ARO ALL
58	Pin	38-11-10-01-160	ARO ALL
		38-11-10-06-010	ARO ALL

C. Location Zones

Zone	Area
124	Area Below Forward Cargo Compartment, Right

D. Access Panels

Number	Name/Location
122CR	Potable Water Drain Valve Door

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E. Forward Drain Valve Installation

SUBTASK 38-11-10-420-012



DO NOT APPLY A TORQUE TO THE HOSES ON THE DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE ISOLATION VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (1) Connect the hoses to the forward drain valve [55].

SUBTASK 38-11-10-420-003

- (2) Put the forward drain valve [55] in its position.

SUBTASK 38-11-10-420-004

- (3) Install the screws [53] and washers [54].

SUBTASK 38-11-10-860-006

- (4) Make sure the forward drain valve is in the CLOSED position.

SUBTASK 38-11-10-860-007

- (5) Make sure the handle on the forward drain panel is in the CLOSED position.

SUBTASK 38-11-10-420-005

- (6) Install the cotter pin [56], washer [57], and pin [58] to connect the control cable assembly [59].

F. Forward Drain Valve Installation Test

SUBTASK 38-11-10-860-019

- (1) Open the valves that follow:

- (a) For the lavatory modules forward of the wings, do these steps:

- 1) Get access to the lavatory module (TASK 06-41-00-800-801).
- 2) Turn the water shutoff valve to the ON position.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

ARO 001-005

- (b) For the isolation/drain valve at the No. 2 entry door, make sure the handle is in the open position.

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SUBTASK 38-11-10-710-001

- (2) Open the forward drain valve to make sure that the water flows.

SUBTASK 38-11-10-790-003

- (3) Make sure there are no water leaks at the forward drain valve.

SUBTASK 38-11-10-710-002

- (4) Close the forward drain valve to make sure that the water flow stops.

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G. Put the Airplane Back in its Usual Condition.

SUBTASK 38-11-10-410-005



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

(1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-410-006

(2) Close the access to the forward cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-007

(3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

———— **END OF TASK** ————

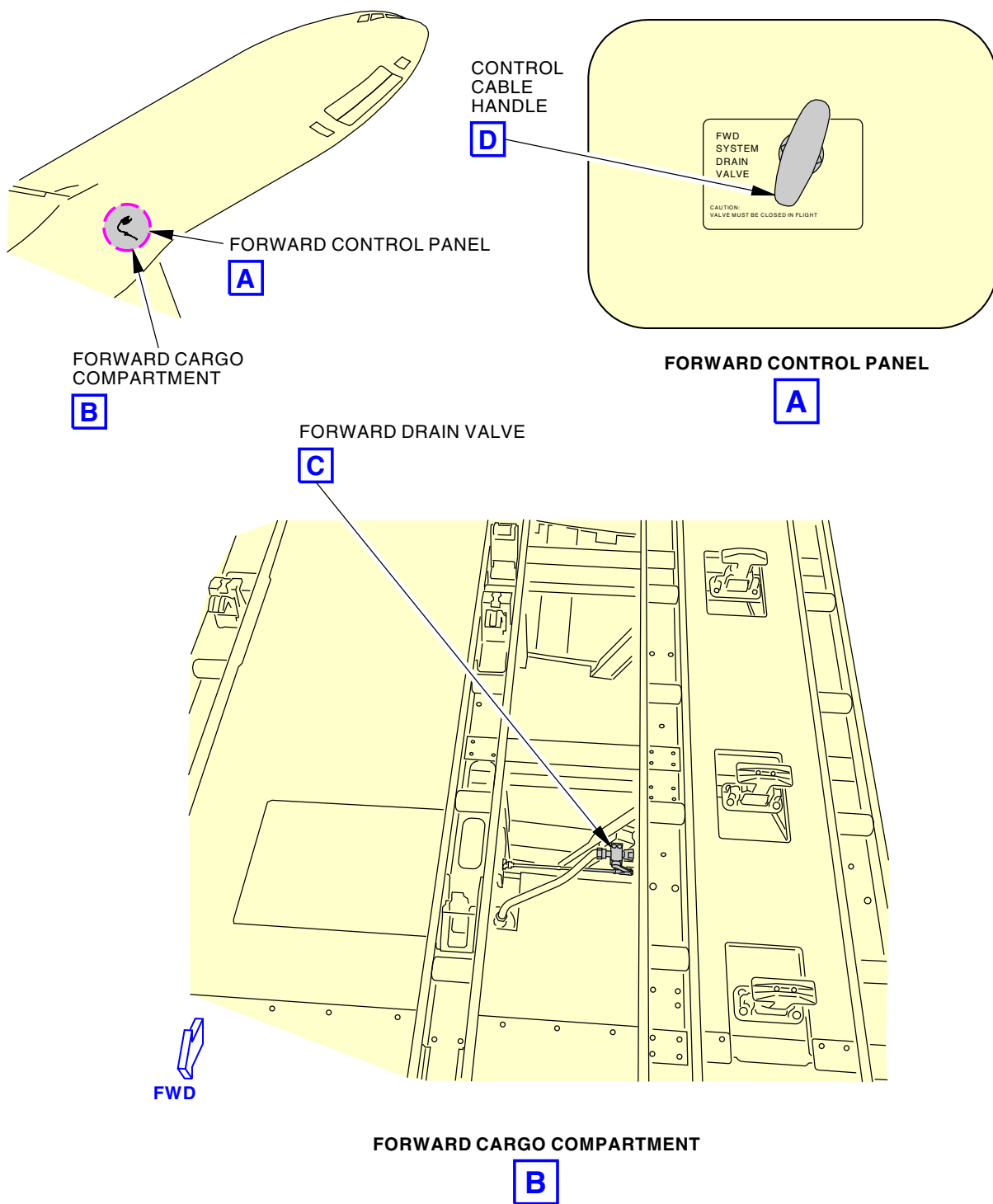
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**Forward Drain Valve Installation
Figure 402/38-11-10-990-803 (Sheet 1 of 2)**

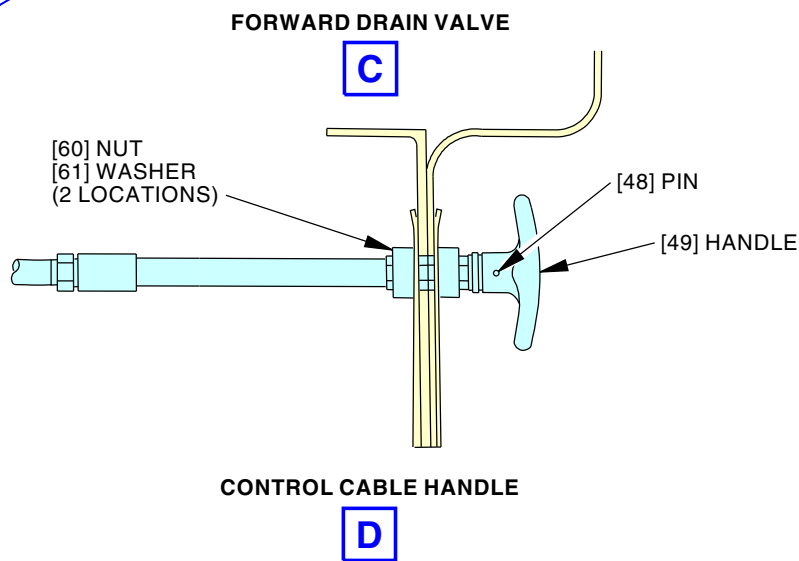
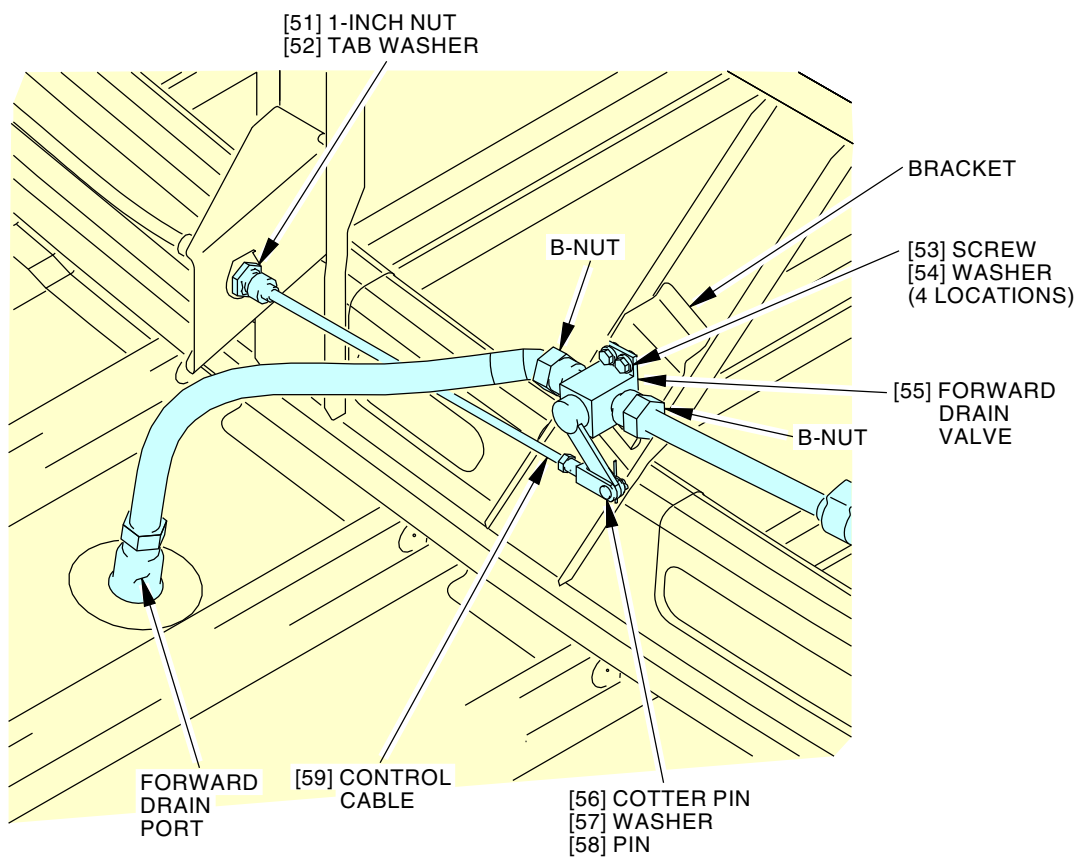
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E34640 S0006422566_V2

Forward Drain Valve Installation
Figure 402/38-11-10-990-803 (Sheet 2 of 2)

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TASK 38-11-10-000-804

6. Aft Drain Valve Removal

(Figure 403)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

Zone	Area
154	Area Below Aft Cargo Compartment, Right

C. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

D. Prepare for the Aft Drain Valve Removal

SUBTASK 38-11-10-480-002

- (1) Attach a hose to the aft drain port.

SUBTASK 38-11-10-860-020

- (2) Close the valves that follow:

- (a) For the lavatory modules aft of the wings, do these steps:

- 1) Get access to the lavatory module (TASK 06-41-00-800-801).
- 2) Turn the water shutoff valve to the OFF position.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

SUBTASK 38-11-10-010-010

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-860-021

- (4) Pull the handle for the aft system drain valve to drain the aft water system.

SUBTASK 38-11-10-010-011

- (5) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-012

- (6) To remove the floor panel adjacent to the aft drain valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

SUBTASK 38-11-10-010-013

- (7) Get access to the aft drain valve.

E. Aft Drain Valve Removal

SUBTASK 38-11-10-020-009

- (1) Remove the pin [76], washer [75] and cotter pin [74] to disconnect the control cable assembly [78].

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SUBTASK 38-11-10-020-010

- (2) Remove the pin [76], washer [75] and cotter pin [74] to disconnect the control cable assembly [73].

SUBTASK 38-11-10-020-017



CAUTION

DO NOT APPLY A TORQUE TO THE HOSES ON THE DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (3) Remove the screws [79] and washers [80].

SUBTASK 38-11-10-020-011

- (4) Disconnect the hoses from the aft drain valve [77].

SUBTASK 38-11-10-020-012

- (5) Remove the aft drain valve [77].

————— **END OF TASK** —————

TASK 38-11-10-400-804

7. Aft Drain Valve Installation

(Figure 403)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
77	Valve	38-11-10-04-025	ARO ALL

C. Location Zones

Zone	Area
154	Area Below Aft Cargo Compartment, Right

D. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

E. Aft Drain Valve Installation

SUBTASK 38-11-10-420-013



CAUTION

DO NOT APPLY A TORQUE TO THE HOSES ON THE DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (1) Connect the hoses to the aft drain valve.

SUBTASK 38-11-10-420-006

- (2) Put the aft drain valve [77] in its position.

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SUBTASK 38-11-10-420-014

- (3) Install the screws [79] and washers [80] for the aft drain valve [77].

SUBTASK 38-11-10-420-007

- (4) Install the pin [76], washer [75] and cotter pin [74] to connect the control cable assembly [73].

NOTE: This control cable assembly [73] is connected to the hole that is nearest to the valve.

SUBTASK 38-11-10-420-008

- (5) Install the pin [76], washer [75] and cotter pin [74] to connect the control cable assembly [78].

NOTE: This control cable assembly [78] is connected to the hole that is farthest from the valve.

F. Aft Drain Valve Installation Test

SUBTASK 38-11-10-860-022

- (1) Open the valves that follow:

(a) For the lavatory modules aft of the wings, do these steps:

- 1) Get access to the lavatory module (TASK 06-41-00-800-801).
- 2) Turn the water shutoff valve to the ON position.

NOTE: The water shutoff valve is behind the mirror above the sink in the lavatory.

SUBTASK 38-11-10-710-025

- (2) Open the lavatory drain valve.

NOTE: If the lavatory drain valve stays closed, water will not flow to the aft drain valve.

SUBTASK 38-11-10-710-003

- (3) Open the aft drain valve to make sure that the water flows.

SUBTASK 38-11-10-790-004

- (4) Make sure there are no water leaks at the aft drain valve.

SUBTASK 38-11-10-710-026

- (5) Close the lavatory drain valve.

G. Put the Airplane Back in its Usual Condition.

SUBTASK 38-11-10-410-008

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-410-009

- (2) Close the access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-860-023

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

————— END OF TASK —————

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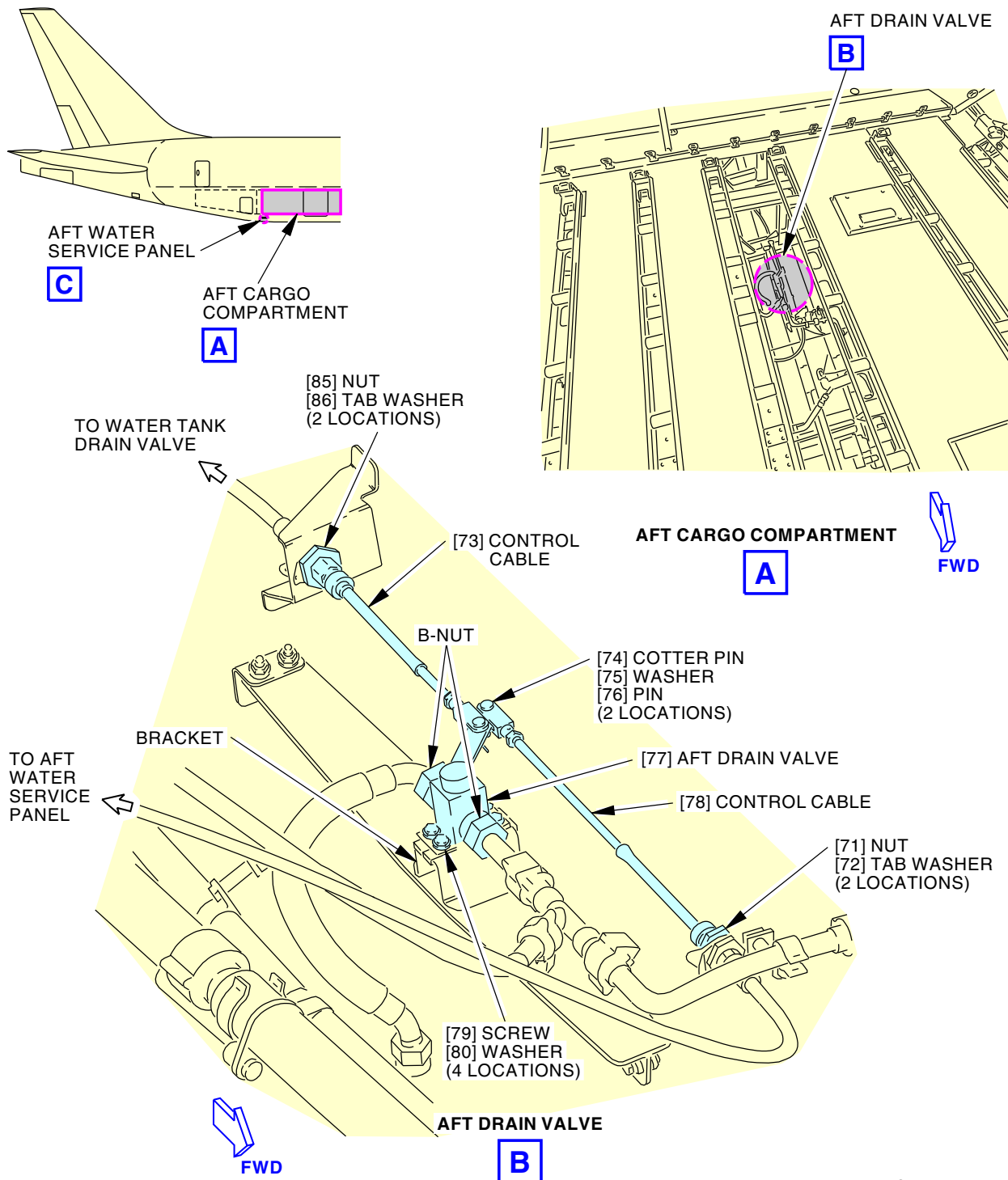
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Aft Drain Valve Installation
Figure 403/38-11-10-990-804 (Sheet 1 of 2)

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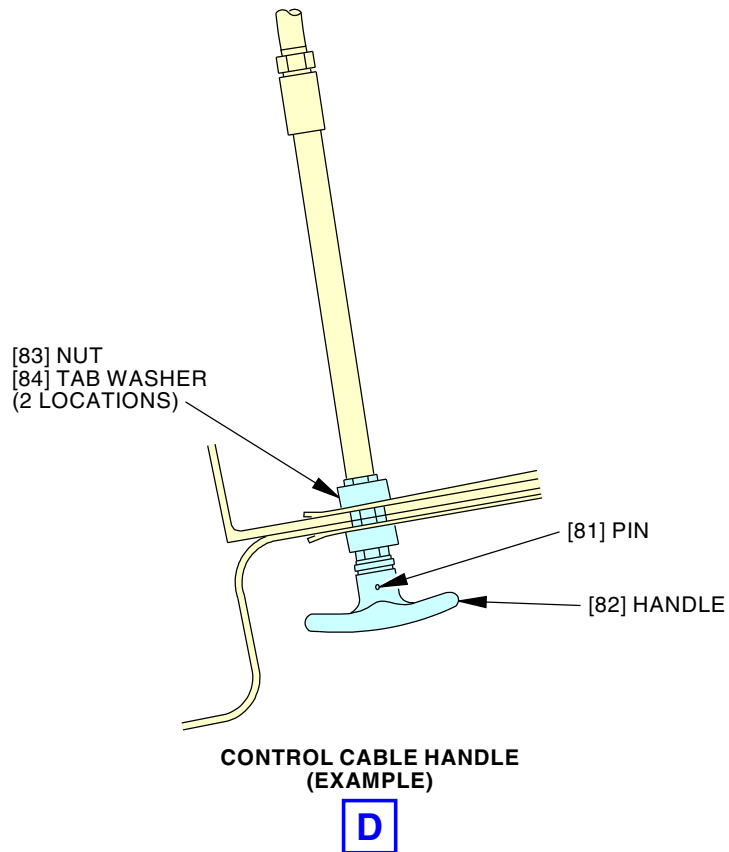
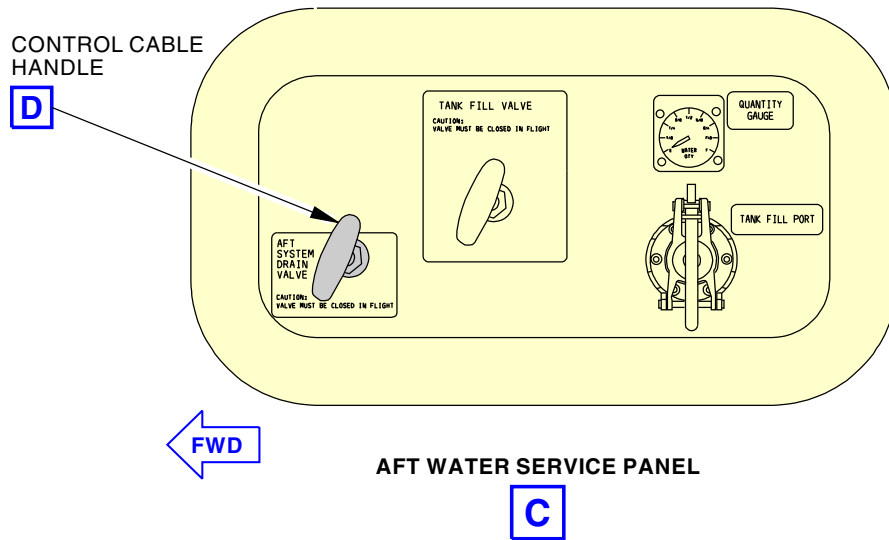
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Aft Drain Valve Installation
Figure 403/38-11-10-990-804 (Sheet 2 of 2)

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TASK 38-11-10-000-806

8. Water Tank Drain Valve Removal

(Figure 404)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
12-14-01-616-802	Potable Water System - Drain (P/B 301)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

C. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

D. Prepare for the Water Tank Drain Valve Removal

SUBTASK 38-11-10-480-003

- (1) Attach a hose to the drain port for the water tank.

SUBTASK 38-11-10-010-014

- (2) Open this access panel:

Number	Name/Location
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-616-001

- (3) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802

SUBTASK 38-11-10-865-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-11-10-010-015

- (5) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-016

- (6) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-11-10-010-017

- (7) Get access to the drain valve for the water tank.

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E. Water Tank Drain Valve Removal

SUBTASK 38-11-10-020-018

- (1) Remove the cotter pin [74], washer [75] and pin [76] to disconnect the control cable assembly [73].

SUBTASK 38-11-10-020-019



DO NOT APPLY A TORQUE TO THE HOSES ON THE DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (2) Remove the screws [92], washers [93], and washers [94].

SUBTASK 38-11-10-020-020

- (3) Disconnect the hoses from the drain valve assembly [91] for the water tank.

SUBTASK 38-11-10-030-001

- (4) Remove the screws, washers and nuts, and remove interlock switch [95] from the valve assembly [91].

NOTE: You do not need to disconnect the interlock switch [95] electric wires. You will use the same interlock switch [95] to install the valve.

SUBTASK 38-11-10-020-021

- (5) Remove the drain valve assembly [91] for the water tank.

— END OF TASK —

TASK 38-11-10-400-806

9. Water Tank Drain Valve Installation

(Figure 404)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
38-11-10-820-806	Water Tank Drain Valve Interlock Switch Adjustment (P/B 501)
WDM 38-14-11	Wiring Diagram Manual

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
91	Valve assembly	38-31-57-06A-040	ARO ALL

C. Location Zones

Zone	Area
154	Area Below Aft Cargo Compartment, Right

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D. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

E. Water Tank Drain Valve Installation

SUBTASK 38-11-10-420-015



CAUTION

DO NOT APPLY A TORQUE TO THE HOSES ON THE DRAIN VALVE WHEN IN ITS POSITION ON THE BRACKET. IF YOU APPLY A TORQUE TO THE HOSES WITH THE DRAIN VALVE INSTALLED, DAMAGE TO THE BRACKET CAN OCCUR.

- (1) Connect the hoses to the drain valve assembly [91] for the water tank.

SUBTASK 38-11-10-420-016

- (2) Put the drain valve assembly [91] for the water tank in its position.

SUBTASK 38-11-10-420-017

- (3) Install the screws [92], washers [93] and washers [94] for the drain valve assembly [91] for the water tank.

SUBTASK 38-11-10-420-018

- (4) Install the pin [76], washer [75] and cotter pin [74] to connect the control cable assembly [73].

SUBTASK 38-11-10-420-065

- (5) Put the interlock switch [95] on the valve assembly [91] bracket, and install the screws, washers, and nuts.

SUBTASK 38-11-10-430-001

- (6) Connect the interlock switch [95] electric wires to the airplane wires, as necessary (WDM 38-14-11).

F. Water Tank Drain Valve Installation Test

SUBTASK 38-11-10-860-025

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-11-10-860-026

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-10-610-001

- (3) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-11-10-860-027

- (4) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-10-860-073

- (5) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

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- (a) Make sure that one of the water pumps is operating.

SUBTASK 38-11-10-010-072

- (6) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-860-070

- (7) Pull the AFT SYSTEM DRAIN VALVE control handle out, to the stop

SUBTASK 38-11-10-710-021

- (8) Make sure that both of the water pumps are operating, and that water flows from the aft potable water drain port. Place your hand on each pump and feel for the vibration to make sure the pumps are operating.

If both of the pumps are not operating, adjust the interlock switch (Water Tank Drain Valve Interlock Switch Adjustment, TASK 38-11-10-820-806).

SUBTASK 38-11-10-860-071

- (9) Push the AFT SYSTEM DRAIN VALVE control handle in, to the stop.

SUBTASK 38-11-10-410-053

- (10) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-790-005

- (11) Make sure there are no water leaks at the drain valve for the water tank.

SUBTASK 38-11-10-860-028

- (12) Close the aft system drain valve.

SUBTASK 38-11-10-670-003

- (13) Do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

G. Put the Airplane Back in its Usual Condition.

SUBTASK 38-11-10-410-010

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-10-410-011

- (2) Close the access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-012

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-080-001

- (4) Remove the hose from the drain port of the water tank.

————— END OF TASK —————

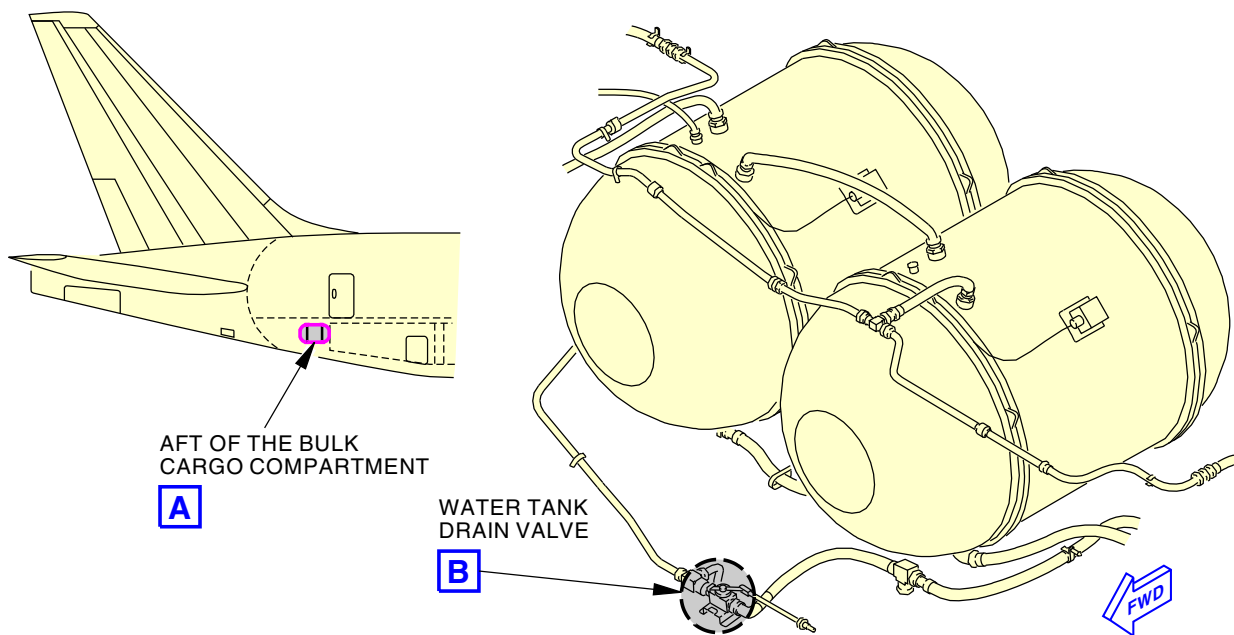
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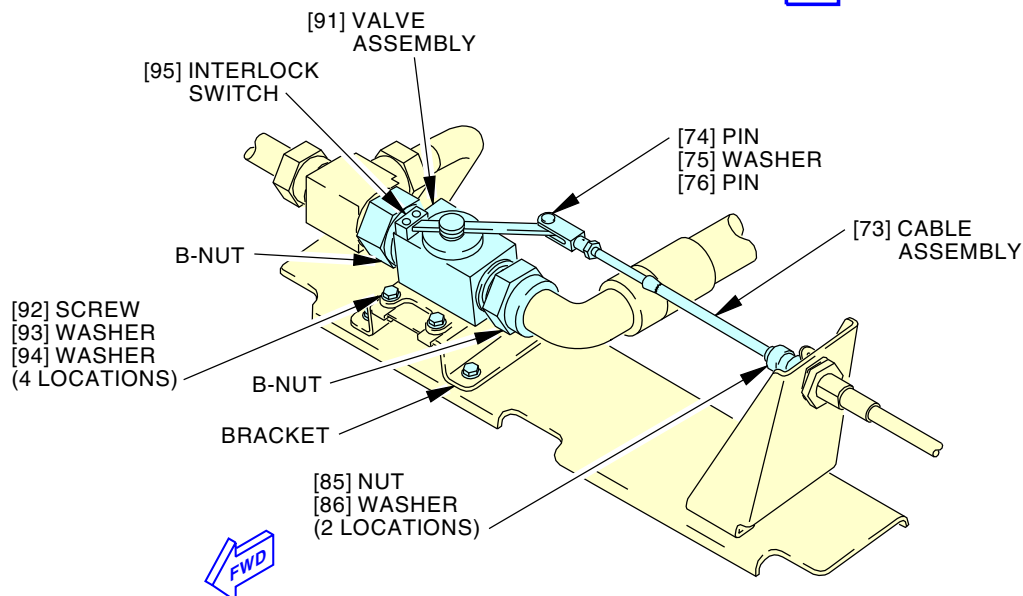
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AFT OF THE BULK CARGO COMPARTMENT

A



WATER TANK DRAIN VALVE

B

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**Water Tank Drain Valve Installation
Figure 404/38-11-10-990-805**

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ARO 001-005

TASK 38-11-10-000-805

10. Isolation/Drain Valve Control Cable Removal

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-21-01-000-801	Sidewall Panel - Removal (P/B 401)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage
233	Area Above Passenger Compartment Ceiling, Left - Section 43

C. Prepare for the Isolation/Drain Valve Control Cable Removal

SUBTASK 38-11-10-010-018

- (1) Get access to the passenger cabin at the No. 2 entry door (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-019

- (2) To remove the main ceiling panels on the left inboard side 15 to 20 feet aft of the No. 2 entry door, do this task: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

SUBTASK 38-11-10-010-020

- (3) To remove the sidewall panels on the left inboard side of the No. 2 entry door, do this task: Sidewall Panel - Removal, TASK 25-21-01-000-801.

SUBTASK 38-11-10-010-021

- (4) Get access to the control cable for the isolation/drain valve.

D. Isolation/Drain Valve Control Cable Removal

SUBTASK 38-11-10-020-022

- (1) Do this task: Isolation/Drain Valve Removal, TASK 38-11-10-000-801.

SUBTASK 38-11-10-020-023

- (2) Remove the bolts [2] and washers [3] that attach the bracket and gearbox to the structure.

SUBTASK 38-11-10-020-024

- (3) Cut the straps to remove the control cable assembly [1] from the P-clamps.

SUBTASK 38-11-10-020-025

- (4) Remove the bolts [9] and washers [10] that attach the gearbox at the handle end to the structure.

SUBTASK 38-11-10-020-026

- (5) To remove the gearbox from the control cable assembly [1] at the access panel, do these steps:
 - (a) Loosen the nut that holds the control cable assembly [1] to the gearbox.
NOTE: Monitor the position of the handle to let you assemble the gearbox correctly.
 - (b) Pull the control cable from the gearbox.

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ARO 001-005 (Continued)

- (c) Make sure you do not turn the handle on the gearbox, after the control cable moves from the gearbox.
- (d) Pull the control cable from behind the access panel.
- (e) Install the control cable into the gearbox.

NOTE: Monitor the position of the handle to make sure you assembled the gearbox correctly.

- (f) Tighten the nut that holds the gearbox to the control cable assembly [1].

SUBTASK 38-11-10-020-027

- (6) Remove the control cable assembly [1].

————— **END OF TASK** —————

TASK 38-11-10-400-805

11. Isolation/Drain Valve Control Cable Installation

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-21-01-400-801	Sidewall Panel - Installation (P/B 401)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Control cable assembly	38-11-59-02A-100	ARO 001-005

C. Location Zones

Zone	Area
200	Upper Half of Fuselage
233	Area Above Passenger Compartment Ceiling, Left - Section 43

D. Access Panels

Number	Name/Location
122CR	Potable Water Drain Valve Door

E. Isolation/Drain Valve Control Cable Installation

SUBTASK 38-11-10-420-019

- (1) To remove the gearbox from the control cable assembly [1] at the access panel, do these steps:
 - (a) Loosen the nut that holds the control cable assembly [1] to the gearbox.
NOTE: Monitor the position of the handle to let you assemble the gearbox correctly.
 - (b) Pull the control cable from the gearbox.
 - (c) Make sure you do not turn the handle on the gearbox, after the control cable moves from the gearbox.

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ARO 001-005 (Continued)

- (d) Push the control cable from behind and through the access panel.
- (e) Install the control cable into the gearbox.

NOTE: Monitor the position of the handle to make sure you assembled the gearbox correctly.

- (f) Tighten the nut that holds the control cable assembly [1].

SUBTASK 38-11-10-420-020

- (2) Install the bolts [9] and washers [10] for the gearbox to the structure at the access panel.

SUBTASK 38-11-10-420-021

- (3) Put the control cable assembly [1] in its position.

SUBTASK 38-11-10-860-029

- (4) Make sure the isolation/drain valve is in the CLOSE position.

SUBTASK 38-11-10-420-022

- (5) Install the bolts [2] and washers [3] for the gearbox to the structure above the isolation/drain valve.

SUBTASK 38-11-10-020-028

- (6) Do this task: Isolation/Drain Valve Installation, TASK 38-11-10-400-801.

SUBTASK 38-11-10-420-023

- (7) Put the control cable in the P-clamps.
 - (a) Install the strap to hold the control cable in the P-clamp.

F. Isolation/Drain Valve Installation Test

SUBTASK 38-11-10-860-030

- (1) Make sure you have pressure in the potable water system.
 - (a) If you do not have pressure in the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-10-710-005

- (2) Make sure the isolation/drain valve is in the open position to do these steps:
 - (a) Operate the lavatory faucet in a lavatory forward of the No. 2 entry door to make sure that water flows.
 - (b) If water flows, turn the isolation/drain valve handle to the closed position.
 - (c) With the isolation/drain valve in the closed position, do these steps:
 - 1) Operate the lavatory faucet to make sure that no water flows.
 - 2) If water does not flow, turn the isolation/drain valve handle to the drain position to do these steps:
 - a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door
 - b) Pull the handle for the forward system drain valve.
 - c) Make sure there is pressurized water flow from the drain port for the forward water system.
 - d) Push the handle for the forward system drain valve.

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ARO 001-005 (Continued)

- e) Turn the isolation/drain valve handle to the closed position.
- f) Pull the handle for the forward system drain valve.
- g) Make sure the water drains from the drain port for the forward water system.
- h) Push the handle for the forward system drain valve.
- i) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

SUBTASK 38-11-10-420-024

- (3) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

G. Put the Airplane Back to its Usual Condition

SUBTASK 38-11-10-410-013

- (1) Do this task: Sidewall Panel - Installation, TASK 25-21-01-400-801.

SUBTASK 38-11-10-410-014

- (2) Do this task: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 38-11-10-410-015

- (3) Close the access to the passenger cabin at the No. 2 entry door (TASK 06-46-00-800-801).

ARO ALL

————— END OF TASK —————

TASK 38-11-10-020-802

12. Forward Drain Valve Control Cable Removal

(Figure 402)

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
124	Area Below Forward Cargo Compartment, Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

D. Prepare for the Forward Drain Valve Control Cable Removal

SUBTASK 38-11-10-010-025

- (1) Get access to the forward cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-026

- (2) To remove the floor panel (121CG), do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

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SUBTASK 38-11-10-010-027

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

E. Forward Drain Valve Control Cable Removal

SUBTASK 38-11-10-020-038

- (1) Remove the pin [48] that attach the handle [49] at the drain control panel for the forward system.

SUBTASK 38-11-10-020-039

- (2) Remove the nut [60] and tab washer [61] from the control cable assembly [59].

SUBTASK 38-11-10-020-040

- (3) Pull the control cable assembly [59] from the inner side of the drain control panel.

SUBTASK 38-11-10-020-041

- (4) Remove the pin [58], washer [57] and cotter pin [56] to disconnect the control cable assembly [59].

SUBTASK 38-11-10-020-042

- (5) Remove the nut [51] and tab washer [52] at the bracket adjacent to the forward drain valve.

NOTE: Keep the nut [51] and tab washer [52] to install the control cable.

SUBTASK 38-11-10-020-043

- (6) Cut the straps to remove the control cable assembly [59] from the P-clamps.

SUBTASK 38-11-10-020-044

- (7) Remove the control cable assembly [59].

————— **END OF TASK** —————

TASK 38-11-10-420-802

13. Forward Drain Valve Control Cable Installation

(Figure 402)

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
51-31-01-390-801	Non-Removable Faying (Mated) Surface Seal Application (P/B 201)

B. Expendables/Parts

<u>AMM Item</u>	<u>Description</u>	<u>AIPC Reference</u>	<u>AIPC Effectivity</u>
48	Pin	38-11-10-01-210	ARO ALL
56	Pin	38-11-10-01-165	ARO ALL
		38-11-10-06-015	ARO ALL
58	Pin	38-11-10-01-160	ARO ALL
		38-11-10-06-010	ARO ALL

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AMM Item	Description	AIPC Reference	AIPC Effectivity
59	Cable assembly	38-11-10-06-050	ARO ALL

C. Location Zones

Zone	Area
124	Area Below Forward Cargo Compartment, Right

D. Access Panels

Number	Name/Location
122CR	Potable Water Drain Valve Door

E. Forward Drain Valve Control Cable Installation

SUBTASK 38-11-10-020-045

- (1) Remove the pin [48] that attach the handle [49] at the drain control panel for the forward system.

SUBTASK 38-11-10-020-046

- (2) Remove one nut [60] and tab washer [61] at the handle end of the control cable assembly [59].

SUBTASK 38-11-10-390-001

- (3) Apply a fay surface seal to the control cable assembly [59] at the drain control panel for the forward system (TASK 51-31-01-390-801).

SUBTASK 38-11-10-420-033

- (4) Install the nut [60] and tab washer [61] for the control cable assembly [59].

SUBTASK 38-11-10-420-034

- (5) Install the pin [48] and handle [49] for the control cable assembly [59] at the drain control panel.

SUBTASK 38-11-10-420-035

- (6) Put the control cable assembly [59] in the P-clamps.
 - (a) Install the strap that hold the control cable assembly [59] in each P-clamp.

SUBTASK 38-11-10-020-047

- (7) Remove one nut [51] and tab washer [52] from the clevis end of the control cable assembly [59].

SUBTASK 38-11-10-420-036

- (8) Put the clevis end of the control cable assembly [59] through the support bracket.

SUBTASK 38-11-10-420-037

- (9) Install loosely the nut [51] and tab washer [52] for the control cable assembly [59].

SUBTASK 38-11-10-420-038

- (10) Install the pin [58], washer [57] and cotter pin [56] for the control cable assembly [59] on the forward drain valve.

F. Forward Drain Valve Control Cable Installation Test

SUBTASK 38-11-10-860-035

- (1) Make sure you have pressure in the potable water system.
 - (a) If you do not have pressure in the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-10-710-007

- (2) Open the forward drain valve to make sure that the water flows.

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SUBTASK 38-11-10-860-036

- (3) Make sure the forward drain valve is fully open.

SUBTASK 38-11-10-710-008

- (4) Close the forward drain valve to make sure that the water flow stops.

SUBTASK 38-11-10-860-037

- (5) Make sure the forward drain valve is fully closed.

SUBTASK 38-11-10-420-039

- (6) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

G. Put the Airplane Back in its Usual Condition

SUBTASK 38-11-10-410-019



WARNING

SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-410-020

- (2) Close the access to the forward cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-021

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

———— END OF TASK ————

TASK 38-11-10-020-803

14. Aft Drain Valve Control Cable Removal

(Figure 403)

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
154	Area Below Aft Cargo Compartment, Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

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D. Prepare for the Aft Drain Valve Control Cable Removal

SUBTASK 38-11-10-010-028

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-010-029

- (2) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-030

- (3) To remove the floor panel adjacent to the aft drain valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

E. Aft Drain Valve Control Cable Removal

SUBTASK 38-11-10-020-048

- (1) Remove the pin [81] that attaches the t handle [82] at the aft water service panel.

SUBTASK 38-11-10-020-049

- (2) Remove one of the nut [83] and tab washer [84] that is on the control cable assembly [78].

SUBTASK 38-11-10-020-050

- (3) Pull the control cable assembly [78] from the inner side of the aft water service panel.
(a) Connect the pin [81] and t handle [82] to the cable assembly [78].

SUBTASK 38-11-10-020-051

- (4) Remove the pin [74], washer [75] and cotter pin [76] to disconnect the control cable assembly [78].

SUBTASK 38-11-10-020-052

- (5) Remove the nut [71] and tab washer [72] at the bracket adjacent to the aft drain valve.

NOTE: Keep the nut [71] and tab washer [72] to install the control cable.

SUBTASK 38-11-10-020-053

- (6) Cut the straps to remove the control cable assembly [78] from the P-clamps.

SUBTASK 38-11-10-020-054

- (7) Remove the control cable assembly [78].

————— END OF TASK —————

TASK 38-11-10-420-803

15. Aft Drain Valve Control Cable Installation

(Figure 403)

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)
51-31-01-390-801	Non-Removable Faying (Mated) Surface Seal Application (P/B 201)

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B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
78	Cable assembly	38-11-10-01-190	ARO ALL
81	Pin	38-11-10-01-210	ARO ALL
82	T handle	38-11-10-01-205	ARO ALL

C. Location Zones

Zone	Area
154	Area Below Aft Cargo Compartment, Right

D. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

E. Aft Drain Valve Control Cable Installation

SUBTASK 38-11-10-020-055

- (1) Remove the pin [81] and t handle [82] for the end of the control cable assembly [78] at the aft water service panel.

SUBTASK 38-11-10-020-056

- (2) Remove one nut [83] and tab washer [84] at the handle end of the control cable assembly [78].

SUBTASK 38-11-10-390-002

- (3) Apply a fay surface seal to the control cable assembly [78] at the aft water service panel (TASK 51-31-01-390-801).

SUBTASK 38-11-10-390-003

- (4) Put the control cable assembly [78] in its position at the aft water service panel.

SUBTASK 38-11-10-420-040

- (5) Install the nut [83] and tab washer [84] for the control cable assembly [78].
 - (a) Install the pin [81] and t handle [82] to the cable assembly [78].

SUBTASK 38-11-10-860-038

- (6) Get access to the aft cargo compartment.

SUBTASK 38-11-10-020-057

- (7) Remove one nut [71] and tab washer [72] at the clevis end of the control cable assembly [78].

SUBTASK 38-11-10-420-041

- (8) Put the clevis end of the control cable assembly [78] through the support bracket.

SUBTASK 38-11-10-420-042

- (9) Put the control cable assembly [78] in the P-clamps.
 - (a) Install a strap to hold the control cable assembly [78] in each P-clamp.

SUBTASK 38-11-10-420-043

- (10) Install loosely the nut [71] and tab washer [72] for the control cable assembly [78].

SUBTASK 38-11-10-420-044

- (11) Install the pin [74], washer [75] and cotter pin [76] for the control cable assembly [78] on the aft drain valve.

F. Aft Drain Valve Control Cable Installation Test

SUBTASK 38-11-10-860-039

- (1) Make sure you have pressure in the potable water system.

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- (a) If you do not have pressure in the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-10-710-009

- (2) Open the aft drain valve to make sure that the water flows.

SUBTASK 38-11-10-860-040

- (3) Make sure the aft drain valve is fully open.

SUBTASK 38-11-10-710-010

- (4) Close the aft drain valve to make sure that the water flow stops.

SUBTASK 38-11-10-860-041

- (5) Make sure the aft drain valve is fully closed.

SUBTASK 38-11-10-420-045

- (6) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

G. Put the Airplane Back in its Usual Condition

SUBTASK 38-11-10-410-022



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- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-410-023

- (2) Close the access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-024

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

————— END OF TASK —————

TASK 38-11-10-020-804

16. Water Tank Drain Valve Control Cable Removal

(Figure 403, Figure 404)

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
154	Area Below Aft Cargo Compartment, Right
164	Area Below Bulk Cargo Compartment, Right
166	Area Aft of Bulk Cargo Compartment, Right

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C. Prepare for the Water Tank Drain Valve Control Cable Removal

SUBTASK 38-11-10-010-031

- (1) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-032

- (2) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-11-10-010-033

- (3) To remove the floor panels for access to the control cable, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.

SUBTASK 38-11-10-010-034

- (4) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-035

- (5) To remove the floor panel adjacent to the aft drain valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

D. Water Tank Drain Valve Control Cable Removal

SUBTASK 38-11-10-020-058

- (1) Remove the pin [74], washer [75] and cotter pin [76] to disconnect the control cable assembly [73] from the aft drain valve.

SUBTASK 38-11-10-020-059

- (2) Remove the nut [85] and tab washer [86] that attach the control cable assembly [73] to the support bracket.

SUBTASK 38-11-10-020-060

- (3) Pull the control cable assembly [73] from the support bracket at the aft drain valve.

SUBTASK 38-11-10-020-061

- (4) Cut the straps to remove the control cable assembly [73] from the P-clamps.

SUBTASK 38-11-10-010-036

- (5) Get access to the drain valve for the water tank.

SUBTASK 38-11-10-020-062

- (6) Remove the pin [74], washer [75] and cotter pin [76] to disconnect the control cable assembly [73].

SUBTASK 38-11-10-020-063

- (7) Remove the nut [85] and tab washer [86] at the bracket adjacent to the drain valve for the water tank.

NOTE: Keep the nut [85] and tab washer [86] to install the control cable assembly [73].

SUBTASK 38-11-10-020-064

- (8) Pull the control cable assembly [73] from the support bracket at the drain valve for the water tank.

SUBTASK 38-11-10-020-065

- (9) Remove the control cable assembly [73].

————— **END OF TASK** —————

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TASK 38-11-10-420-804

17. Water Tank Drain Valve Control Cable Installation

(Figure 403, Figure 404)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
73	Cable assembly	38-11-10-01-175	ARO ALL
74	Pin	38-11-10-01-165	ARO ALL
76	Pin	38-11-10-01-160	ARO ALL

C. Location Zones

Zone	Area
154	Area Below Aft Cargo Compartment, Right
164	Area Below Bulk Cargo Compartment, Right
166	Area Aft of Bulk Cargo Compartment, Right

D. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

E. Water Tank Drain Valve Control Cable Installation

SUBTASK 38-11-10-020-066

- (1) Remove one nut [85] and tab washer [86] at the control cable assembly [73] at the drain valve for the water tank.

SUBTASK 38-11-10-420-046

- (2) Put the end of the control cable assembly [73] for the drain valve at the water tank through the support bracket.

SUBTASK 38-11-10-420-047

- (3) Install the nut [85] and tab washer [86] for the control cable assembly [73] to the support bracket.

SUBTASK 38-11-10-420-048

- (4) Install the pin [74], washer [75] and cotter pin [76] for the control cable assembly [73] on the drain valve for the water tank.

SUBTASK 38-11-10-860-042

- (5) Get access to the aft cargo compartment.

SUBTASK 38-11-10-020-067

- (6) Remove one nut [85] and tab washer [86] at the aft drain valve end of the control cable assembly [73].

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SUBTASK 38-11-10-420-049

- (7) Put the clevis end of the control cable assembly [73] through the support bracket.

SUBTASK 38-11-10-420-050

- (8) Put the control cable assembly [73] in the P-clamps.
 - (a) Install a strap to hold the control cable assembly [73] in each P-clamp.

SUBTASK 38-11-10-420-051

- (9) Install loosely the nut [85] and tab washer [86] for the control cable assembly [73].

SUBTASK 38-11-10-420-053

- (10) Install the pin [74], washer [75] and cotter pin [76] for the control cable assembly [73] to the aft drain valve.

F. Water Tank Drain Valve Control Cable Installation Test

SUBTASK 38-11-10-860-043

- (1) Make sure you have pressure in the potable water system.
 - (a) If you do not have pressure in the potable water system, do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-10-010-037

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-710-011

- (3) Open the drain valves for the aft system to make sure that the water flows from the drain port for the water tank.

SUBTASK 38-11-10-860-044

- (4) Make sure the drain valve for the water tank is fully open.

SUBTASK 38-11-10-710-012

- (5) Close the drain valve for the aft system to make sure that the water flow stops.

SUBTASK 38-11-10-860-045

- (6) Make sure the drain valve for the water tank is fully closed.

SUBTASK 38-11-10-420-052

- (7) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

G. Put the Airplane Back in its Usual Condition

SUBTASK 38-11-10-410-025



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- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-410-026

- (2) Close the access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-027

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

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SUBTASK 38-11-10-410-028

(4) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

SUBTASK 38-11-10-410-029

(5) Close the access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-030

(6) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

———— **END OF TASK** ————

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ISOLATION VALVE, DRAIN VALVE, ISOLATION/DRAIN VALVES - ADJUSTMENT/TEST

1. **General**

- A. This procedure contains scheduled maintenance task data.
- B. The procedure has these tasks:

ARO 001-005

- (1) An operational test of the isolation/drain valve.
- (2) An adjustment of the control cable for the isolation/drain valve.

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- (3) An adjustment of the control cable for the forward drain valve.
- (4) An adjustment of the control cable for the aft drain valve.
- (5) An adjustment of the control cable for the water tank drain valve.
- (6) An adjustment of the interlock switch for the water tank drain valve.

ARO 001-005

- C. The isolation/drain valve is forward of the wing.

NOTE: The control handle is on the left side above the No. 2 entry door.

TASK 38-11-10-700-802

2. **Isolation/Drain Valve Operational Check**

A. References

Reference	Title
25-21-08-000-801	Overdoor Panel Opening/Removal (P/B 201)
25-21-08-400-801	Overdoor Panel Installation/Closing (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Location Zones

Zone	Area
231	Passenger Compartment, Left - Section 43
261	Passenger Compartment, Left - Section 47

C. Access Panels

Number	Name/Location
122CR	Potable Water Drain Valve Door

D. Isolation/Drain Valve Operational Check

SUBTASK 38-11-10-865-003

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-11-10-863-001

- (2) Do this task to pressurize the potable water system: Potable Water System - Pressurization, TASK 38-10-00-863-801.

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ARO 001-005 (Continued)

SUBTASK 38-11-10-010-076

- (3) Open the access panel, above the No. 2 entry door, do this task: Overdoor Panel Opening/Removal, TASK 25-21-08-000-801.

SUBTASK 38-11-10-860-074

- (4) Make sure the handle for the isolation/drain valve is in the OPEN position.

SUBTASK 38-11-10-710-022

- (5) Make sure there is water flow from the faucets that are forward of the wings.

SUBTASK 38-11-10-860-075

- (6) Turn the handle for the isolation/drain valve to the CLOSE position.

SUBTASK 38-11-10-710-023

- (7) Make sure there is no water flow from the faucets that are forward of the wings.

SUBTASK 38-11-10-860-076

- (8) Pull the handle for the isolation/drain valve then turn to the DRAIN position.

SUBTASK 38-11-10-010-077

- (9) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

SUBTASK 38-11-10-860-077

- (10) Pull the handle for the forward system drain valve.

NOTE: This will open the valve to drain the water at the forward drain port.

SUBTASK 38-11-10-710-024

- (11) Make sure the water drains fully from the forward drain port.

SUBTASK 38-11-10-860-078

- (12) Push the handle for the forward system drain valve.

SUBTASK 38-11-10-860-079

- (13) Push the handle for the isolation/drain valve then turn the handle to the OPEN position.

E. Put Airplane Back to Its Usual Condition

SUBTASK 38-11-10-410-056

- (1) To close the access panels above the entry door No. 2 and the aft entry door, do this task: Overdoor Panel Installation/Closing, TASK 25-21-08-400-801.

SUBTASK 38-11-10-410-057

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

————— END OF TASK —————

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ARO 001-005 (Continued)

TASK 38-11-10-820-801

3. Isolation/Drain Valve Control Cable Adjustment

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-21-01-400-801	Sidewall Panel - Installation (P/B 401)
25-21-06-000-801	Main Ceiling Panel - Removal (P/B 401)
25-21-06-400-801	Main Ceiling Panel - Installation (P/B 401)
25-21-08-000-801	Overdoor Panel Opening/Removal (P/B 201)
25-21-08-400-801	Overdoor Panel Installation/Closing (P/B 201)

B. Location Zones

Zone	Area
231	Passenger Compartment, Left - Section 43
233	Area Above Passenger Compartment Ceiling, Left - Section 43

C. Prepare for the Adjustment

SUBTASK 38-11-10-010-041

- (1) Get access to the passenger cabin at the No. 2 entry door (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-042

- (2) To remove the main ceiling panels 15 to 20 feet aft of the No. 2 entry door on the left inboard side, do this task: Main Ceiling Panel - Removal, TASK 25-21-06-000-801.

SUBTASK 38-11-10-010-043

- (3) To open the overdoor panel of the No. 2 entry door on the left side, do this task: Overdoor Panel Opening/Removal, TASK 25-21-08-000-801.

SUBTASK 38-11-10-010-044

- (4) Get access to the control cable for the isolation/drain valve.

D. Isolation/Drain Valve Control Cable Adjustment

SUBTASK 38-11-10-860-060

- (1) Make sure the isolation/drain valve is in the open position.

SUBTASK 38-11-10-210-001

- (2) Do a check of the handle for the isolation/drain valve to make sure it is in the open position.
 - (a) If the handle is not in the open position, do these steps:
 - 1) Remove the gearbox from the control cable.
 - 2) Turn the control cable handle fully counterclockwise.
 - 3) Install the gearbox on the control cable.
 - 4) Make sure the handle is in the open position.
 - 5) If the handle is in the open position, then continue.

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ARO 001-005 (Continued)

SUBTASK 38-11-10-420-054

- (3) For the gearbox nuts, do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

E. Put the Airplane Back to its Usual Condition

SUBTASK 38-11-10-410-032

- (1) Do this task: Sidewall Panel - Installation, TASK 25-21-01-400-801.

SUBTASK 38-11-10-410-033

- (2) Do this task: Main Ceiling Panel - Installation, TASK 25-21-06-400-801.

SUBTASK 38-11-10-410-034

- (3) Do this task: Overdoor Panel Installation/Closing, TASK 25-21-08-400-801.

SUBTASK 38-11-10-410-035

- (4) Close the access to the passenger cabin at the No. 2 entry door (TASK 06-46-00-800-801).

———— **END OF TASK** ————

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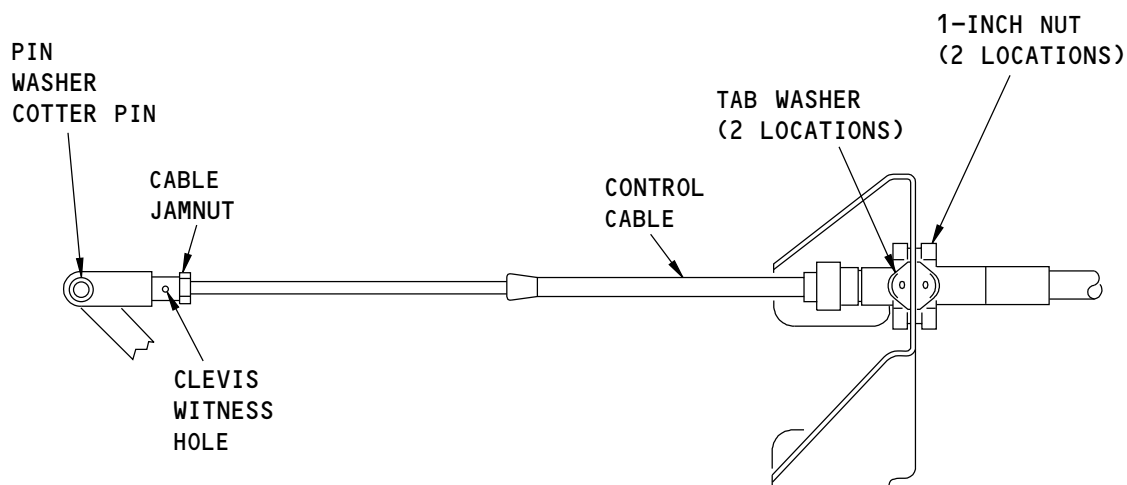
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CONTROL CABLE
(EXAMPLE)

E32900 S0006422588_V1

Control Cable Adjustment
Figure 501/38-11-10-990-807

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TASK 38-11-10-820-803

4. Forward Drain Valve Control Cable Adjustment

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)

B. Location Zones

Zone	Area
124	Area Below Forward Cargo Compartment, Right

C. Access Panels

Number	Name/Location
122CR	Potable Water Drain Valve Door

D. Prepare for the Adjustment

SUBTASK 38-11-10-860-062

- (1) Get access to the forward cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-049

- (2) To remove the floor panel (121CG), do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

SUBTASK 38-11-10-010-050

- (3) Open this access panel:

Number	Name/Location
122CR	Potable Water Drain Valve Door

SUBTASK 38-11-10-010-051

- (4) Get access to the control cable for the forward drain valve.

E. Forward Drain Valve Control Cable Adjustment

SUBTASK 38-11-10-860-063

- (1) Make sure the forward drain valve is in the closed position.

SUBTASK 38-11-10-210-005

- (2) Do a check of the handle for the forward drain valve to make sure it is in the closed position.
 - (a) If the handle is not in the closed position, do these steps:
 - (b) Remove the pin, washer and cotter pin to disconnect the control cable from the forward drain valve.
 - (c) Adjust the position of the clevis to let you connect the control cable to the forward drain valve.
 - (d) Make sure you can see the threads through the clevis sight hole.
 - (e) If you can see the threads, tighten the jamnut for the clevis 15-18 pound-inches.
 - 1) If you cannot see the threads, loosen the 1-inch nuts to increase the length of the control cable.

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- 2) Adjust the position of the clevis to let you connect the control cable to the forward drain valve.
 - 3) Make sure you can see the threads through the clevis sight hole.
 - 4) If you can see the threads, tighten the jamnut for the clevis 15-18 pound-inches.
 - 5) Tighten the 1-inch nuts for the control cable 400-500 pound-inches.
- (f) Install the pin, washer and cotter pin to connect the control cable to the forward drain valve.

SUBTASK 38-11-10-420-056

- (3) For the jamnut and the 1-inch nuts, do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

F. Put the Airplane Back in its Usual Condition

SUBTASK 38-11-10-410-040



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-860-064

- (2) Close the access to the forward cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-860-065

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
122CR	Potable Water Drain Valve Door

————— END OF TASK —————

TASK 38-11-10-820-804

5. Aft Drain Valve Control Cable Adjustment

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
154	Area Below Aft Cargo Compartment, Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

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D. Prepare for the Adjustment

SUBTASK 38-11-10-010-052

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-010-053

- (2) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-054

- (3) To remove the floor panel adjacent to the aft drain valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

SUBTASK 38-11-10-010-055

- (4) Get access to the control cable for the aft drain valve.

E. Aft Drain Valve Control Cable Adjustment

SUBTASK 38-11-10-860-066

- (1) Make sure the aft drain valve is in the closed position.

SUBTASK 38-11-10-210-006

- (2) Do a check of the handle for the aft drain valve to make sure it is in the closed position.
- (a) If the handle is not in the closed position, do these steps:
 - (b) Remove the pin, washer and cotter pin to disconnect the control cable from the aft drain valve.
 - (c) Adjust the position of the clevis to let you connect the control cable to the aft drain valve.
 - (d) Make sure you can see the threads through the clevis sight hole.
 - (e) If you can see the threads, tighten the jamnut for the clevis 15-18 pound-inches.
 - 1) If you cannot see the threads, loosen the 1-inch nuts to increase the length of the control cable.
 - 2) Adjust the position of the clevis to let you connect the control cable to the aft drain valve.
 - 3) Make sure you can see the threads through the clevis sight hole.
 - 4) If you can see the threads, tighten the jamnut for the clevis 15-18 pound-inches.
 - 5) Tighten the 1-inch nuts for the control cable 400-500 pound-inches.
 - (f) Install the pin, washer and cotter pin to connect the control cable to the aft drain valve.

SUBTASK 38-11-10-420-057

- (3) For the jamnut and the 1-inch nuts, do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

F. Put the Airplane Back in its Usual Condition

SUBTASK 38-11-10-410-041



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

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SUBTASK 38-11-10-410-042

- (2) Close the access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-043

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

————— END OF TASK —————

TASK 38-11-10-820-805

6. Water Tank Drain Valve Control Cable Adjustment

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
154	Area Below Aft Cargo Compartment, Right
164	Area Below Bulk Cargo Compartment, Right
166	Area Aft of Bulk Cargo Compartment, Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

D. Prepare for the Adjustment

SUBTASK 38-11-10-010-056

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-010-057

- (2) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-010-058

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

SUBTASK 38-11-10-010-059

- (4) To remove the floor panels for access to the control cable, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.

SUBTASK 38-11-10-010-060

- (5) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

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SUBTASK 38-11-10-010-061

- (6) To remove the floor panel adjacent to the aft drain valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

SUBTASK 38-11-10-010-062

- (7) Get access to the control cable for the drain valve for the water tank.

E. Water Tank Drain Valve Control Cable Adjustment

SUBTASK 38-11-10-860-067

- (1) Make sure the drain valve for the water tank is in the closed position.

SUBTASK 38-11-10-210-007

- (2) Do a check of the handle for the drain valve for the water tank to make sure it is in the closed position.
 - (a) If the handle is not in the closed position, do these steps:
 - (b) Remove the pin, washer and cotter pin to disconnect the control cable from the drain valve.
 - (c) Adjust the position of the clevis to let you connect the control cable to the drain valve.
 - (d) Make sure you can see the threads through the clevis sight hole.
 - (e) If you can see the threads, tighten the jamnut for the clevis 15-18 pound-inches.
 - 1) If you cannot see the threads, loosen the 1-inch nuts to increase the length of the control cable.
 - 2) Adjust the position of the clevis to let you connect the control cable to the drain valve.
 - 3) Make sure you can see the threads through the clevis sight hole.
 - 4) If you can see the threads, tighten the jamnut for the clevis 15-18 pound-inches.
 - 5) Tighten the 1-inch nuts for the control cable 400-500 pound-inches.
 - (f) Install the pin, washer and cotter pin to connect the control cable to the drain valve.

SUBTASK 38-11-10-420-058

- (3) For the jamnuts and the 1-inch nuts, do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

F. Put the Airplane Back to its Usual Condition

SUBTASK 38-11-10-410-044



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-11-10-410-045

- (2) Close the access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-046

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-10-410-047

- (4) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

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SUBTASK 38-11-10-410-048

- (5) Close the access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-11-10-410-049

- (6) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

————— END OF TASK —————

TASK 38-11-10-820-806

7. Water Tank Drain Valve Interlock Switch Adjustment

Figure 404 (Sheet 1)

A. References

<u>Reference</u>	<u>Title</u>
	Water Tank Drain Valve Installation (P/B 401)
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Tools/Equipment

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

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door
	Part #: J52011-1 Supplier: 81205
	Part #: J52011-2 Supplier: 81205
	Opt Part #: D0136-030 Supplier: 2S363

C. Location Zones

<u>Zone</u>	<u>Area</u>
166	Area Aft of Bulk Cargo Compartment, Right

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

E. Prepare for the Task:

SUBTASK 38-11-10-865-002

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND

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Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-10-861-001

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-10-610-002

- (3) Make sure there is water in the potable water tanks. Do this task, as necessary: Potable Water Tank - Fill, TASK 12-14-01-600-810

SUBTASK 38-11-10-010-073

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-10-490-001

- (5) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-10-010-074

- (6) Do this Task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

F. Interlock Switch Adjustment

SUBTASK 38-11-10-651-001

- (1) Do this Task: Potable Water System - Pressurization, TASK 38-10-00-863-801
- (a) Make sure that only one potable water pumps is operating. Place your hand on each of the water pumps and feel for the vibration to make sure the pump is operating.

SUBTASK 38-11-10-010-075

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-10-860-072

- (3) Pull the AFT SYSTEM DRAIN VALVE control handle, at the aft water service panel, out to the stop.

SUBTASK 38-11-10-820-006

- (4) Make sure that both the water pumps start operating, and that water flows from the aft potable water drain port. Place your hand on each pump and feel for the vibration to make sure the pumps are operating.

If both of the pumps are not operating, adjust the interlock switch as follows:

- (a) Loosen the screws that attach the interlock switch to the drain valve assembly.
- (b) Move the interlock switch toward the drain valve control lever until both the water pumps start operating.

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- (c) Tighten the screws that attach the interlock switch to the drain valve assembly.
- (d) Push the AFT SYSTEM DRAIN VALVE HANDLE in to the stop.
- (e) Make sure that only one of the two water pumps is operating.
- (f) Pull the AFT SYSTEM DRAIN VALVE HANDLE out to the stop. Make sure that both the water pumps are operating, and that water flows from the aft drain port. Adjust the interlock switch, as necessary.
- (g) Push the AFT SYSTEM DRAIN VALVE HANDLE in to the stop.
- (h) Make sure that only one of the two water pumps is operating.

G. Restore the airplane to its usual condition

SUBTASK 38-11-10-410-054

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-10-090-001

- (2) Remove the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-10-410-055

- (3) Close these access panels:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

SUBTASK 38-11-10-861-002

- (4) Do this task to remove the electrical power, if it is no longer necessary. Remove Electrical Power, TASK 24-22-00-860-806

————— **END OF TASK** —————

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LAVATORY WATER SUPPLY SHUTOFF VALVE - REMOVAL/INSTALLATION

1. General

- A. The Lavatory Water Supply Shutoff Valve is referred to as the Shutoff Valve in this procedure.
- B. This procedure has two tasks:
- (1) A removal of the shutoff valve for the water supply in the lavatory.
 - (2) An installation of the shutoff valve.

TASK 38-11-12-000-801

2. Shutoff Valve Removal

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Location Zones

<u>Zone</u>	<u>Area</u>
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-11-12-860-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C38401	LAV WTR HTR 1
B	8	C38403	LAV WTR HTR 2

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	24	C38406	LAV WTR HTR 6
D	25	C38404	LAV WTR HTR 5
D	26	C38402	LAV WTR HTR 4
D	27	C38400	LAV WTR HTR 3

SUBTASK 38-11-12-670-003

- (2) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the component installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or the component.
- Make sure that no unwanted material falls into the open waterlines.

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- Use a cap to seal all waterlines after the component removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the component, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch the waterline or component connections.
- Clean the waterline and component connections before installation.
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-12-010-004

(3) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).

(a) Main Deck Lavatories:

- 1) Open the cabinet door under the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-12-040-001

(4) Open the faucet to release the pressure and to drain some of the water.

D. Shutoff Valve Removal

SUBTASK 38-11-12-020-001

(1) Push the shroud up to access the B-nut to loosen the B-nuts [2] for the water hose connections at the shutoff valve [1].

(a) Use a bucket to catch the water in the water hoses.

SUBTASK 38-11-12-020-002

(2) Remove the screws [3] and washers [4].

SUBTASK 38-11-12-020-003

(3) Remove the shutoff valve [1].

————— END OF TASK —————

TASK 38-11-12-400-801

3. Shutoff Valve Installation

(Figure 401)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve	38-11-12-55-065	ARO ALL
		38-11-12-55A-050	ARO ALL

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

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D. Shutoff Valve Installation

SUBTASK 38-11-12-670-004

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the component installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or the component.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the component removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the component, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch the waterline or component connections.
- Clean the waterline and component connections before installation.
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-11-12-420-001

- (2) Put the shutoff valve [1] in its position.

SUBTASK 38-11-12-420-002

- (3) Install the screws [3] and washers [4].

SUBTASK 38-11-12-420-003

- (4) Attach the water hoses to the top and the bottom of the shutoff valve [1] with the B-nuts [2].

SUBTASK 38-11-12-420-004

- (5) Tighten the B-nuts [2].

E. Shutoff Valve Installation Test

SUBTASK 38-11-12-860-003

- (1) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-11-12-860-005

- (2) Turn the handle for the shutoff valve to the OPEN position.

SUBTASK 38-11-12-790-001

- (3) Make sure there are no leaks.

F. Put the Airplane Back in Its Usual Condition

SUBTASK 38-11-12-670-001

- (1) If you have not followed all of the procedures to prevent contamination, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-11-12-860-004

- (2) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C38401	LAV WTR HTR 1
B	8	C38403	LAV WTR HTR 2

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	24	C38406	LAV WTR HTR 6
D	25	C38404	LAV WTR HTR 5
D	26	C38402	LAV WTR HTR 4
D	27	C38400	LAV WTR HTR 3

SUBTASK 38-11-12-010-005

(3) Turn the water shutoff valve to the ON position.

(a) Main Deck Lavatories:

1) Close the cabinet door under the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-11-12-410-001

(4) Close the access to the lavatory module (TASK 06-41-00-800-801).

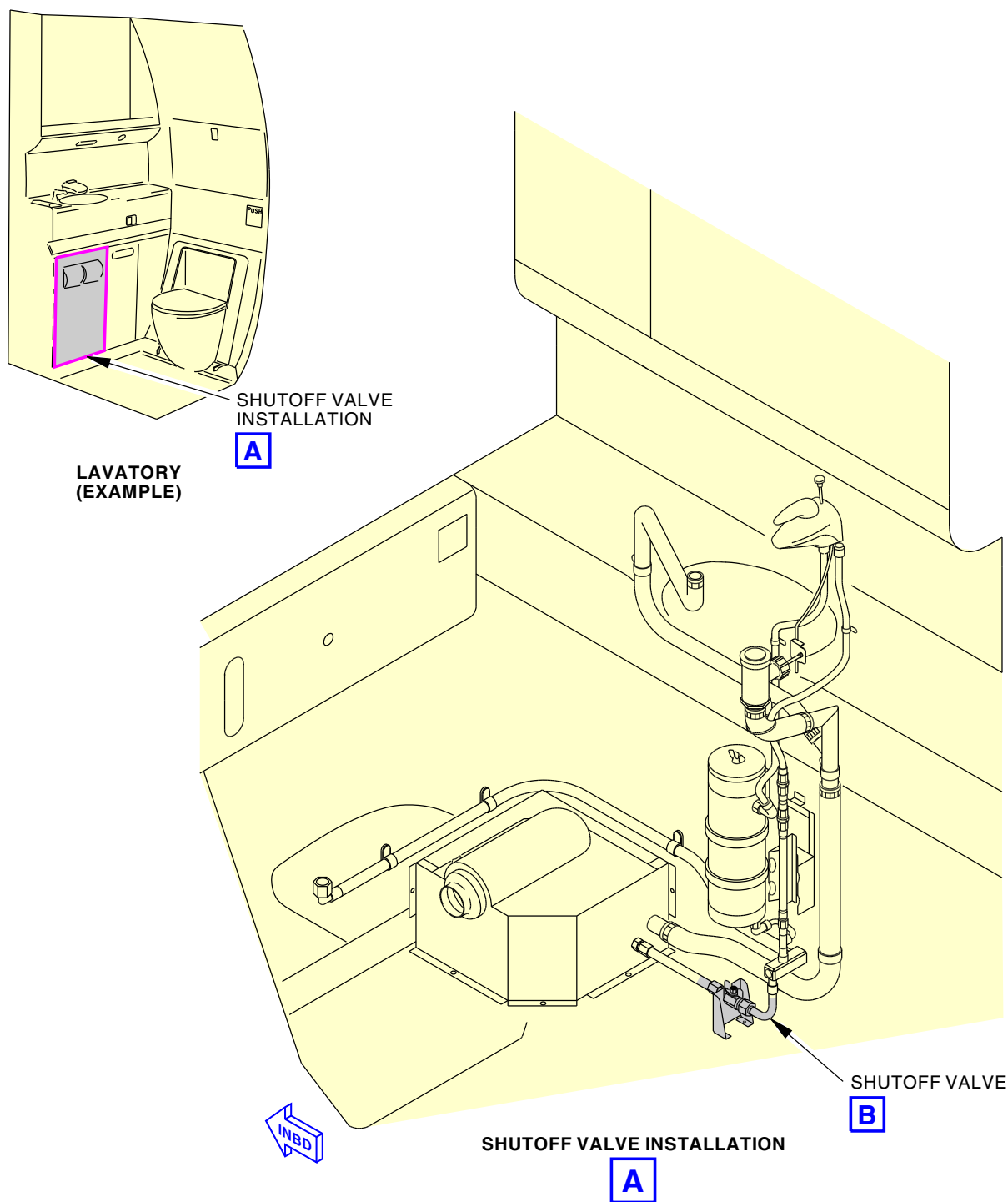
———— **END OF TASK** ————

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E05329 S0006422596_V4

Shutoff Valve Installation
Figure 401/38-11-12-990-801 (Sheet 1 of 2)

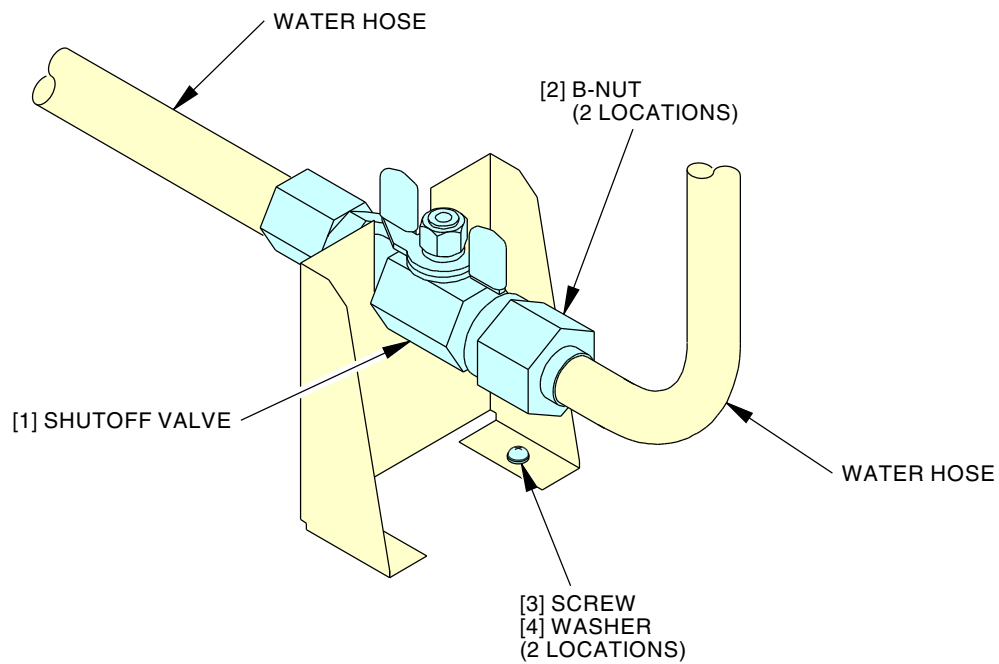
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SHUTOFF VALVE

B

2608680 S0000626633_V1

Shutoff Valve Installation
Figure 401/38-11-12-990-801 (Sheet 2 of 2)

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AFT PRESELECT VALVE - REMOVAL INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the aft preselect valve.
 - (2) An installation of the aft preselect valve.
 - (3) A removal of the actuator assembly of the aft preselect valve.
 - (4) An installation of the actuator assembly on the aft preselect valve.
- B. The aft preselect valve and actuator assembly are located aft of the bulk cargo compartment, on the right side of the airplane.

TASK 38-11-13-020-801

2. Aft Preselect Valve Removal

A. References

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-149	Cap and Plug - NAS834

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the task:

SUBTASK 38-11-13-865-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

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SUBTASK 38-11-13-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-13-490-001

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-13-010-002

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

E. Aft Preselect Valve Removal

SUBTASK 38-11-13-030-001

- (1) Disconnect the three clamps [8] that connect the Aft Preselect Valve [1] to the cross fitting and the tubes. Remove the packings [9] and sleeves [10]. Discard the packings.

SUBTASK 38-11-13-030-002

- (2) Disconnect the airplane electrical connector from the Aft Preselect Valve [1]

SUBTASK 38-11-13-020-001

- (3) Remove the four bolts [2], the washers [3], and the nuts [4], and remove the valve

SUBTASK 38-11-13-913-001

- (4) Put a protective cap and plug, STD-149 on the open water hose/tube fittings, and the open valve ports.

————— END OF TASK —————

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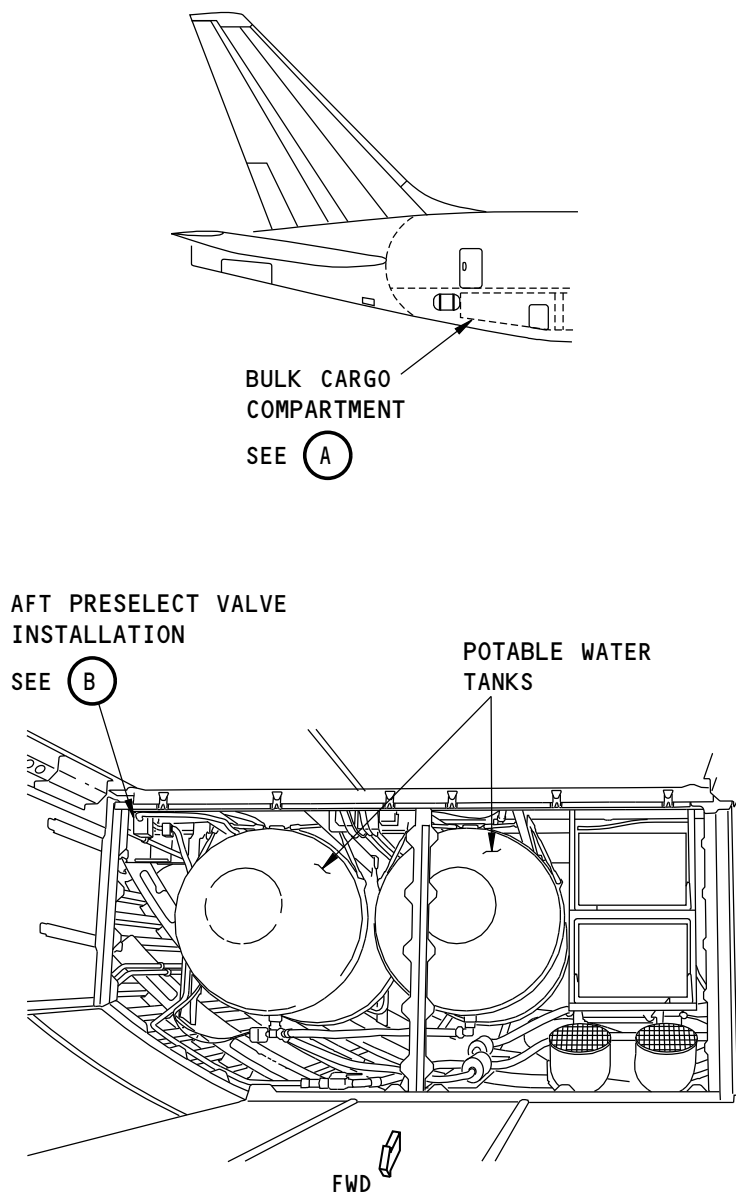
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BULK CARGO COMPARTMENT
(END WALL AND LEFT SIDEWALL PANELS NOT SHOWN)

(A)

1303161 S000022260_V1

AFT PRESELECT VALVE - REMOVAL/INSTALLATION
Figure 401/38-11-13-990-801 (Sheet 1 of 4)

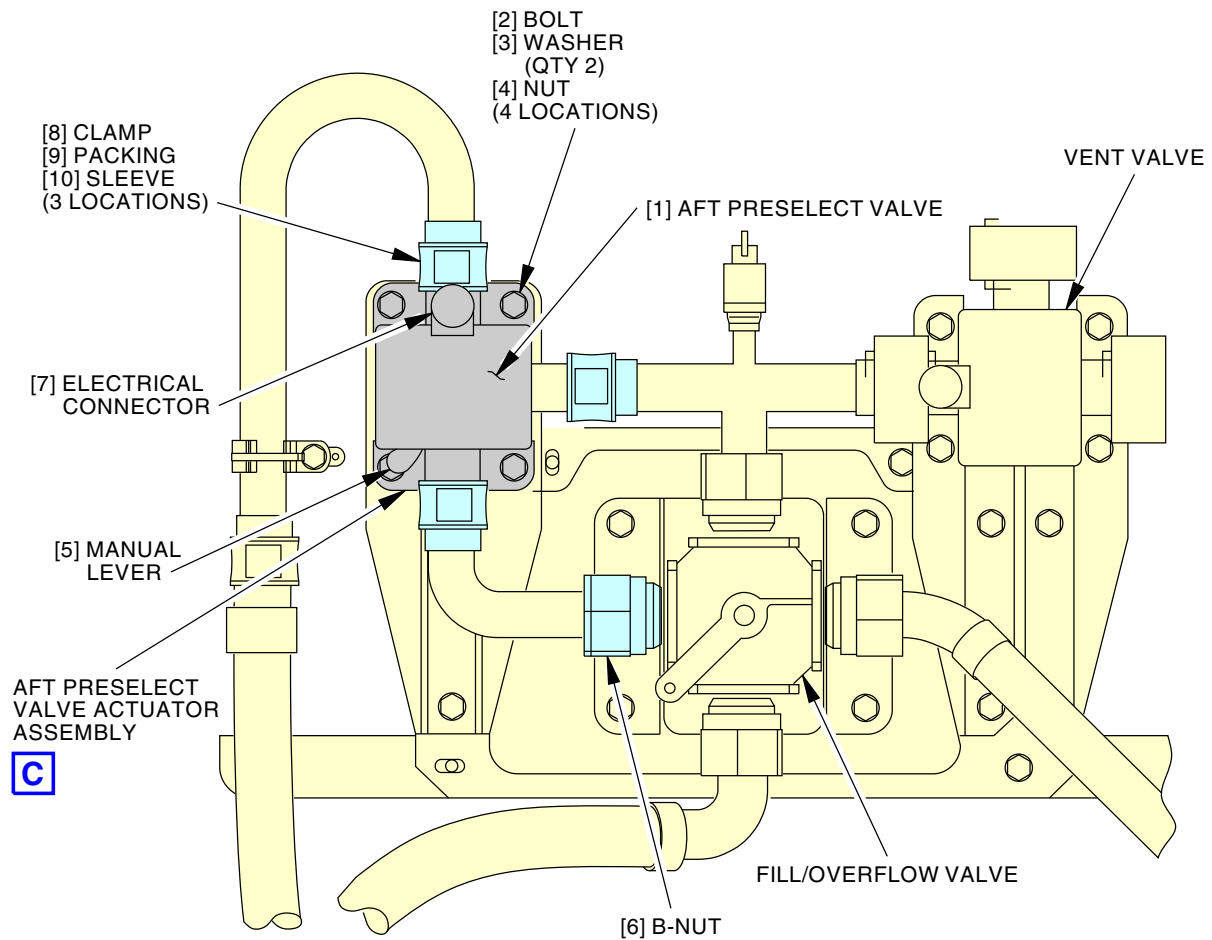
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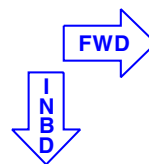
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C



AFT PRESELECT VALVE INSTALLATION

B

1303158 S0000222262_V3

**AFT PRESELECT VALVE - REMOVAL/INSTALLATION
Figure 401/38-11-13-990-801 (Sheet 2 of 4)**

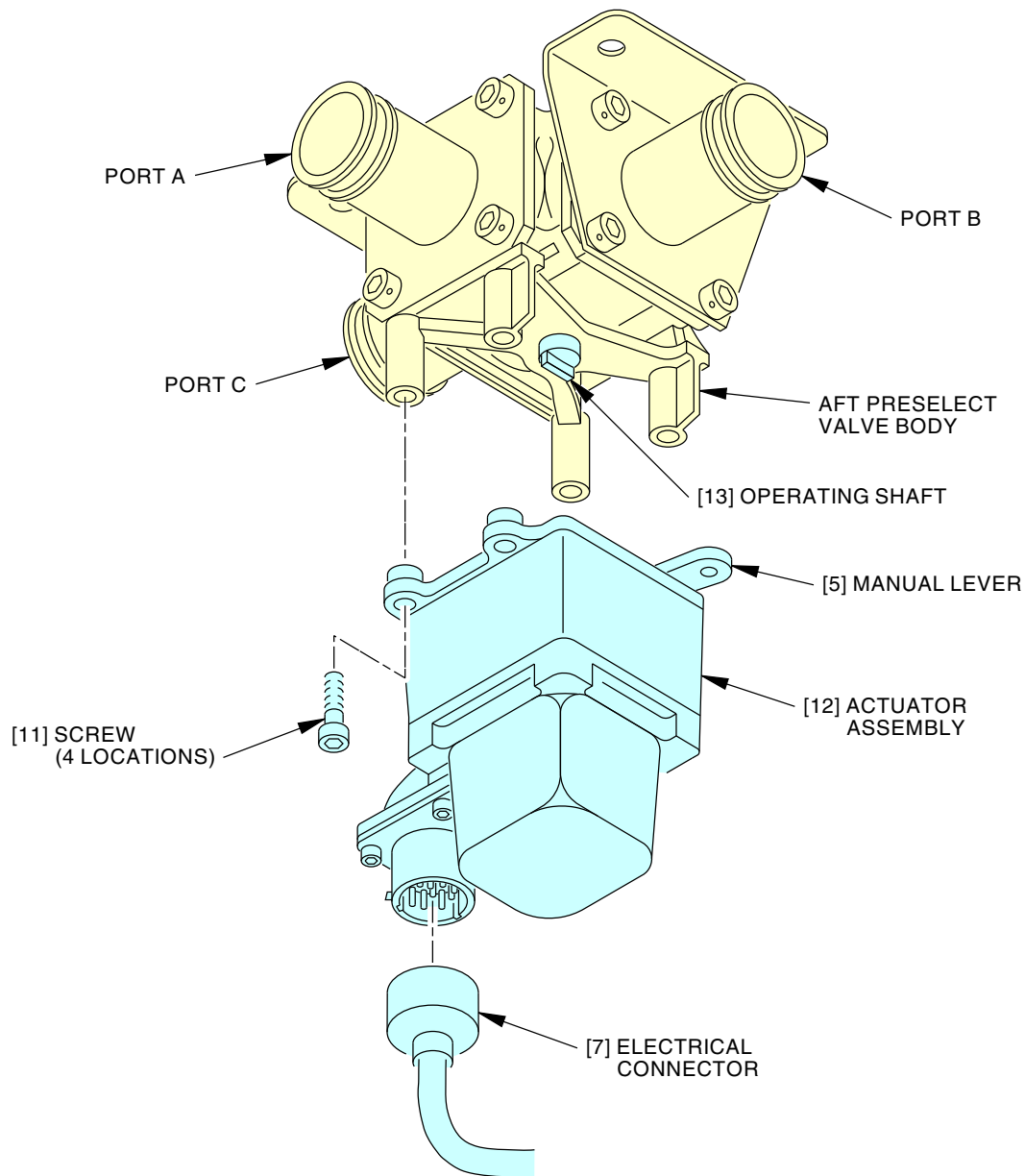
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AFT PRESELECT VALVE ACTUATOR ASSEMBLY

C

2381089 S0000544963_V2

AFT PRESELECT VALVE - REMOVAL/INSTALLATION
Figure 401/38-11-13-990-801 (Sheet 3 of 4)

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AFT PRESELECT VALVE BODY

2381109 S0000544964_V2

AFT PRESELECT VALVE - REMOVAL/INSTALLATION
Figure 401/38-11-13-990-801 (Sheet 4 of 4)

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TASK 38-11-13-400-801

3. Aft Preselect Valve Installation

(Figure 401)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

E. Aft Preselect Valve Installation

SUBTASK 38-11-13-430-001

- (1) Put the Molykote 111 Compound, D00189 on the six packings [9], and put the packings in their positions on the water tube fittings and the Aft Preselect Valve [1] fittings.

SUBTASK 38-11-13-420-001

- (2) Put the Aft Preselect Valve [1] in its position on the airplane structure

SUBTASK 38-11-13-430-003

- (3) Install the four bolts [2], the washers [3], and the nuts [4] that attach the Aft Preselect Valve [1] to the airplane structure.

SUBTASK 38-11-13-430-004

- (4) Put the sleeves [10] and clamshell coupling clamps [8] on the Aft Preselect Valve [1] cross fitting and water tube connections. Latch the clamshell coupling clamps [8]
 - (a) Make sure the clamshell coupling clamps are fully seated and latched.

SUBTASK 38-11-13-430-005

- (5) Connect the airplane electrical connector to the Aft Preselect Valve [1] electrical connector [7].

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SUBTASK 38-11-13-865-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-13-861-001

- (7) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-13-710-002

- (8) Make sure that the Aft Preselect Valve [1] manual lever [5] is aligned with the position 2 (POS 2) mark on the valve body.

SUBTASK 38-11-13-010-003

- (9) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-13-860-001

- (10) Pull the TANK FILL VALVE control handle out, to the stop.

SUBTASK 38-11-13-710-001

- (11) Make sure that the Aft Preselect Valve [1] manual lever [5] is aligned with the position 1 (POS 1) mark on the valve body.

SUBTASK 38-11-13-860-002

- (12) Push the TANK FILL VALVE control handle in, to the stop.

SUBTASK 38-11-13-710-003

- (13) Do this task, using the preselect fill method: Potable Water Tank - Fill, TASK 12-14-01-600-810
- (a) Make sure the water tanks fill, using the preselect fill method.
 - (b) Make sure there are no water leaks at the Aft Preselect Valve [1].
 - (c) Make sure the water flow stops, when the preselected quantity is indicated on the service panel water quantity indicator.

SUBTASK 38-11-13-410-001

- (14) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

F. Restore the airplane to its usual condition

SUBTASK 38-11-13-410-002

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-13-090-001

- (2) Remove the large cargo door safety barrier, SPL-1988, as necessary.

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SUBTASK 38-11-13-410-003

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-13-862-001

- (4) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

————— END OF TASK —————

TASK 38-11-13-000-801

4. Aft Preselect Valve Actuator Assembly Removal

(Figure 401)

A. General

- (1) This task includes the steps to remove the actuator assembly of the aft preselect valve.

B. References

<u>Reference</u>	<u>Title</u>
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall 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.

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

D. Location Zones

<u>Zone</u>	<u>Area</u>
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

F. Prepare for the Removal

SUBTASK 38-11-13-860-003

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-13-010-004

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-13-480-001

- (3) Install the large cargo door safety barrier, SPL-1988, if necessary.

SUBTASK 38-11-13-010-005

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

G. Aft Preselect Valve Actuator Assembly Removal

SUBTASK 38-11-13-020-002

- (1) Disconnect the airplane electrical connector from the actuator assembly [12] electrical connector [7].

SUBTASK 38-11-13-020-003

- (2) Remove the screws [11].

SUBTASK 38-11-13-020-004

- (3) Lift the actuator assembly [12] directly up from the Aft Preselect Valve [1] body until the output shaft is clear of the operating shaft [13].

————— END OF TASK —————

TASK 38-11-13-400-802

5. Aft Preselect Valve Actuator Assembly Installation

(Figure 401)

A. General

- (1) This task includes the steps to install the Actuator Assembly of the Aft Preselect Valve.

B. References

<u>Reference</u>	<u>Title</u>
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

C. Tools/Equipment

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

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

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D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
12	Actuator assembly	38-11-16-50-055	ARO 001-017

E. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

F. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

G. Aft Preselect Valve Actuator Assembly Installation

SUBTASK 38-11-13-710-004

- (1) Make sure that the actuator assembly [12] manual lever [5] and the Aft Preselect Valve [1] body are set to position 1 (POS 1).

SUBTASK 38-11-13-420-002

- (2) Install the actuator assembly [12] on the Aft Preselect Valve [1] body with the output shaft connected to the operating shaft [13].

SUBTASK 38-11-13-420-003

- (3) Install the screws [11].

SUBTASK 38-11-13-420-004

- (4) Tighten the screws [11] to 18 in-lb (2.03 N·m) - 20 in-lb (2.26 N·m).

SUBTASK 38-11-13-420-005

- (5) Connect the airplane electrical connector to the actuator assembly [12] electrical connector [7].

H. Aft Preselect Valve Actuator Assembly Installation Test

SUBTASK 38-11-13-860-004

- (1)

Remove the safety tags and close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV
G	12	C38310	WTR SYS ELECT PUMP 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-13-860-005

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-13-710-005

- (3) Make sure that the Aft Preselect Valve [1] manual lever [5] is aligned with the position 2 (POS 2) mark on the valve body.

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SUBTASK 38-11-13-010-006

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-11-13-860-006

- (5) Pull the TANK FILL CONTROL VALVE control handle out, to the stop.

SUBTASK 38-11-13-710-006

- (6) Make sure that the Aft Preselect Valve [1] manual lever [5] is aligned with the position 1 (POS 1) mark on the valve body.

SUBTASK 38-11-13-860-007

- (7) Pull the TANK FILL CONTROL VALVE control handle in, to the stop.

SUBTASK 38-11-13-710-007

- (8) Do this task, using the preselect fill method: Potable Water Tank - Fill, TASK 12-14-01-600-810.
- (a) Make sure that the water tanks fill, using the preselect fill method.
 - (b) Make sure that there are no water leaks at the Aft Preselect Valve [1].
 - (c) Make sure that the water flow stops, when the preselected quantity is shown on the water quantity indicator of the service panel.

SUBTASK 38-11-13-410-004

- (9) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-13-410-005

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-13-080-001

- (2) Remove the large cargo door safety barrier, SPL-1988, if necessary.

SUBTASK 38-11-13-410-006

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-13-860-008

- (4) Do this task to remove the electrical power, if it is not necessary: Remove Electrical Power, TASK 24-22-00-860-806.

————— END OF TASK —————

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VENT VALVE - POTABLE WATER TANKS - MAINTENANCE PRACTICES

1. General

- A. This procedure has this task.
(1) Vent Valve Screen - Cleaning

TASK 38-11-14-160-801

2. Vent Valve Screen - Cleaning

A. **References**

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-4449	Air Source - Dry, Filtered, 0-25 PSI +/- 1 PSI

C. **Consumable Materials**

Reference	Description	Specification
B50026	Soap - Clear Liquid Dishwashing	
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

E. **Clean the tank vent valve screen**

SUBTASK 38-11-14-010-001

- (1) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-14-010-002

- (2) Do this task to remove the endwall panels: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-11-14-030-001

- (3) Disconnect the clamshell clamp [4] and sleeve [5], and remove the screen assembly [2].

SUBTASK 38-11-14-160-001

- (4) Clean the lint and dust from the screen assembly [2] with the compressed air supply, STD-4449.

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- (a) Make sure that the screen [6] is not torn or deformed. Replace damaged screen assemblies [2].

SUBTASK 38-11-14-140-001

- (5) As necessary, remove the retainer ring from the screen assembly, and remove the screen [6].
 - (a) As necessary, clean the screen with a solution of soap, B50026 and clean water.
 - (b) As necessary, put the screen [6] in the screen assembly [2], and install the retainer ring.

SUBTASK 38-11-14-430-001

- (6) Renew the Molykote 111 Compound, D00189 on the two packings [3], and put the packings on the vent hose [1] fitting and the screen assembly [2].

SUBTASK 38-11-14-430-002

- (7) Put the screen assembly [2] in its position on the vent hose [1]. Install the sleeve [5] and the clamshell clamp [4].
 - (a) Make sure the clamshell clamp [4] is fully seated, and latched

SUBTASK 38-11-14-410-001

- (8) Do this task to install the endwall panels: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-14-090-001

- (9) Remove the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-14-410-002

- (10) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

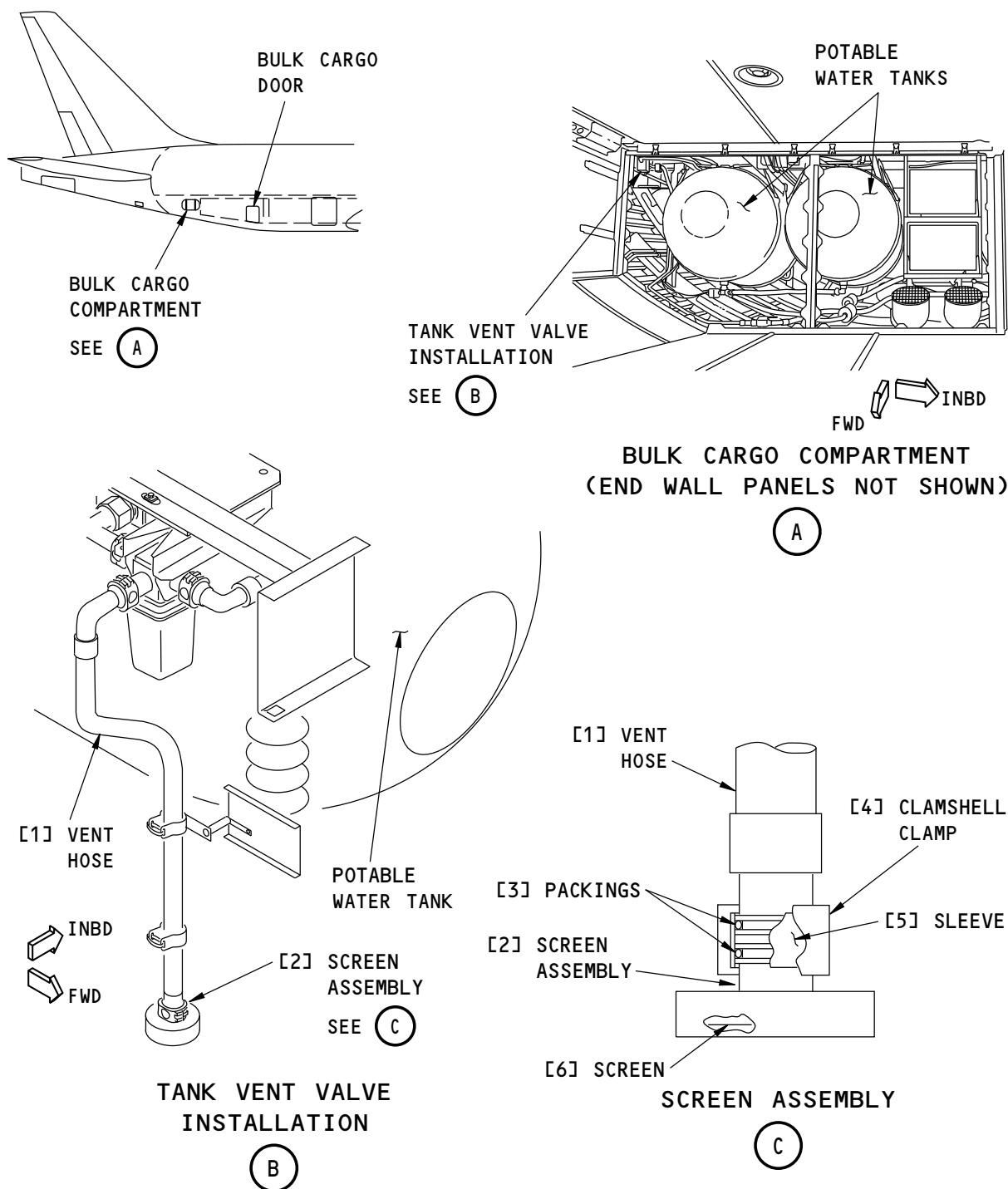
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VENT VALVE SCREEN - MAINTENANCE PRACTICES Figure 201/38-11-14-990-801

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VENT VALVE - POTABLE WATER TANKS - REMOVAL / INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the tank vent valve.
 - (2) An installation of the tank vent valve.
 - (3) A removal of the actuator assembly of the tank vent valve.
 - (4) An installation of the actuator assembly on the tank vent valve.
- B. The vent valve is located aft of the bulk cargo compartment endwall panel, on the right side of the airplane.
- C. The actuator assembly of the vent valve is located aft of the bulk cargo compartment, on the right side of the airplane.

TASK 38-11-14-000-801

2. Vent Valve Removal

A. **References**

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

B. **Tools/Equipment**

Reference	Description
STD-149	Cap and Plug - NAS834

C. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

D. **Prepare for the task:**

SUBTASK 38-11-14-865-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-14-010-003

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-14-010-004

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

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E. Remove the Vent Valve

SUBTASK 38-11-14-030-003

- (1) Disconnect the electrical connector.

SUBTASK 38-11-14-030-002

- (2) Disconnect the three clamshell coupling clamps [8] and sleeves at the hose [2], hose [7] and the cross fitting [11]. Remove and discard the packings.

SUBTASK 38-11-14-020-001

- (3) Remove the bolts [5] and washers [4] washers that attach the vent valve [6] assembly to the bracket [1], and remove the valve.

SUBTASK 38-11-14-913-001

- (4) Put the protective cap and plug, STD-149 in the open water lines, and the valve ports.

———— **END OF TASK** ————

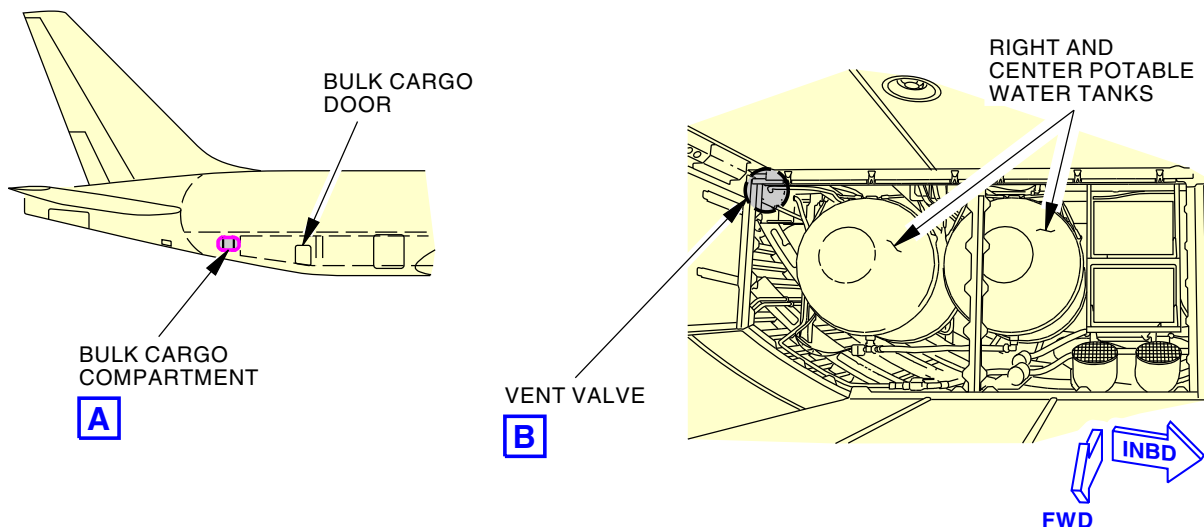
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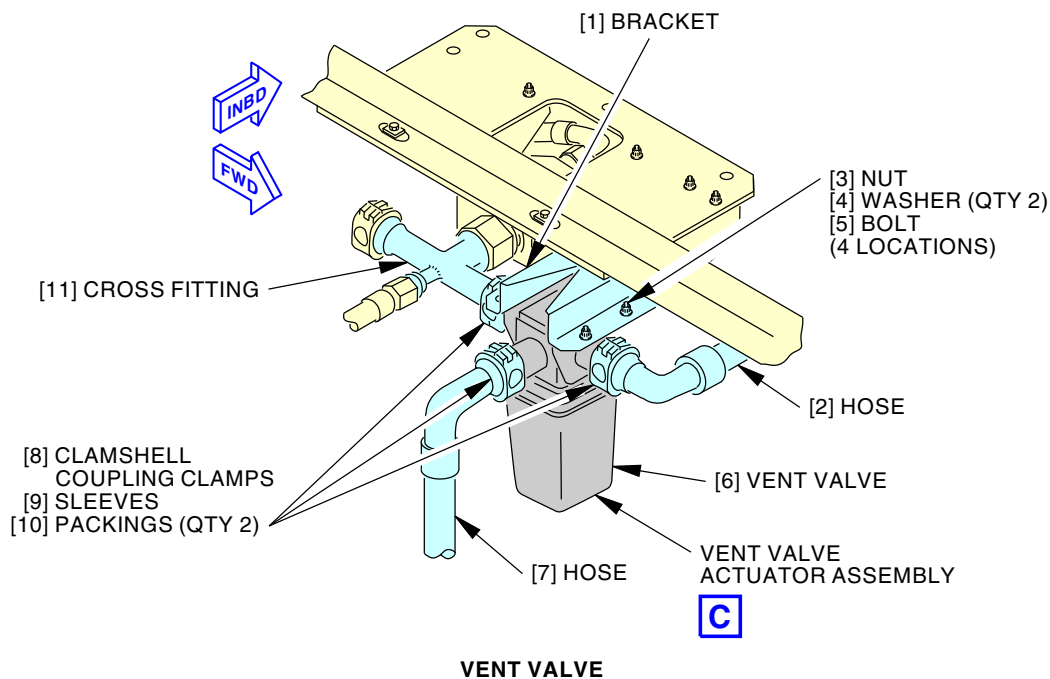
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**BULK CARGO COMPARTMENT
(END WALL PANELS NOT SHOWN)**

A



VENT VALVE

B

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VENT VALVE - POTABLE WATER TANKS - REMOVAL / INSTALLATION Figure 401/38-11-14-990-802 (Sheet 1 of 3)

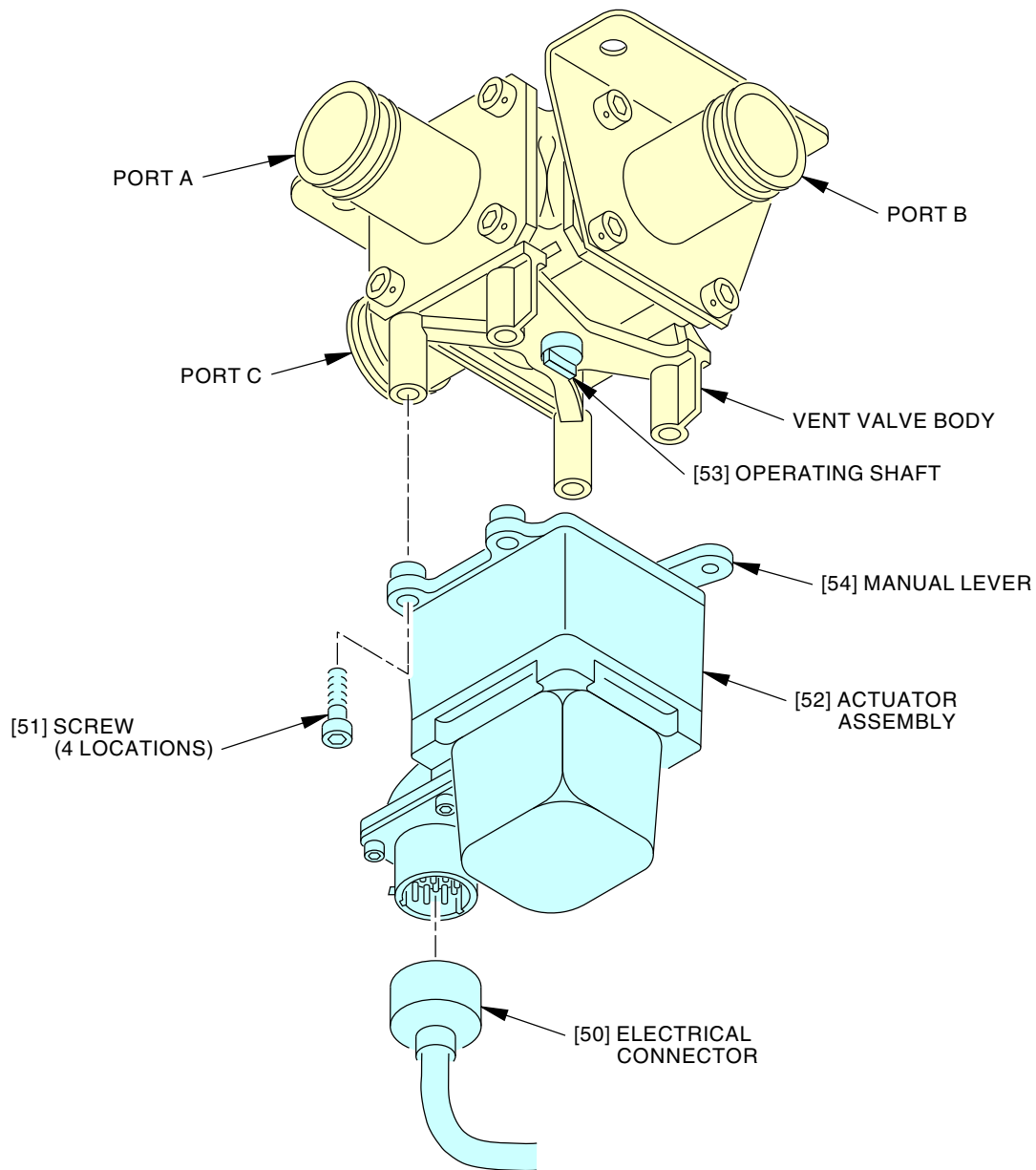
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VENT VALVE ACTUATOR ASSEMBLY

C

2381456 S0000545637_V2

VENT VALVE - POTABLE WATER TANKS - REMOVAL / INSTALLATION
Figure 401/38-11-14-990-802 (Sheet 2 of 3)

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VENT VALVE BODY

2381462 S0000545638_V2

VENT VALVE - POTABLE WATER TANKS - REMOVAL / INSTALLATION
Figure 401/38-11-14-990-802 (Sheet 3 of 3)

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TASK 38-11-14-400-801

3. Vent Valve Installation

(Figure 401)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

C. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

D. Vent Valve Installation

SUBTASK 38-11-14-430-003

- (1) Lubricate the six packings [10] with Molykote 111 Compound, D00189. Put the packings in their positions on the vent valve [6], the cross fitting [11] port, the hose [7] fitting, and the hose [2] fitting.

SUBTASK 38-11-14-430-004

- (2) Put the vent valve [6] in its position on the cross fitting [11] fitting, and install the sleeve [9] and the clamshell coupling clamp [8].

SUBTASK 38-11-14-430-005

- (3) Install the four bolts [5], eight washers [4], and the four nuts [3] that attach the vent valve to the airplane bracket [1].

SUBTASK 38-11-14-430-006

- (4) Put the hose [2] in its position on the vent valve and install the sleeve and clamshell coupling clamp.

SUBTASK 38-11-14-430-007

- (5) Put the hose [7] hose in its position on the vent valve and install the sleeve and clamshell coupling clamp.

SUBTASK 38-11-14-210-001

- (6) Make sure that the three clamshell coupling clamps [8] clamps are latched.

SUBTASK 38-11-14-430-008

- (7) Connect the airplane electrical connector to the vent valve [6].

SUBTASK 38-11-14-865-002

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

E. Vent Valve Operational Check.

SUBTASK 38-11-14-861-001

- (1) Do this task Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-14-860-001

- (2) Make sure that the controls on the aft water service panel are in the flight/normal positions.

SUBTASK 38-11-14-710-001

- (3) Make sure that the vent valve [6] manual lever is aligned with the position 2 (POS 2) mark on the valve body.

SUBTASK 38-11-14-010-005

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

- (a) Pull the TANK FILL VALVE control handle out, to the stop.

SUBTASK 38-11-14-710-003

- (5) Make sure that the vent valve [6] manual lever is aligned with the position 1 (POS 1) mark on the valve body.

SUBTASK 38-11-14-790-001

- (6) Do this task to pressurize the water hoses: Potable Water Tank - Fill, TASK 12-14-01-600-810

- (a) Examine the vent valve [6] connections at the hose [2], the hose [7], and the cross fitting [11], and make sure there are no water leaks.

F. Restore the airplane to its usual condition.

SUBTASK 38-11-14-410-003

- (1) Do this task to install the endwall panels: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801

SUBTASK 38-11-14-410-004

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-14-862-001

- (3) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806

————— END OF TASK —————

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TASK 38-11-14-000-805

4. Vent Valve Actuator Assembly Removal

(Figure 401)

A. General

- (1) This task includes the steps to remove the actuator assembly of the vent valve.

B. References

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for the Removal

SUBTASK 38-11-14-860-003

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-14-010-018

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-14-480-001

- (3) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.

F. Vent Valve Actuator Assembly Removal

SUBTASK 38-11-14-020-005

- (1) Disconnect the airplane electrical connector from the actuator assembly [52] electrical connector [50].

SUBTASK 38-11-14-020-006

- (2) Remove the screws [51].

SUBTASK 38-11-14-020-007

- (3) Lift the actuator assembly [52] directly up from the vent valve [6] body until the output shaft is clear of the operating shaft [53].

————— END OF TASK —————

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TASK 38-11-14-400-805

5. Vent Valve Actuator Assembly Installation

(Figure 401)

A. General

(1) This task includes the steps to install the actuator assembly of the vent valve.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
52	Actuator assembly	38-11-16-50-055	ARO 001-017

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door
825	Bulk Cargo Door

F. Vent Valve Actuator Assembly Installation

SUBTASK 38-11-14-710-012

(1) Make sure the actuator assembly [52] manual lever [54] and vent valve [6] body are set to position 1 (POS 1).

SUBTASK 38-11-14-420-001

(2) Install the actuator assembly [52] on the vent valve [6] body with the output shaft connected to the operating shaft [53].

SUBTASK 38-11-14-420-002

(3) Install the screws [51].

SUBTASK 38-11-14-420-003

(4) Tighten the screws [51] to 18 in-lb (2.03 N·m) - 20 in-lb (2.26 N·m).

SUBTASK 38-11-14-420-004

(5) Connect the airplane electrical connector to the actuator assembly [52] electrical connector [50].

G. Vent Valve Actuator Assembly Installation Test

SUBTASK 38-11-14-860-004

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND
E	7	C38615	WTR SYS ELECT VLV

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-11-14-860-005

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-11-14-710-013

- (3) Make sure that the controls on the aft water service panel are in the flight/normal positions.

SUBTASK 38-11-14-710-015

- (4) Make sure that the vent valve [6] manual lever [54] is aligned with the position 2 (POS 2) mark on the valve body.

SUBTASK 38-11-14-010-020

- (5) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

- (a) Pull the TANK FILL VALVE control handle out, to the stop.

SUBTASK 38-11-14-710-016

- (6) Make sure that the vent valve [6] manual lever [54] is aligned with the position 1 (POS 1) mark on the valve body.

SUBTASK 38-11-14-410-019

- (7) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-11-14-410-016

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-11-14-410-018

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-11-14-860-006

- (3) Do this task to remove the electrical power, if it is no longer necessary: Remove Electrical Power, TASK 24-22-00-860-806.

————— END OF TASK —————

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BYPASS RESTRICTOR - MAINTENANCE PRACTICES

1. General

A. This Procedure has this task.

- (1) A cleaning and visual check of the pump bypass restrictor.

TASK 38-11-15-100-801

2. Bypass Restrictor - Cleaning

A. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-1280	Source - Air, Regulated, Dry Filtered, 0-30 PSIG

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Clean the bypass restrictor

SUBTASK 38-11-15-865-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-11-15-010-001

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-11-15-490-001

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-11-15-010-002

- (4) Do this Task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

SUBTASK 38-11-15-030-001

- (5) Disconnect the pump bypass hose [2] b-nuts from the bypass restrictor [1] and remove the bypass restrictor.

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SUBTASK 38-11-15-170-001

- (6) Use the 0-30 psig dry filtered regulated air source, STD-1280, or clean water to flush the restrictor flow path.

SUBTASK 38-11-15-210-001

- (7) Do a visual check of the restrictor for corrosion or deformation. Replace damaged restrictor assemblies.

SUBTASK 38-11-15-430-001

- (8) Put the bypass restrictor [1] in its position, and connect the pump bypass hose [2] b-nuts. Tighten the b-nuts.

SUBTASK 38-11-15-865-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C38311	WTR SYS ELECT PUMP 2
G	12	C38310	WTR SYS ELECT PUMP 1

SUBTASK 38-11-15-861-001

- (10) Do this task to supply electrical power to the airplane: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-11-15-863-001

- (11) Do this task to pressurize the potable water system: Potable Water System - Pressurization, TASK 38-10-00-863-801

SUBTASK 38-11-15-790-001

- (12) Make sure that there are no water leaks at the pump bypass hose [2] and bypass restrictor [1] connections.

————— **END OF TASK** —————

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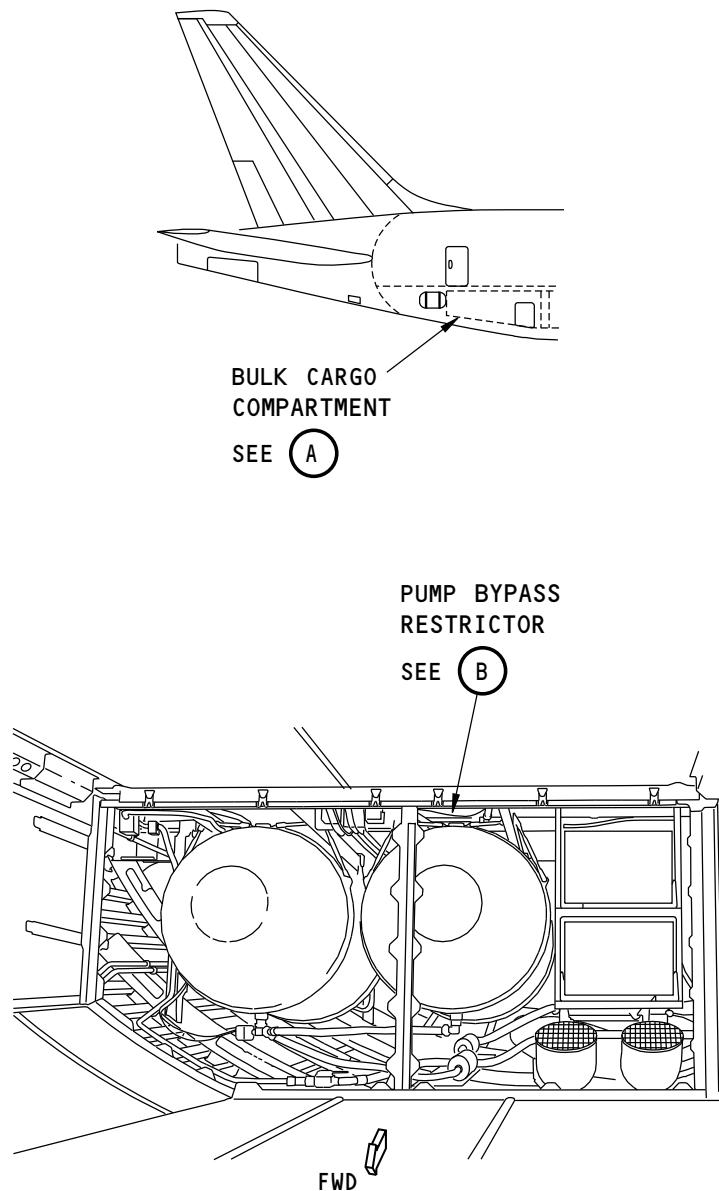
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BULK CARGO COMPARTMENT
(END WALL AND LEFT SIDEWALL PANELS NOT SHOWN)

(A)

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BYPASS RESTRICTOR - MAINTENANCE PRACTICES
Figure 201/38-11-15-990-801 (Sheet 1 of 2)

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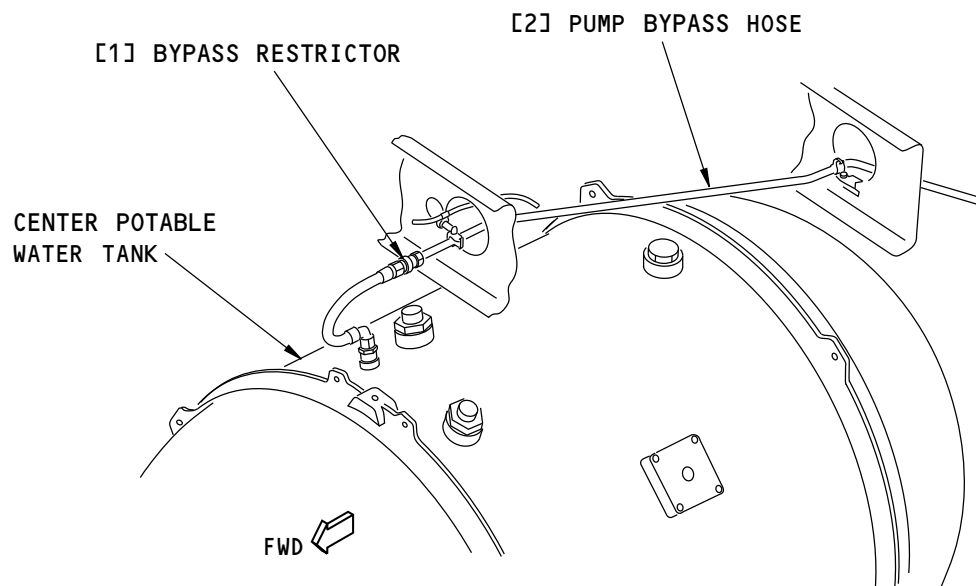
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PUMP BYPASS RESTRICTOR

(B)

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BYPASS RESTRICTOR - MAINTENANCE PRACTICES
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WATER HEATER - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the water heater
 - (2) An installation of the water heater.
- B. The water heater is below the sink in the lavatory compartment.

TASK 38-13-01-000-801

2. Water Heater Removal

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
12-14-01-616-802	Potable Water System - Drain (P/B 301)

B. Location Zones

<u>Zone</u>	<u>Area</u>
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-13-01-860-001

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C38401	LAV WTR HTR 1
B	8	C38403	LAV WTR HTR 2
D	7	C38407	LAV WTR HTR 7

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	24	C38406	LAV WTR HTR 6
D	25	C38404	LAV WTR HTR 5
D	26	C38402	LAV WTR HTR 4
D	27	C38400	LAV WTR HTR 3

NOTE: You must open the applicable circuit breaker for the lavatory you work in.

SUBTASK 38-13-01-010-004

- (2) Get access to the lavatory module water shutoff valve (TASK 06-41-00-800-801).

(a) Main Deck Lavatories:

- 1) Open the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-13-01-860-005

- (3) Turn the water shutoff valve to the OFF position.

SUBTASK 38-13-01-010-001

- (4) Get access to the drain valve and water heater.

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- (a) Open the door of the cabinet below the sink.

SUBTASK 38-13-01-860-008

- (5) Move the drain valve to the OPEN TO DRAIN position.

NOTE: The drain valve is found below the sink in the lavatory. Disabled, and some first class, lavatories have two drain valves each.

- (a) For the self-close type drain valve, make sure that the lavatory drain valve is held open manually for about one and a half minutes when placing it in the OPEN TO DRAIN position.

SUBTASK 38-13-01-040-002

- (6) Open the faucet to release the pressure and to drain some of the water.

SUBTASK 38-13-01-680-001

- (7) If it is necessary, do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

D. Water Heater Removal

SUBTASK 38-13-01-670-003

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the component installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or the component.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the component removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the component, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch the waterline or component connections.
- Clean the waterline and component connections before installation.
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-13-01-020-001

- (2) Disconnect the electrical connector [2].

SUBTASK 38-13-01-020-002

- (3) Disconnect the water hose [3] from the side of the water heater assembly [1].

- (a) Put a cloth under the water heater to absorb the extra water.

SUBTASK 38-13-01-020-003

- (4) Disconnect the water hose [4] from the bottom of the water heater assembly [1].

- (a) Put a cloth under the water heater to absorb the extra water.

SUBTASK 38-13-01-020-004

- (5) Loosen the screws [5] to disconnect the support straps [6].

SUBTASK 38-13-01-020-005

- (6) Remove the water heater assembly [1].

————— **END OF TASK** —————

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TASK 38-13-01-400-801

3. Water Heater Installation

(Figure 401)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
38-10-00-600-801	Potable Water System - Disinfectant (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Heater assembly	38-13-01-55-060	ARO ALL

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Water Heater Installation

SUBTASK 38-13-01-670-004

- (1) Follow these procedures to prevent contamination.

NOTE: If you do not follow these procedures, you must do the potable water system disinfectant task after the component installation.

- Use rubber or latex gloves.
- Replace gloves after you touch drain parts and before you touch the waterlines or the component.
- Make sure that no unwanted material falls into the open waterlines.
- Use a cap to seal all waterlines after the component removal.
- Use a disinfectant wipe or a clean cloth soaked with isopropyl alcohol to clean the component, the connections and the tools. Keep the connection surface wet for a 30 seconds minimum.
- Clean the tools that will touch the waterline or component connections.
- Clean the waterline and component connections before installation.
- Operate the faucet for one minute minimum after installation to flush.

SUBTASK 38-13-01-420-001

- (2) Put the water heater assembly [1] in its position.

SUBTASK 38-13-01-420-002

- (3) Connect the support straps [6] for the water heater assembly [1].

NOTE: Do not tighten the screws [5] for the support straps [6].

SUBTASK 38-13-01-420-003

- (4) Connect the water hose [4] to the bottom of the water heater assembly [1].

SUBTASK 38-13-01-420-004

- (5) Connect the water hose [3] to the side of the water heater assembly [1].

SUBTASK 38-13-01-420-005

- (6) Connect the electrical connector [2] to the water heater assembly [1].

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SUBTASK 38-13-01-420-006

- (7) Tighten the screws [5] for the support straps [6].

E. Put the Airplane Back in the Usual Condition.

SUBTASK 38-13-01-670-001

- (1) If you have not followed all of the procedures to prevent contamination, do this task: Potable Water System - Disinfectant, TASK 38-10-00-600-801.

SUBTASK 38-13-01-680-002

- (2) If it is necessary, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-13-01-860-004



CAUTION

MAKE SURE THAT YOU CLOSE THE DRAIN VALVE TO PREVENT A FROZEN DRAIN LINE DURING THE WATER SYSTEM OPERATION. THE DRAIN LINE CAN FREEZE DURING FLIGHT. THIS CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (3) Move the drain valve for the lavatory to the CLOSED position.

SUBTASK 38-13-01-010-005

- (4) Move the water shutoff valve to the ON position.

(a) Main Deck Lavatories:

- 1) Close the cabinet door below the sink.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-13-01-860-002

- (5) Close these circuit breakers:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	8	C38401	LAV WTR HTR 1
B	8	C38403	LAV WTR HTR 2
D	7	C38407	LAV WTR HTR 7

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	24	C38406	LAV WTR HTR 6
D	25	C38404	LAV WTR HTR 5
D	26	C38402	LAV WTR HTR 4
D	27	C38400	LAV WTR HTR 3

SUBTASK 38-13-01-790-001

- (6) Make sure the water hose connections at the water heater do not have a leak.

SUBTASK 38-13-01-710-001

- (7) After 5 minutes, open the hot water faucet to make sure that the water is hot.

(a) If the water is not at the correct temperature, move the temperature select switch to a higher or lower temperature position.

SUBTASK 38-13-01-020-006

- (8) Remove the cloth from below the heater assembly [1].

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SUBTASK 38-13-01-410-003

(9) Close the door to the cabinet below the sink.

SUBTASK 38-13-01-410-002

(10) Close the access to the lavatory module (TASK 06-41-00-800-801).

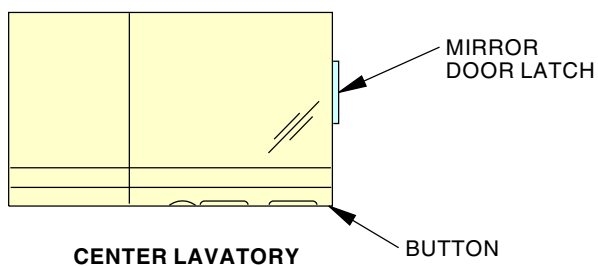
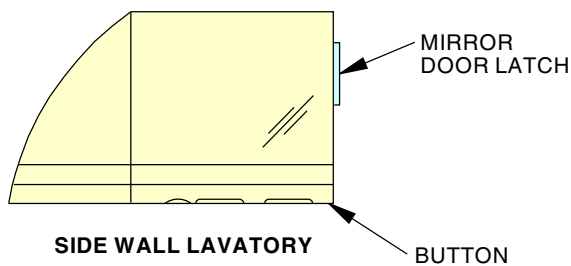
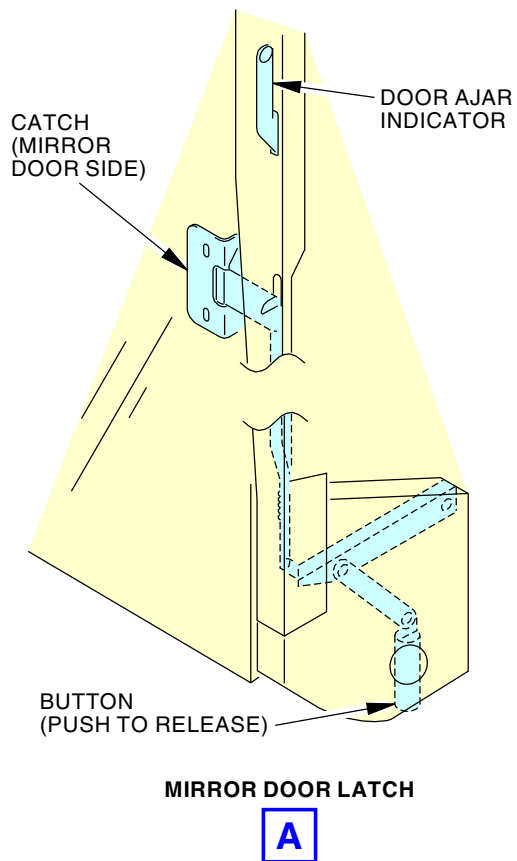
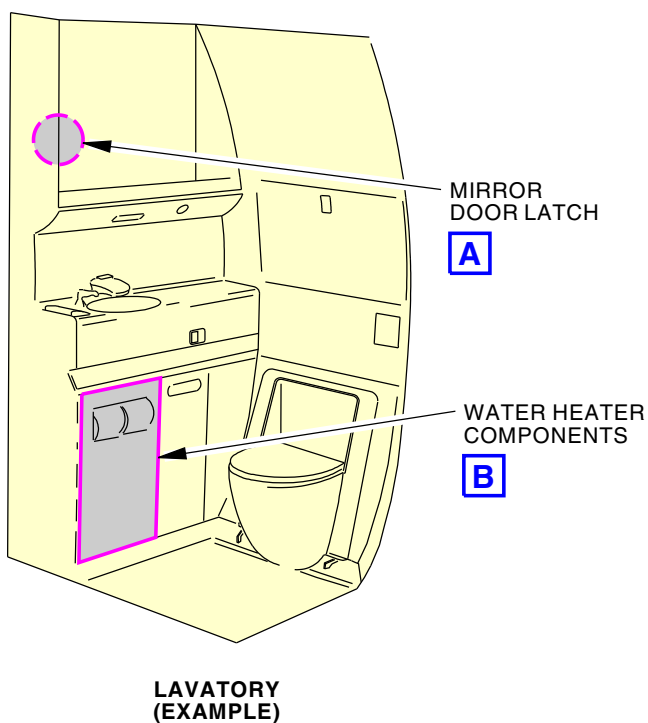
———— **END OF TASK** ————

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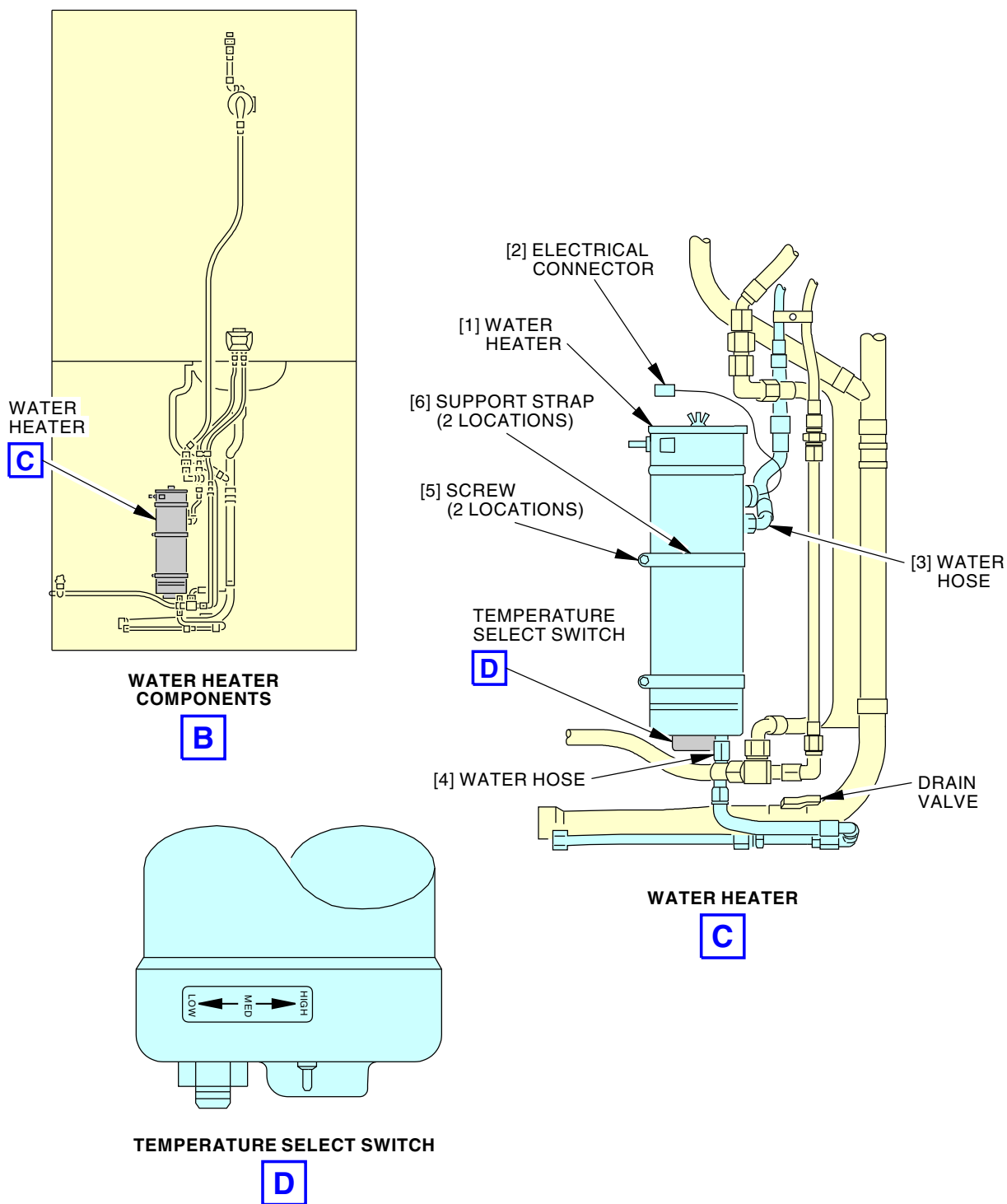
**Water Heater Installation
Figure 401/38-13-01-990-801 (Sheet 1 of 2)**

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**Water Heater Installation
Figure 401/38-13-01-990-801 (Sheet 2 of 2)**

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WATER QUANTITY INDICATION RECONFIGURATION - MAINTENANCE PRACTICES

1. General

A.

These tasks are for use with the water tank deactivation

TASK 38-14-00-860-803

2. Water Quantity Indication Reconfiguration for Right Tank Deactivation

A. **General**

- (1) This task is used to reconfigure the water quantity indication for airplanes with the right water tank deactivated.

B. **References**

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
23-39-00-400-811	Configuration Database and Lighting Database Installation (Phase II) (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

D. **Location Zones**

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

F. **Prepare for the Reconfiguration**

SUBTASK 38-14-00-860-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

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SUBTASK 38-14-00-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-14-00-480-001

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-14-00-010-002

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Indication Reconfiguration

SUBTASK 38-14-00-860-012

- (1) Remove connector DM38015 from the Water Quantity Control Module and make these wiring changes:

- (a) Re-terminate wire from pin 10 to pin 23.

NOTE: This will reprogram from three to two tank sensors

- (b) Disconnect wire terminated at pin 55 and then cap and stow.

- (c) Re-terminate wire from pin 53 to pin 55.

NOTE: This will move left tank sensor (+) input to sensor #1 position

- (d) Disconnect wire terminated at pin 37 and then cap and stow.

- (e) Re-terminate wire from pin 35 to pin 37.

NOTE: This will move left tank sensor (-) input to sensor #1 position

SUBTASK 38-14-00-420-003

- (2) Install connector DM38015 to the Water Quantity Control Module.

SUBTASK 38-14-00-860-003

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-860-002

- (4) Rescale the CSCP water quantity readout from a 3 tank configuration to 2 tank configuration.

NOTE: The wiring changes in step 1 cause the service panel gauge and CSCP bar graph display to be scaled to a two tank configuration (gauge/display will read full with both tanks full). The CSCP water quantity readout (gallons/liters) will still be scaled to a three tank configuration (when the two tanks are full, the display will show a water quantity in gallons/liters equal to three full tanks). The CSCP must be rescaled to show the correct amounts for the two tank configuration.

- (a) Use the CDG (Configuration Database Generator) tool to update the CSS (Cabin Services System) CDB (Configuration Data Base).

- 1) In the CDG, open the applicable baseline CDB for the applicable airplane.
- 2) Select from the CDG menu:

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- a) DATA
 - b) PANEL SETUP
 - c) POTABLE WATER
- 3) Change the volume of the tank from "1237 liters" to "825" liters or "327" gallons to "218" gallons.
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CHECK CONSISTENCY
 - b) Verify that there are no "CRITICAL ERRORS".
 - 4) Rename the Configuration Data Base.
 - a) Select from the CDG menu:
 - <1> File > Save As
 - b) Rename as necessary.
 - 5) Create new Load Disks
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CREATE DATALOAD DISK
 - 6) Load the new Configuration Data Base (TASK 23-39-00-400-811).

SUBTASK 38-14-00-710-001

- (5) Check for correct the water quantity indication.
 - (a) Fill the water tanks (TASK 12-14-01-600-810).
 - (b) Select from the CSCP menu:
 - 1) WATER/WASTE TANK STATUS MENU
 - 2) POTABLE WATER STATUS
 - (c) Make sure that the CSCP indicator shows the correct amount of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-00-080-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-00-410-003

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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TASK 38-14-00-860-802

3. Water Quantity Indication Reconfiguration for Center Tank Deactivation

A. General

- (1) This task is used to reconfigure the water quantity indication for airplanes with the center water tank deactivated.

B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
23-39-00-400-811	Configuration Database and Lighting Database Installation (Phase II) (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Reconfiguration

SUBTASK 38-14-00-860-004

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-010-004

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-14-00-480-002

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

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SUBTASK 38-14-00-010-005

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Indication Reconfiguration

SUBTASK 38-14-00-860-005

- (1) Remove connector DM38015 from the Water Quantity Control Module and make these wiring changes:

- (a) Re-terminate wire from pin 10 to pin 23.

NOTE: This will reprogram from three to two tank sensors

- (b) Disconnect wire terminated at pin 54 and then cap and stow.

- (c) Re-terminate wire from pin 53 to pin 54.

NOTE: This will move left tank sensor (+) input to sensor #2 position

- (d) Disconnect wire terminated at pin 36 and then cap and stow.

- (e) Re-terminate wire from pin 35 to pin 36.

NOTE: This will move left tank sensor (-) input to sensor #2 position

SUBTASK 38-14-00-420-002

- (2) Install connector DM38015 to the Water Quantity Control Module.

SUBTASK 38-14-00-860-007

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-860-006

- (4) Rescale the CSCP water quantity readout from a 3 tank configuration to 2 tank configuration.

NOTE: The wiring changes in step 1 cause the service panel gauge and CSCP bar graph display to be scaled to a two tank configuration (gauge/display will read full with both tanks full). The CSCP water quantity readout (gallons/liters) will still be scaled to a three tank configuration (when the two tanks are full, the display will show a water quantity in gallons/liters equal to three full tanks). The CSCP must be rescaled to show the correct amounts for the two tank configuration.

- (a) Use the CDG (Configuration Database Generator) tool to update the CSS (Cabin Services System) CDB (Configuration Data Base).

- 1) In the CDG, open the applicable baseline CDB for the applicable airplane.

- 2) Select from the CDG menu:

- a) DATA
- b) PANEL SETUP
- c) POTABLE WATER

- 3) Change the volume of the tank from "1237 liters" to "825" liters or "327" gallons to "218" gallons.

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- a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CHECK CONSISTENCY
- b) Verify that there are no "CRITICAL ERRORS".
- 4) Rename the Configuration Data Base.
 - a) Select from the CDG menu:
 - <1> File > Save As
 - b) Rename as necessary.
- 5) Create new Load Disks
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CREATE DATALOAD DISK
- 6) Load the new Configuration Data Base (TASK 23-39-00-400-811).

SUBTASK 38-14-00-710-002

- (5) Check for correct the water quantity indication.
 - (a) Fill the water tanks (TASK 12-14-01-600-810).
 - (b) Select from the CSCP menu:
 - 1) WATER/WASTE TANK STATUS MENU
 - 2) POTABLE WATER STATUS
 - (c) Make sure that the CSCP indicator shows the correct amount of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-00-080-002

 WARNING	SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-00-410-006

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-14-00-860-801

4. Water Quantity Indication Reconfiguration for Left Tank Deactivation

A. General

- (1) This task is used to reconfigure the water quantity indication for airplanes with the left water tank deactivated.

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B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
23-39-00-400-811	Configuration Database and Lighting Database Installation (Phase II) (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Reconfiguration

SUBTASK 38-14-00-860-008

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-010-006

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-14-00-480-003

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-14-00-010-007

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Indication Reconfiguration

SUBTASK 38-14-00-860-009

- (1) Remove connector DM38015 from the Water Quantity Control Module and make these wiring changes:

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- (a) Re-terminate wire from pin 10 to pin 23.

NOTE: This will reprogram from three to two tank sensors.

SUBTASK 38-14-00-420-001

- (2) Install connector DM38015 to the Water Quantity Control Module.

SUBTASK 38-14-00-860-011

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-860-010

- (4) Rescale the CSCP water quantity readout from a 3 tank configuration to 2 tank configuration.

NOTE: The wiring changes in step 1 cause the service panel gauge and CSCP bar graph display to be scaled to a two tank configuration (gauge/display will read full with both tanks full). The CSCP water quantity readout (gallons/liters) will still be scaled to a three tank configuration (when the two tanks are full, the display will show a water quantity in gallons/liters equal to three full tanks). The CSCP must be rescaled to show the correct amounts for the two tank configuration.

- (a) Use the CDG (Configuration Database Generator) tool to update the CSS (Cabin Services System) CDB (Configuration Data Base).
- 1) In the CDG, open the applicable baseline CDB for the applicable airplane.
 - 2) Select from the CDG menu:
 - a) DATA
 - b) PANEL SETUP
 - c) POTABLE WATER
 - 3) Change the volume of the tank from "1237 liters" to "825" liters or "327" gallons to "218" gallons.
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CHECK CONSISTENCY
 - b) Verify that there are no "CRITICAL ERRORS".
 - 4) Rename the Configuration Data Base.
 - a) Select from the CDG menu:
 - <1> File > Save As
 - b) Rename as necessary.
 - 5) Create new Load Disks
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CREATE DATALOAD DISK

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- 6) Load the new Configuration Data Base (TASK 23-39-00-400-811).

SUBTASK 38-14-00-710-003

- (5) Check for correct the water quantity indication.
- (a) Fill the water tanks (TASK 12-14-01-600-810).
 - (b) Select from the CSCP menu:
 - 1) WATER/WASTE TANK STATUS MENU
 - 2) POTABLE WATER STATUS
 - (c) Make sure that the CSCP indicator shows the correct amount of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-00-080-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-00-410-007

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-14-00-860-804

5. Water Quantity Indication Reconfiguration for Right Tank Reactivation

A. General

- (1) This task is used to reconfigure water quantity indication for airplanes with the right water tank reactivated.

B. References

<u>Reference</u>	<u>Title</u>
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
23-39-00-400-811	Configuration Database and Lighting Database Installation (Phase II) (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

C. Tools/Equipment

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

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

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D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Reconfiguration

SUBTASK 38-14-00-860-013

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-010-008

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-14-00-480-004

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-14-00-010-009

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Indication Reconfiguration

SUBTASK 38-14-00-860-014

- (1) Remove connector DM38015 from the Water Quantity Control Module and make these wiring changes:
- (a) Re-terminate wire from pin 23 to pin 10.
NOTE: This will reprogram from two to three tank sensors
 - (b) Re-terminate wire from pin 55 to pin 53.
NOTE: This will move left tank sensor (+) input to sensor #3 position
 - (c) Remove cap from stowed wire for right tank sensor (+) and re-terminate to pin 55 .
NOTE: This will restore right tank sensor (+) input to sensor #1 position
 - (d) Re-terminate wire from pin 37 to pin 35.
NOTE: This will move left tank sensor (-) input to sensor #3 position
 - (e) Remove cap from stowed wire for right tank sensor (-) and re-terminate to pin 37 .
NOTE: This will restore right tank sensor (-) input to sensor #1 position

SUBTASK 38-14-00-420-004

- (2) Install connector DM38015 to the Water Quantity Control Module.

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SUBTASK 38-14-00-860-016

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-860-015

- (4) Rescale the CSCP water quantity readout from a 2 tank configuration to 3 tank configuration.

NOTE: The wiring changes in step 1 cause the service panel gauge and CSCP bar graph display to be scaled to a three tank configuration (gauge/display will read full with three tanks full). The CSCP water quantity readout (gallons/liters) will still be scaled to a two tank configuration (when the three tanks are full, the display will show a water quantity in gallons/liters equal to two full tanks). The CSCP must be rescaled to show the correct amounts for the three tank configuration.

- (a) If you have a 3 tank configuration available in the Configuration Data Base, load the new Configuration Data Base (TASK 23-39-00-400-811).
- (b) If you do not have a 3 tank configuration available in the Configuration Data Base, use the CDG (Configuration Database Generator) tool to update the CSS (Cabin Services System) CDB (Configuration Data Base).
 - 1) In the CDG, open the applicable baseline CDB for the applicable airplane.
 - 2) Select from the CDG menu:
 - a) DATA
 - b) PANEL SETUP
 - c) POTABLE WATER
 - 3) Change the volume of the tank from "825" liters to "1237" liters or "218" gallons to "327" gallons.
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CHECK CONSISTENCY
 - b) Verify that there are no "CRITICAL ERRORS".
 - 4) Rename the Configuration Data Base.
 - a) Select from the CDG menu:
 - <1> File > Save As
 - b) Rename as necessary.
 - 5) Create new Load Disks
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CREATE DATALOAD DISK
 - 6) Load the new Configuration Data Base (TASK 23-39-00-400-811).

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SUBTASK 38-14-00-710-004

- (5) Check for correct the water quantity indication.
 - (a) Fill the water tanks (TASK 12-14-01-600-810).
 - (b) Select from the CSCP menu:
 - 1) WATER/WASTE TANK STATUS MENU
 - 2) POTABLE WATER STATUS
 - (c) Make sure that the CSCP indicator shows the correct amount of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-00-080-004



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-00-410-008

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-14-00-860-805

6. Water Quantity Indication Reconfiguration for Center Tank Reactivation

A. General

- (1) This task is used to reconfigure water quantity indication for airplanes with the center water tank reactivated.

B. References

<u>Reference</u>	<u>Title</u>
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
23-39-00-400-811	Configuration Database and Lighting Database Installation (Phase II) (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

C. Tools/Equipment

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

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

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D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Reconfiguration

SUBTASK 38-14-00-860-017

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-010-010

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-14-00-480-005

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-14-00-010-011

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Indication Reconfiguration

SUBTASK 38-14-00-860-018

- (1) Remove connector DM38015 from the Water Quantity Control Module and make these wiring changes:
- (a) Re-terminate wire from pin 23 to pin 10.
NOTE: This will reprogram from two to three tank sensors
 - (b) Re-terminate wire from pin 54 to pin 53.
NOTE: This will move left tank sensor (+) input to sensor #3 position
 - (c) Remove cap from stowed wire for left tank sensor (+) and re-terminate to pin 54 .
NOTE: This will restore left tank sensor (+) input to sensor #2 position
 - (d) Re-terminate wire from pin 36 to pin 35.
NOTE: This will move left tank sensor (-) input to sensor #3 position
 - (e) Remove cap from stowed wire for right tank sensor (-) and re-terminate to pin 36 .
NOTE: This will restore right tank sensor (-) input to sensor #2 position

SUBTASK 38-14-00-420-005

- (2) Install connector DM38015 to the Water Quantity Control Module.

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SUBTASK 38-14-00-860-020

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-860-019

- (4) Rescale the CSCP water quantity readout from a 2 tank configuration to 3 tank configuration.

NOTE: The wiring changes in step 1 cause the service panel gauge and CSCP bar graph display to be scaled to a three tank configuration (gauge/display will read full with three tanks full). The CSCP water quantity readout (gallons/liters) will still be scaled to a two tank configuration (when the three tanks are full, the display will show a water quantity in gallons/liters equal to two full tanks). The CSCP must be rescaled to show the correct amounts for the three tank configuration.

- (a) If you have a 3 tank configuration available in the Configuration Data Base, load the new Configuration Data Base (TASK 23-39-00-400-811).
- (b) If you do not have a 3 tank configuration available in the Configuration Data Base, use the CDG (Configuration Database Generator) tool to update the CSS (Cabin Services System) CDB (Configuration Data Base).
 - 1) In the CDG, open the applicable baseline CDB for the applicable airplane.
 - 2) Select from the CDG menu:
 - a) DATA
 - b) PANEL SETUP
 - c) POTABLE WATER
 - 3) Change the volume of the tank from "825" liters to "1237" liters or "218" gallons to "327" gallons.
 - a) Select from the CDG menu:
 <1> UTILITIES
 <2> CHECK CONSISTENCY
 - b) Verify that there are no "CRITICAL ERRORS".
 - 4) Rename the Configuration Data Base.
 - a) Select from the CDG menu:
 <1> File > Save As
 - b) Rename as necessary.
 - 5) Create new Load Disks
 - a) Select from the CDG menu:
 <1> UTILITIES
 <2> CREATE DATALOAD DISK
 - 6) Load the new Configuration Data Base (TASK 23-39-00-400-811).

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SUBTASK 38-14-00-710-005

- (5) Check for correct the water quantity indication.
 - (a) Fill the water tanks (TASK 12-14-01-600-810).
 - (b) Select from the CSCP menu:
 - 1) WATER/WASTE TANK STATUS MENU
 - 2) POTABLE WATER STATUS
 - (c) Make sure that the CSCP indicator shows the correct amount of water.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-00-080-005



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-00-410-009

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-14-00-860-806

7. Water Quantity Indication Reconfiguration for Left Tank Reactivation

A. General

- (1) This task is used to reconfigure the water quantity indication for airplanes with the left water tank reactivated.

B. References

<u>Reference</u>	<u>Title</u>
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
23-39-00-400-811	Configuration Database and Lighting Database Installation (Phase II) (P/B 201)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)

C. Tools/Equipment

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

<u>Reference</u>	<u>Description</u>
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

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D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Reconfiguration

SUBTASK 38-14-00-860-021

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-00-010-012

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-14-00-480-006

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

SUBTASK 38-14-00-010-013

- (4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Indication Reconfiguration

SUBTASK 38-14-00-860-022

- (1) Remove connector DM38015 from the Water Quantity Control Module and make these wiring changes:

- (a) Re-terminate wire from pin 23 to pin 10.

NOTE: This will reprogram from two to three tank sensors.

SUBTASK 38-14-00-420-006

- (2) Install connector DM38015 to the Water Quantity Control Module.

SUBTASK 38-14-00-860-024

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

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SUBTASK 38-14-00-860-023

- (4) Rescale the CSCP water quantity readout from a 2 tank configuration to 3 tank configuration.

NOTE: The wiring changes in step 1 cause the service panel gauge and CSCP bar graph display to be scaled to a three tank configuration (gauge/display will read full with three tanks full). The CSCP water quantity readout (gallons/liters) will still be scaled to a two tank configuration (when the three tanks are full, the display will show a water quantity in gallons/liters equal to two full tanks). The CSCP must be rescaled to show the correct amounts for the three tank configuration.

- (a) If you have a 3 tank configuration available in the Configuration Data Base, load the new Configuration Data Base (TASK 23-39-00-400-811).
- (b) If you do not have a 3 tank configuration available in the Configuration Data Base, use the CDG (Configuration Database Generator) tool to update the CSS (Cabin Services System) CDB (Configuration Data Base).
 - 1) In the CDG, open the applicable baseline CDB for the applicable airplane.
 - 2) Select from the CDG menu:
 - a) DATA
 - b) PANEL SETUP
 - c) POTABLE WATER
 - 3) Change the volume of the tank from "825" liters" to "1237" liters or "218" gallons to "327" gallons.
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CHECK CONSISTENCY
 - b) Verify that there are no "CRITICAL ERRORS".
 - 4) Rename the Configuration Data Base.
 - a) Select from the CDG menu:
 - <1> File > Save As
 - b) Rename as necessary.
 - 5) Create new Load Disks
 - a) Select from the CDG menu:
 - <1> UTILITIES
 - <2> CREATE DATALOAD DISK
 - 6) Load the new Configuration Data Base (TASK 23-39-00-400-811).

SUBTASK 38-14-00-710-006

- (5) Check for correct the water quantity indication.
- (a) Fill the water tanks (TASK 12-14-01-600-810).
 - (b) Select from the CSCP menu:
 - 1) WATER/WASTE TANK STATUS MENU
 - 2) POTABLE WATER STATUS
 - (c) Make sure that the CSCP indicator shows the correct amount of water.

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H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-00-080-007



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-00-410-010

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— **END OF TASK** —————

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WATER QUANTITY PRESELECT SWITCH - REMOVAL/INSTALLATION

1. General

- A. This procedure has two tasks:
- (1) A removal of the water quantity preselect switch.
 - (2) An installation of the water quantity preselect switch.
- B. The Water Quantity Preselect Switch is referred to as the Preselect Switch in this procedure.

TASK 38-14-01-000-801

2. Preselect Switch Removal

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left

C. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

D. Preselect Switch Removal

SUBTASK 38-14-01-860-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-01-010-001

- (2) Open this access panel:

Number	Name/Location
154AR	Aft Potable Water Service Door

SUBTASK 38-14-01-020-001

- (3) Remove the dial knob [3] for the preselect selector [2] at the service panel.

SUBTASK 38-14-01-020-002

- (4) Remove the attach nut [4] and lockwasher [5].

SUBTASK 38-14-01-010-002

- (5) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

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SUBTASK 38-14-01-010-003

- (6) To remove the walkway panel for access to the top of the service panel, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

SUBTASK 38-14-01-020-003

- (7) Disconnect the electrical connector [1] from the preselect selector [2].

SUBTASK 38-14-01-020-004

- (8) Remove the preselect selector [2].

————— END OF TASK —————

TASK 38-14-01-400-801

3. Preselect Switch Installation

(Figure 401)

A. References

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-10-400-801	Floor Panels and Walkways Installation (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
COM-1141	Equipment - Potable Water Servicing Part #: SPW-500PL Supplier: 32526 Part #: TWS-402 Supplier: 44185 Part #: WSP-900 Supplier: 6L481 Part #: WTM-900 Supplier: 6L481 Opt Part #: 2303 Supplier: 00365 Opt Part #: ACE-1520 Supplier: 6L481 Opt Part #: ACE-488-350 Supplier: 6L481 Opt Part #: ACE-499-350 Supplier: 6L481 Opt Part #: DEV-499 Supplier: 6L481

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Selector	38-14-01-01-030	ARO ALL
3	Knob	38-14-01-01-005	ARO ALL

E. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left

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F. Access Panels

Number	Name/Location

154AR	Aft Potable Water Service Door

G. Preselect Switch Installation

SUBTASK 38-14-01-020-005

- (1) Remove the lockwasher [5] and the attach nut [4] from the preselect selector [2].

SUBTASK 38-14-01-390-001

- (2) Apply the sealant, A00247 on the preselect selector [2] for a fay surface seal to the service panel.

SUBTASK 38-14-01-420-001

- (3) Attach the electrical connector [1] to the preselect selector [2].

SUBTASK 38-14-01-420-002

- (4) Put the tab/indexing washer [6] and the preselect selector [2] in its position on the service panel.

SUBTASK 38-14-01-420-003

- (5) Install the lockwasher [5], and the attach nut [4] on the preselect selector [2].

SUBTASK 38-14-01-420-004

- (6) Torque the attach nut [4] to 25 ±5 in-lb (3 ±1 N·m).

SUBTASK 38-14-01-420-005

- (7) Install the dial knob [3].

H. Preselect Switch Installation Test

SUBTASK 38-14-01-860-002

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

Row	Col	Number	Name
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-01-860-003

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-14-01-710-002

- (3) Do a test of the preselect fill system as follows:
 - (a) Do this task: Potable Water System - Drain, TASK 12-14-01-616-802.
 - (b) Connect the service potable water servicing equipment, COM-1141 or the water source as follows:
 - 1) We recommend a water pressure of 25 psi.
NOTE: Do not use a water pressure of more than 55 psi.
 - 2) Open the cap on the water fill fitting.
 - 3) Connect the water supply hose to the water fill fitting.
 - (c) Do this test at the 1/4 position as follows:

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- 1) Turn the preselect switch from the RESET/OFF to 1/4.
NOTE: The handle for the preselect fill/overflow valve will extend to show that the preselect fill/overflow valve is in the OPEN position.
- 2) Start the water supply to the potable water tanks.
- 3) The preselect fill/overflow valve handle will retract when the water volume is the same as the preselect quantity.
- 4) Make sure the water quantity shows 1/4.
- (d) Do this test at the 1/2 position as follows:
 - 1) Turn the preselect switch from the 1/4 to 1/2.
 - 2) Start the water supply to the potable water tanks.
 - 3) The preselect fill/overflow valve handle will retract when the water volume is the same as the preselect quantity.
 - 4) Make sure the water quantity shows 1/2.
- (e) Do this test at the 3/4 position as follows:
 - 1) Turn the preselect switch from the 1/2 to 3/4.
 - 2) Start the water supply to the potable water tanks.
 - 3) The preselect fill/overflow valve handle will retract when the water volume is the same as the preselect quantity.
 - 4) Make sure the water quantity shows 3/4.
- (f) Do this test at the FULL position as follows:
 - 1) Turn the preselect switch from the 3/4 to FULL.
 - 2) Start the water supply to the potable water tanks.
 - 3) The preselect fill/overflow valve handle will retract when the water volume is the same as the preselect quantity.
 - 4) Make sure the water quantity shows F.
- (g) Stop the water supply to the potable water tanks.
- (h) Turn the preselect switch to OFF and then do these steps:
 - 1) Make sure the handle for the fill/overflow valve is in the closed position.
NOTE: This will show that the fill/overflow valve is closed.
- (i) Do these steps to disconnect the service potable water servicing equipment, COM-1141 or the water source:
 - 1) Disconnect the water supply hose from the water fill fitting.
- (j) Let the water drain from the water fill line to make sure no water stays in the fill line.
NOTE: Keep the cap for the water fill fitting open for approximately one minute to permit the liquid to drain from the fill line.
- (k) Close the cap on the water fill fitting.

I. Put the Airplane Back in Its Usual Condition

SUBTASK 38-14-01-410-001

- (1) To install the walkway panel above the water service panel, do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

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SUBTASK 38-14-01-860-004

(2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

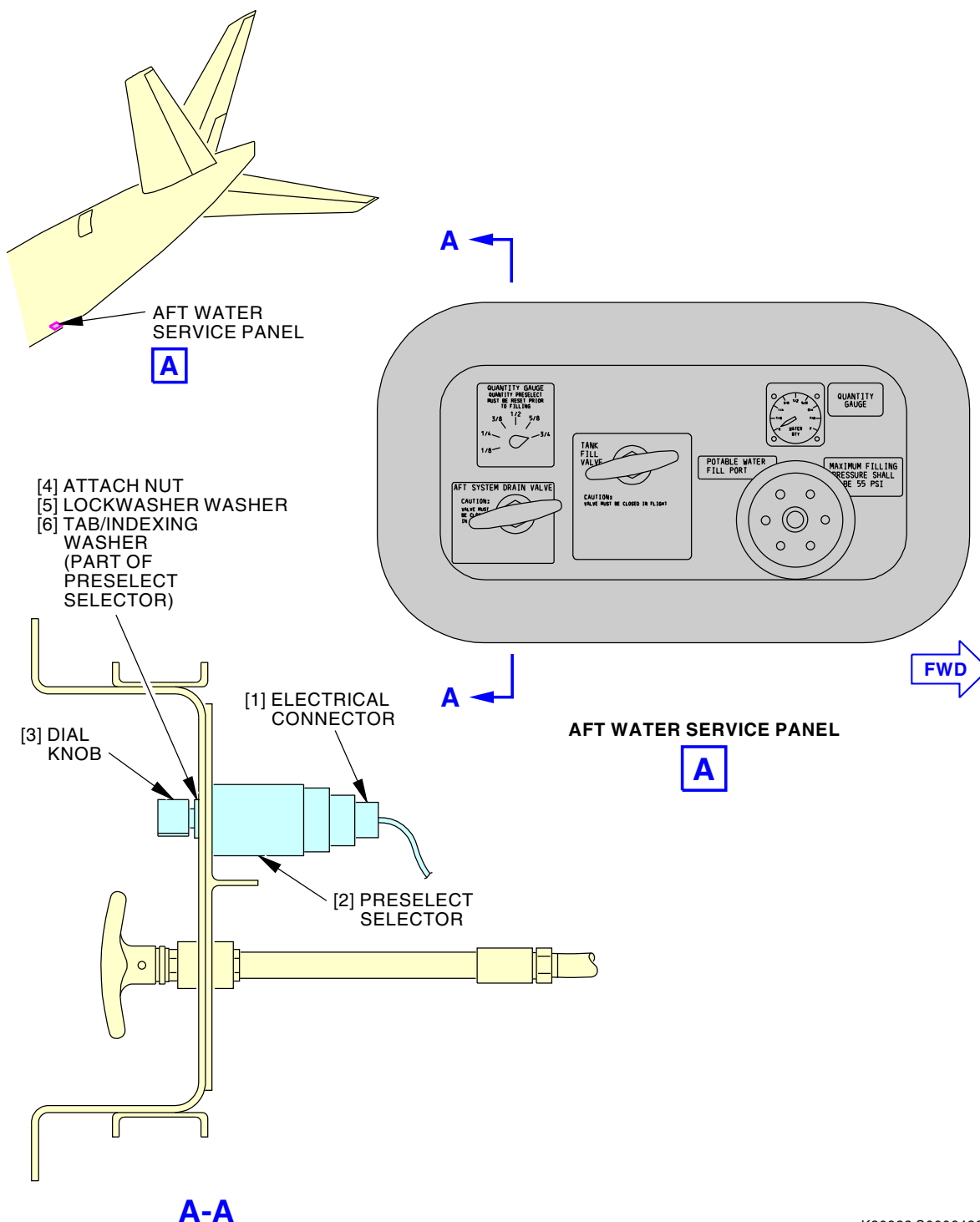
———— **END OF TASK** ————

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**Water Quantity Preselect Switch Installation
Figure 401/38-14-01-990-801**

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WATER QUANTITY GAUGE - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the aft water quantity gauge.
- (2) An installation of the aft water quantity gauge.

TASK 38-14-02-000-802

2. **Aft Water Quantity Gauge Removal**

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
154	Area Below Aft Cargo Compartment, Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

D. Prepare for the Removal

SUBTASK 38-14-02-860-004

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-02-010-004

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

SUBTASK 38-14-02-860-006

- (3) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-14-02-020-005

- (4) To remove the walkway panel for access to the top of the service panel, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

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E. Water Quantity Gauge Removal

SUBTASK 38-14-02-020-003

- (1) Disconnect the electrical connections [8] from the water quantity indicator [9].

SUBTASK 38-14-02-020-004

- (2) Remove the nuts [6] and washers [7].

SUBTASK 38-14-02-020-006

- (3) Remove the water quantity indicator [9].

————— END OF TASK —————

TASK 38-14-02-400-802

3. Water Quantity Gauge Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
51-31-01-390-801	Non-Removable Faying (Mated) Surface Seal Application (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Indicator	38-14-02-01-240	ARO ALL

D. Location Zones

Zone	Area
154	Area Below Aft Cargo Compartment, Right

E. Access Panels

Number	Name/Location
154AR	Aft Potable Water Service Door

F. Water Quantity Gauge Installation

SUBTASK 38-14-02-860-007

- (1) Apply the sealant, A00247 for a faying surface seal between the service panel and the water quantity indicator [9] (TASK 51-31-01-390-801).

SUBTASK 38-14-02-420-004

- (2) Put the water quantity indicator [9] into its position.

SUBTASK 38-14-02-420-005

- (3) Install the nuts [6] and washers [7].

SUBTASK 38-14-02-420-006

- (4) Connect the electrical connections [8].

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G. Aft Water Quantity Gauge Installation Test

SUBTASK 38-14-02-860-009

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C38601	WTR SYS CTRL GND

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	5	C38600	WTR SYS CTRL

SUBTASK 38-14-02-610-002

- (2) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

- (a) Make sure the potable water tanks are full.

SUBTASK 38-14-02-710-002

- (3) Make sure the water quantity gauge shows F.

H. Put the Airplane Back in Its Usual Condition

SUBTASK 38-14-02-410-003

- (1) To install the walkway panel, do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-14-02-410-004

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
154AR	Aft Potable Water Service Door

————— END OF TASK —————

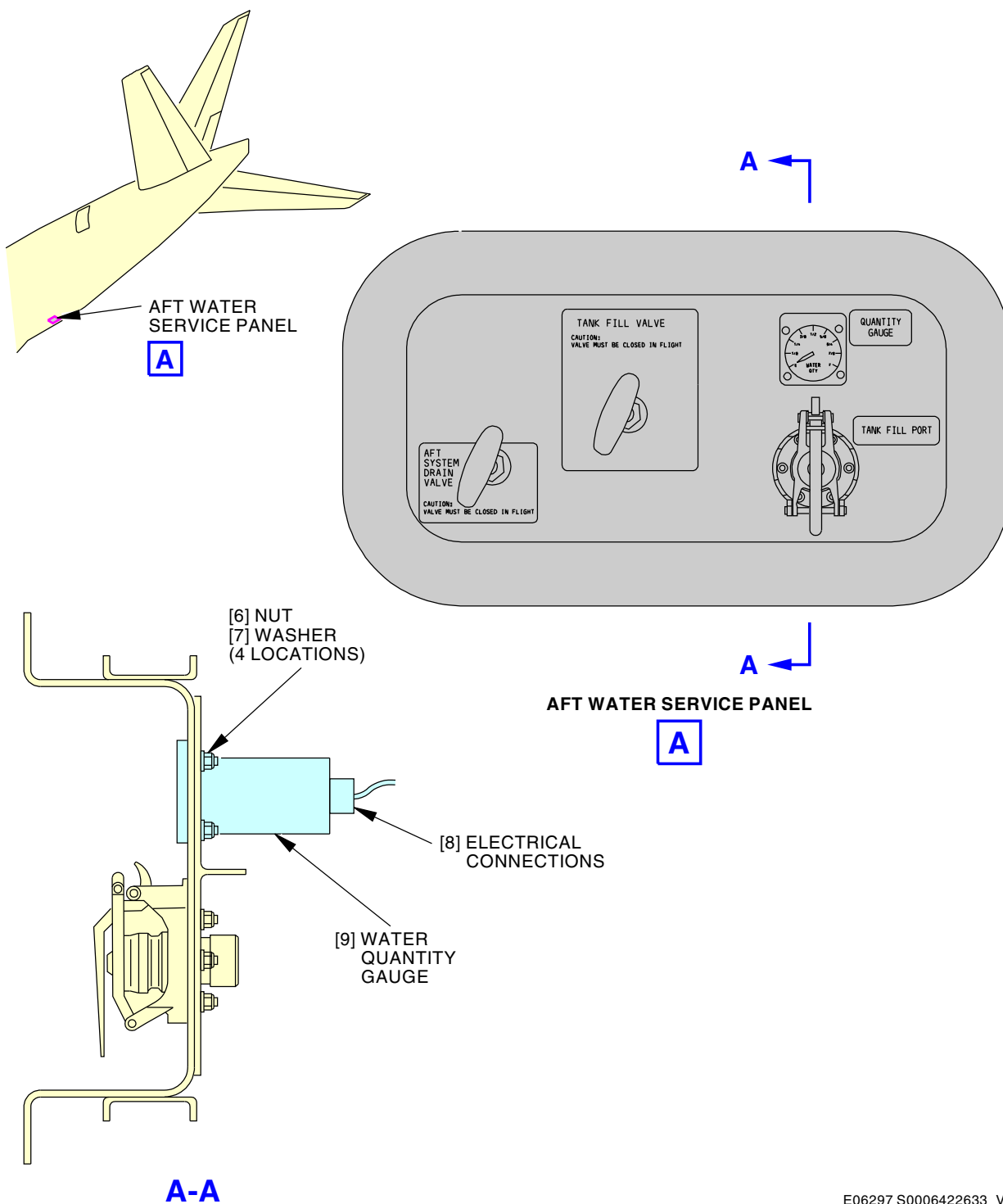
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Water Quantity Gauge Installation
Figure 401/38-14-02-990-801

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WATER QUANTITY SENSOR - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the water quantity sensor.
 - (2) An installation of the water quantity sensor
- B. The water quantity sensor is referred to as sensor in this procedure.

TASK 38-14-05-000-801

2. Water Quantity Sensor Removal

Figure 401

A. **General**

- (1) This task provides instructions to remove the sensor with the water tank removed from its installed position.

B. **References**

Reference	Title
38-11-01-000-803	Water Tank Removal (P/B 401)
38-11-01-000-804	Water Tank (Aft of Waste Tanks) Removal (P/B 401)

C. **Tools/Equipment**

Reference	Description
STD-149	Cap and Plug - NAS834

D. **Location Zones**

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. **Prepare for the Removal**

SUBTASK 38-14-05-010-001

- (1) Remove the water tank that has the sensor to be removed (Water Tank Removal, TASK 38-11-01-000-803 or Water Tank (Aft of Waste Tanks) Removal, TASK 38-11-01-000-804).

F. **Water Quantity Sensor Removal**

SUBTASK 38-14-05-480-001

- (1) Put a protective cap and plug, STD-149 in each of the open fittings on the tank, and open water hoses.

SUBTASK 38-14-05-020-001

- (2) Remove the sensor assembly [1] sensor and packing [2] from the tank.
 - (a) Hold the tank fitting with a wench so that it will not move.
 - (b) Turn the sensor assembly nut to loosen.

SUBTASK 38-14-05-020-002

- (3) Remove the sensor assembly [1] from the tank.

———— **END OF TASK** ————

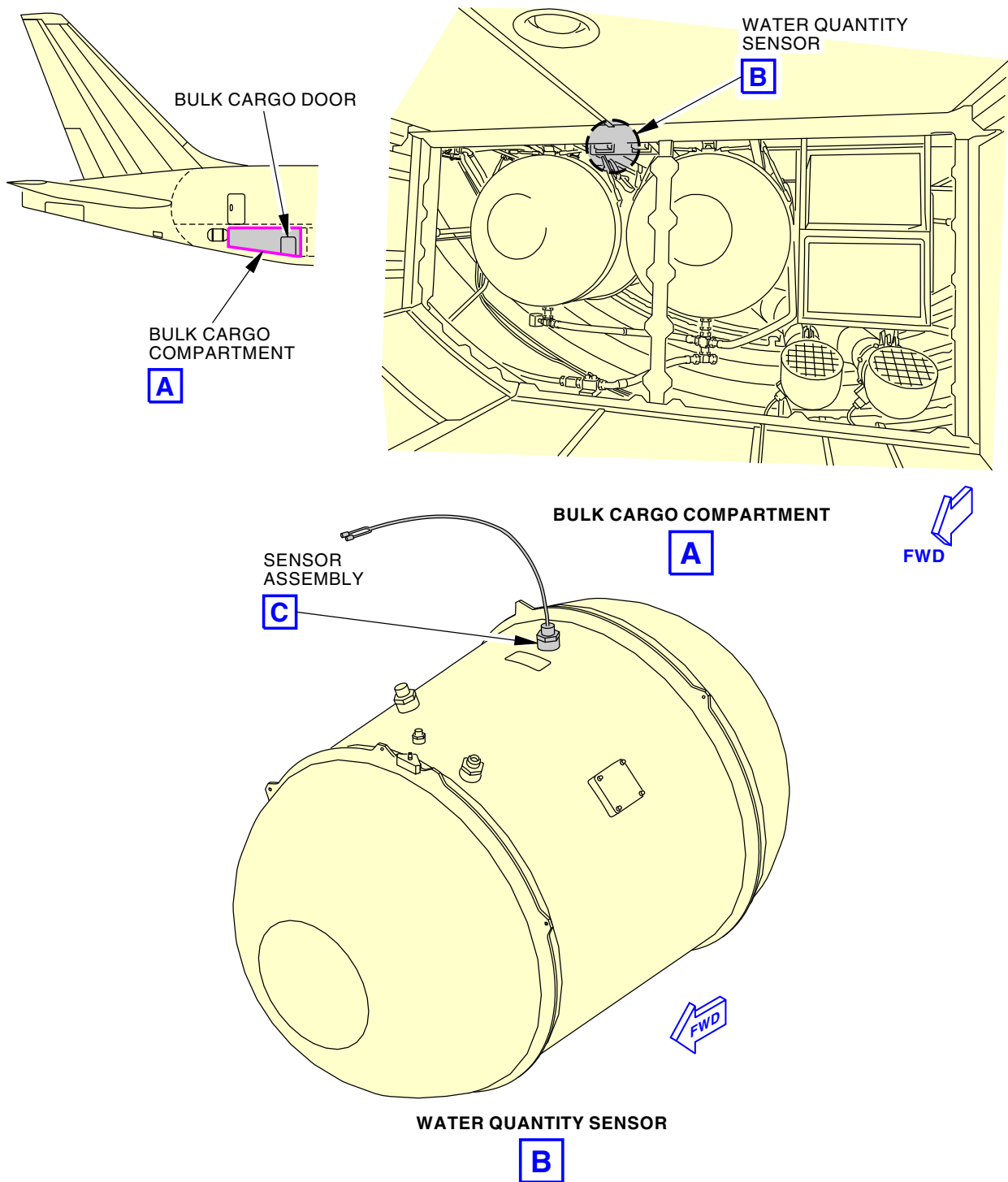
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Water Quantity Sensor Installation
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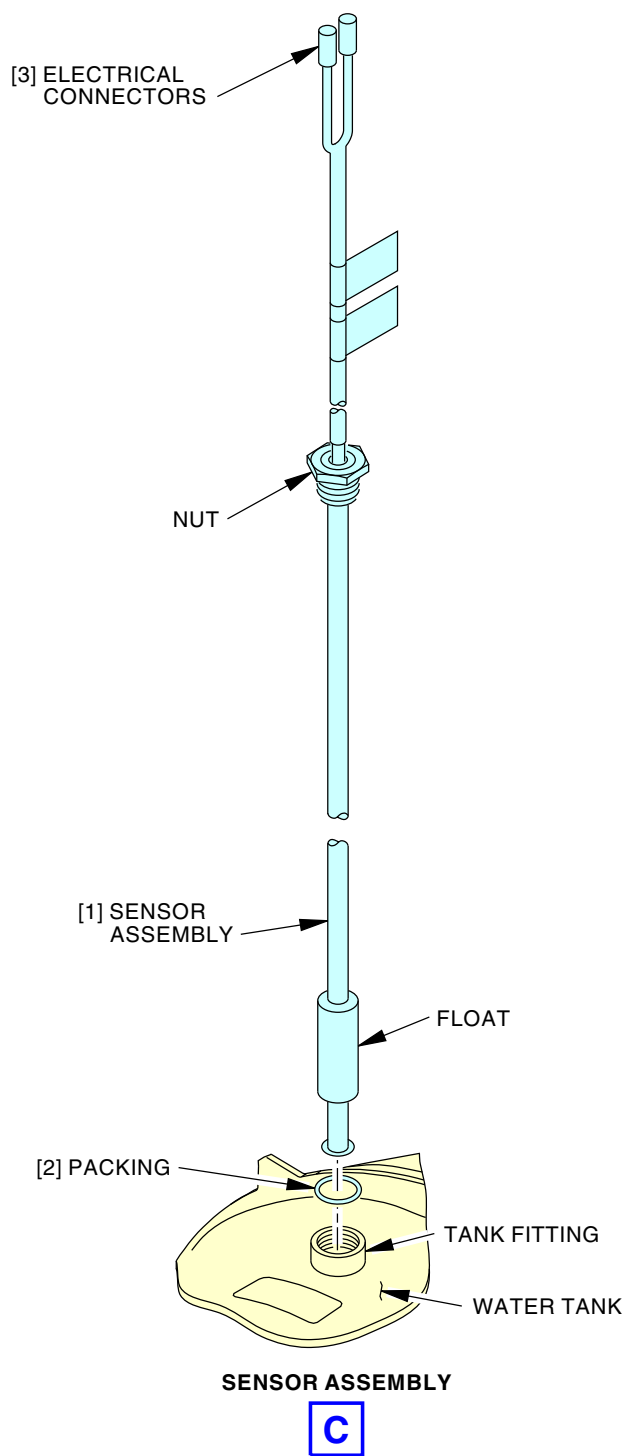
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Water Quantity Sensor Installation
Figure 401/38-14-05-990-801 (Sheet 2 of 2)

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TASK 38-14-05-400-801

3. Water Quantity Sensor Installation

Figure 401

A. General

- (1) This task provides instructions to install the sensor with the water tank removed from its installed position.

B. References

Reference	Title
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-11-01-400-803	Water Tank Installation (P/B 401)
38-11-01-400-804	Water Tank (Aft of Waste Tanks) Installation (P/B 401)
38-14-05-720-801	Water Quantity Sensor - Functional Test (P/B 501)

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Installation

SUBTASK 38-14-05-860-002

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

G. Water Quantity Sensor Installation

SUBTASK 38-14-05-080-001

- (1) Remove the protective plug from the water tank fitting for the sensor.

SUBTASK 38-14-05-410-001

- (2) Apply Molykote 111 Compound, D00189 to a new packing.

SUBTASK 38-14-05-410-002

- (3) Put the packing [2] and sensor assembly [1] into position on the water tank fitting.

SUBTASK 38-14-05-420-001

- (4) Hold the tank fitting with a wench and tighten the sensor assembly nut to 550 ±40 in-lb (62 ±5 N·m).

SUBTASK 38-14-05-410-003

- (5) Do this task: Water Tank (Aft of Waste Tanks) Installation, TASK 38-11-01-400-804 or Water Tank Installation, TASK 38-11-01-400-803.

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- (a) Do not do the task to install the Bulk Cargo Compartment Aft End Wall.

NOTE: Access is required to perform the post installation test.

- (b) Do not do the task to fill the water tanks.

NOTE: The tanks must be empty for the post installation test.

H. Water Quantity Sensor Test

SUBTASK 38-14-05-720-001

- (1) Do this task: Water Quantity Sensor - Functional Test, TASK 38-14-05-720-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-05-410-004



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

SUBTASK 38-14-05-410-005

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— **END OF TASK** —————

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WATER QUANTITY SENSOR - ADJUSTMENT TEST

1. General

A.

TASK 38-14-05-720-801

2. Water Quantity Sensor - Functional Test

Figure 38-14-06-990-801

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
38-14-06-760-801	Water Quantity Control Module - Adjustment (P/B 501)
38-14-06-990-801	Figure: Water Quantity Control Module Installation (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
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 260 Supplier: 55026 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

D. Water Quantity Sensor Installation Test

SUBTASK 38-14-05-860-001

(1) Close this circuit breaker:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

SUBTASK 38-14-05-760-002

(2) Remove the connector dust cap from the J2 calibration/test connector on the control module

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SUBTASK 38-14-05-760-003

- (3) Connect a digital/analog multimeter, COM-1793 to the connector J2 socket for the sensor that was replaced
 - (a) For sensor 1 (right side tank), Connect a digital/analog multimeter, COM-1793 to socket 1 (VDC +) and socket 8 (return).
 - (b) For sensor 2 (center tank), Connect a digital/analog multimeter, COM-1793 to socket 2 (VDC +) and socket 8 (return).
 - (c) For sensor 3 (left side tank), Connect a digital/analog multimeter, COM-1793 to socket 3 (VDC +) and socket 8 (return).

SUBTASK 38-14-05-760-004

- (4) Check the sensor water quantity output DC voltage.
 - (a) The voltage reading for an tank empty tank should be less than 0.5 VDC.

SUBTASK 38-14-05-610-001

- (5) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-14-05-760-005

- (6) Check the sensor water quantity output DC voltage.
 - (a) Voltage for 115 gallon tanks should be 10 ± 0.5 VDC

SUBTASK 38-14-05-730-001

- (7) Do this task: Water Quantity Control Module - Adjustment, TASK 38-14-06-760-801.

————— **END OF TASK** —————

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WATER QUANTITY CONTROL MODULE - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the water quantity control module
- (2) An installation of the water quantity control module

B. The water quantity control module is referred to as the control module in this procedure.

TASK 38-14-06-000-801

2. **Water Quantity Control Module - Removal**

Figure 401

A. General

- (1) This task provides instructions to remove the control module from its installed position.

B. References

Reference	Title
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall 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-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363

D. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Prepare for the Removal

SUBTASK 38-14-06-860-002

- (1) Make sure that this circuit breaker is closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

SUBTASK 38-14-06-010-002

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-14-06-480-001

- (3) Install the large cargo door safety barrier, SPL-1988, as necessary.

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SUBTASK 38-14-06-010-003

(4) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801

G. Water Quantity Sensor Removal

SUBTASK 38-14-06-020-001

(1) Disconnect the electrical connector [4].

SUBTASK 38-14-06-020-002

(2) Remove the nuts [2] and washers [3].

SUBTASK 38-14-06-020-003

(3) Remove the quantity control module [1] from the mounting bracket [5].

———— **END OF TASK** ————

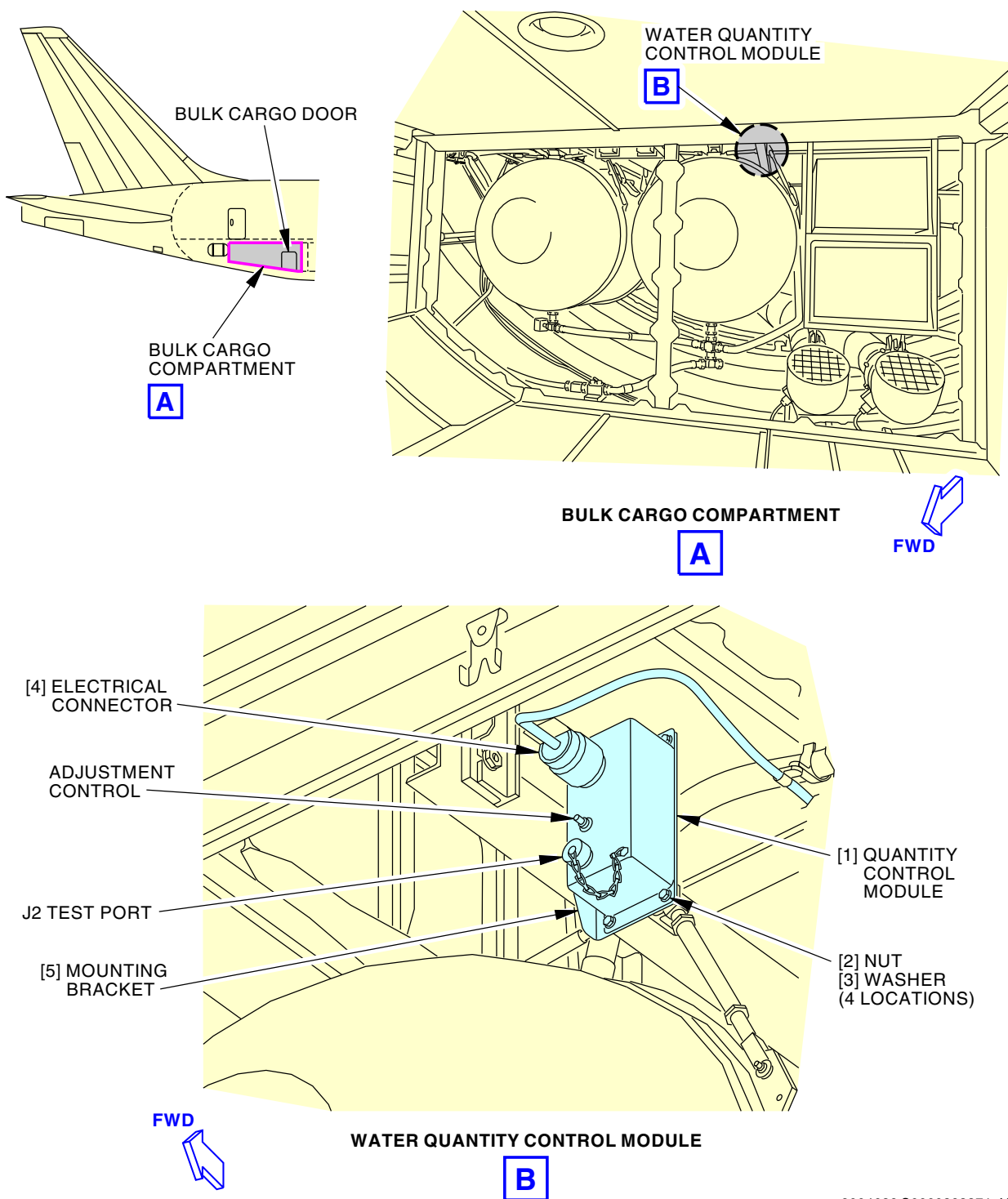
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Water Quantity Control Module Installation
Figure 401/38-14-06-990-801

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TASK 38-14-06-400-801

3. Water Quantity Control Module - Installation

Figure 401

A. General

- (1) This task provides instructions to install the control module.

B. References

Reference	Title
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
38-14-06-760-801	Water Quantity Control Module - Adjustment (P/B 501)

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for the Installation

SUBTASK 38-14-06-860-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

F. Water Quantity Module Installation.

SUBTASK 38-14-06-410-001

- (1) Put the quantity control module [1] into its position on the mounting bracket [5].

SUBTASK 38-14-06-420-001

- (2) Install the nuts [2] and washers [3] to attach the quantity control module [1] to the mounting bracket [5]

SUBTASK 38-14-06-420-002

- (3) Connect the electrical connector [4].

G. Water Quantity Control Module Test

SUBTASK 38-14-06-760-001

- (1) Do this task: Water Quantity Control Module - Adjustment, TASK 38-14-06-760-801

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-14-06-410-002



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (1) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.

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SUBTASK 38-14-06-410-003

(2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— **END OF TASK** —————

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WATER QUANTITY CONTROL MODULE - ADJUSTMENT/TEST

1. General

A.

TASK 38-14-06-760-801

2. Water Quantity Control Module - Adjustment

Figure 38-14-06-990-801

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
38-14-06-990-801	Figure: Water Quantity Control Module Installation (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
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 260 Supplier: 55026 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

C. Location Zones

Zone	Area
166	Area Aft of Bulk Cargo Compartment, Right

D. Water Quantity Control Module Adjustment

SUBTASK 38-14-06-860-003

- (1) Make sure that this circuit breaker is closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
C	12	C38601	WTR SYS CTRL GND

SUBTASK 38-14-06-610-001

- (2) Do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-14-06-760-002

- (3) Remove the connector dust cap from the J2 calibration/test connector on the control module

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- (4) Connect a digital/analog multimeter, COM-1793 to connector J2 between socket 5 (VDC +) and socket 8 (return).
- (5) Measure the system water quantity output DC voltage.
NOTE: 10 VDC is nominal for full water tanks
- (6) If the voltage is not -10 ± 0.3 VDC, adjust the calibration knob on the control module until the voltage is 10 ± 0.3 VDC.

————— **END OF TASK** —————

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WASTE SYSTEM (RECONFIGURATION) - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) A removal of a cap in the waste system.
- (2) An installation of a cap for the waste system.
- (3) A removal of a toilet connection from the waste system.
- (4) An installation of a toilet connection for the waste system.
- (5) A removal of a waste connection to the lavatory.
- (6) An installation of a waste connection to the lavatory.

B. This procedure gives the primary configuration items that are necessary to change the passenger compartment configuration. This procedure is only for the basic configuration of the waste system. For the accurate configuration of your airplane, it is necessary for you to refer to the approved configuration data.

TASK 38-30-00-910-807

2. Waste Tube - Maintenance Practice

(Figure 201, Figure 202)

A. **Location Zones**

Zone	Area

100	Lower Half of Fuselage

B. **Waste Tube - Maintenance Practice**

SUBTASK 38-30-00-860-002

- (1) To access the waste tube and components use (Figure 201, Figure 202).
 - (a) (Figure 201) shows all of the locations of the lavatories.
 - (b) (Figure 202) shows the primary routing of the tubes for the waste system.

————— **END OF TASK** —————

TASK 38-30-00-910-801

3. Waste System - Cap Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203)

A. **References**

Reference	Title

38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. **Location Zones**

Zone	Area

100	Lower Half of Fuselage

C. **Waste System - Cap Removal**

SUBTASK 38-30-00-910-001

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

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SUBTASK 38-30-00-020-015

- (2) Remove the clamshell clamp.

SUBTASK 38-30-00-020-001

- (3) Remove the cap from the waste system component.

SUBTASK 38-30-00-020-002

- (4) Remove and then discard the packing.

————— END OF TASK —————

TASK 38-30-00-910-802

4. Waste System - Cap Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203)

A. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00504	Grease - Petrolatum	VV-P-236

C. Location Zones

Zone	Area
100	Lower Half of Fuselage

D. Waste System - Cap Installation

SUBTASK 38-30-00-910-002

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-30-00-640-001

- (2) Apply the grease, D00504, to the packing.

SUBTASK 38-30-00-420-001

- (3) Install the packing.

SUBTASK 38-30-00-420-002

- (4) Install the cap for the waste system component.

SUBTASK 38-30-00-420-013

- (5) Install the clamshell clamp.

SUBTASK 38-30-00-860-001

- (6) Push the flush switch in a lavatory attached to the system with the cap.

SUBTASK 38-30-00-710-001

- (7) Make sure the waste system operates without leakage.

————— END OF TASK —————

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TASK 38-30-00-910-803

5. Waste System - Toilet Connection Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203)

A. General

- (1) This connection is in the lavatory between the toilet and the waste connection to the waste system.

B. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

C. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

D. Waste System - Toilet Connection Removal

SUBTASK 38-30-00-910-003

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-30-00-010-001

- (2) To get access to the lavatory connections, do these steps:
 - (a) Turn the latch handle away from the toilet to open the toilet shroud.
 - (b) Pull the bottom edge of the toilet shroud out.
 - (c) Move the toilet shroud down until the top edge disengages from the trim strip on the lavatory wall.
 - (d) Loosen the screws to remove the cover from the lavatory drain area.

SUBTASK 38-30-00-020-003

- (3) Remove the clamshell and then move the sleeve off the tube assembly from the toilet.

SUBTASK 38-30-00-020-004

- (4) Remove the clamshell and then move the sleeve off the tube assembly to the waste system.

SUBTASK 38-30-00-020-005

- (5) Remove the tube assembly from the lavatory.

SUBTASK 38-30-00-420-003

- (6) If it is not necessary to use this connection, do this task: Waste System - Cap Installation (Reconfiguration), TASK 38-30-00-910-802.

————— END OF TASK —————

TASK 38-30-00-910-804

6. Waste System - Toilet Connection Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203)

A. General

- (1) This connection is in the lavatory between the toilet and the waste connection to the waste system.

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B. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

C. Consumable Materials

Reference	Description	Specification
D00504	Grease - Petrolatum	VV-P-236

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

E. Waste System - Toilet Connection Installation

SUBTASK 38-30-00-910-004

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-30-00-020-006

- (2) If the connection has a cap, do this task: Waste System - Cap Removal (Reconfiguration), TASK 38-30-00-910-801.

SUBTASK 38-30-00-640-002

- (3) Apply the grease, D00504, to the packings.

SUBTASK 38-30-00-420-004

- (4) Install the packings.

SUBTASK 38-30-00-420-005

- (5) Install the sleeve and clamshell to connect the tube assembly to the toilet.

SUBTASK 38-30-00-420-006

- (6) Install the sleeve and clamshell to connect the tube assembly to the waste system.

NOTE: The lanyard for the clamshell attaches to the clip in the area of the fittings.

SUBTASK 38-30-00-420-007

- (7) Push the flush switch in the lavatory.

SUBTASK 38-30-00-710-002

- (8) Make sure the waste system operates without leakage.

SUBTASK 38-30-00-410-001

- (9) To close the access to the lavatory connections, do these steps:
- Put the cover from the lavatory drain area in its position.
 - Tighten the screws to install the cover from the lavatory drain area.
 - Move the toilet shroud up until the top edge engages in the trim strip on the lavatory wall.
 - Push the bottom edge of the toilet shroud into its position.
 - Turn the latch handle to the toilet to close the toilet shroud.

————— **END OF TASK** —————

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TASK 38-30-00-910-805

7. Waste System - Waste Connection Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203)

A. General

- (1) This connection is between the toilet connection and the main lines for the waste system.

B. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

C. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

D. Waste System - Waste Connection Removal

SUBTASK 38-30-00-910-005

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-30-00-020-007

- (2) Remove the clamshell and then move the sleeve off the tube assembly from the toilet.

SUBTASK 38-30-00-020-008

- (3) Remove the clamshell and then move the sleeve off the tube assembly to the waste system.

SUBTASK 38-30-00-020-009

- (4) Remove the screws and washers for the clamps that attach the tube assembly to the structure.

SUBTASK 38-30-00-020-010

- (5) If it is necessary, remove the screws and washers for the clamp and spacer that attach the tube assembly to the structure.

SUBTASK 38-30-00-020-011

- (6) Remove the tube assembly.

SUBTASK 38-30-00-420-008

- (7) If it is not necessary to use this connection, do this task: Waste System - Cap Installation (Reconfiguration), TASK 38-30-00-910-802.

————— END OF TASK —————

TASK 38-30-00-910-806

8. Waste System - Waste Connection Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203)

A. General

- (1) This connection is between the toilet connection and the main lines for the waste system.

B. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

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C. Consumable Materials

Reference	Description	Specification
D00504	Grease - Petrolatum	VV-P-236
G50310	Tape - Nitto P-412 (Formerly Permacel) Ribbon Dope Thread Sealant Tape	A-A-58092

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

E. Waste System - Waste Connection Installation

SUBTASK 38-30-00-910-006

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-30-00-020-012

- (2) If the connection has a cap, do this task: Waste System - Cap Removal (Reconfiguration), TASK 38-30-00-910-801.

SUBTASK 38-30-00-640-003

- (3) Apply the grease, D00504, to the packings.

SUBTASK 38-30-00-420-009

- (4) Install the packings.

SUBTASK 38-30-00-420-010

- (5) Install the sleeve and clamshell to connect the tube assembly to the toilet.

SUBTASK 38-30-00-420-011

- (6) Install the sleeve and clamshell to connect the tube assembly to the waste system.

NOTE: The lanyard for the clamshell attaches to the clip in the area of the fittings.

SUBTASK 38-30-00-640-004

- (7) Apply two to three layers of the Nitto P-412 tape, G50310 below the clamps at the connection that goes through the floor.

SUBTASK 38-30-00-020-013

- (8) Install the screws and washers for the clamps that attach the tube assembly to the structure at the floor panel.

SUBTASK 38-30-00-020-014

- (9) If it is necessary, install the screws and washers for the clamp with the spacer that attach the tube assembly to the structure.

SUBTASK 38-30-00-420-012

- (10) Push the flush switch in the lavatory.

SUBTASK 38-30-00-710-003

- (11) Make sure the waste system operates without leakage.

————— **END OF TASK** —————

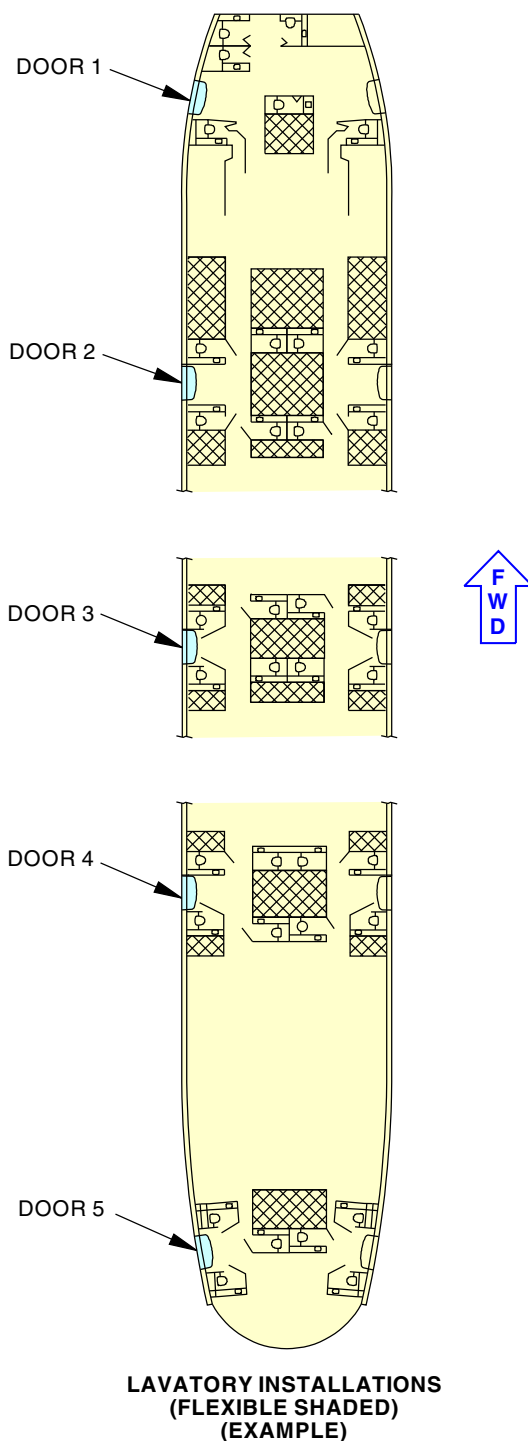
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L22353 S0006422667_V3

Waste System - Location
Figure 201/38-30-00-990-801

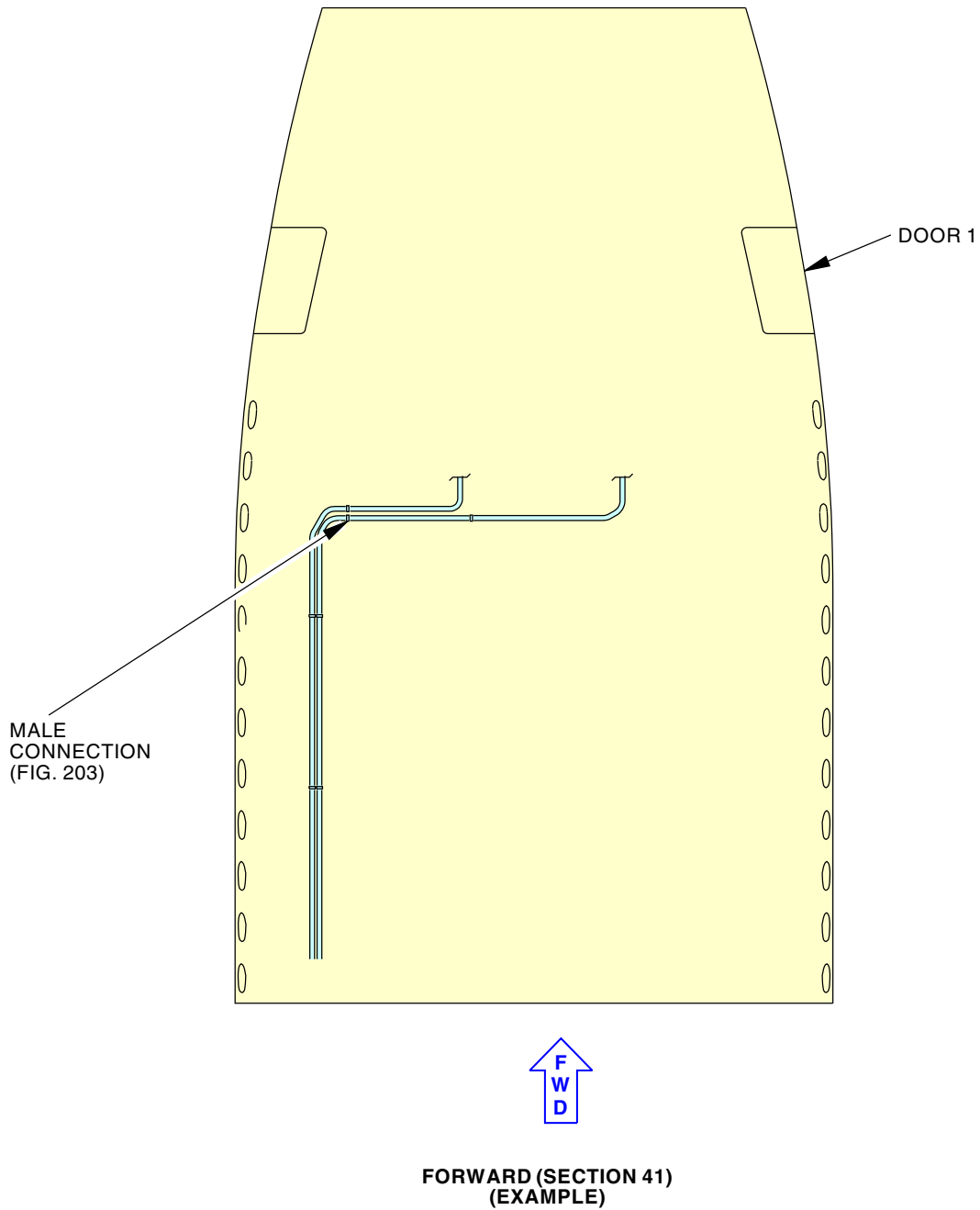
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L22365 S0006422672_V3

Waste System - Primary Routing
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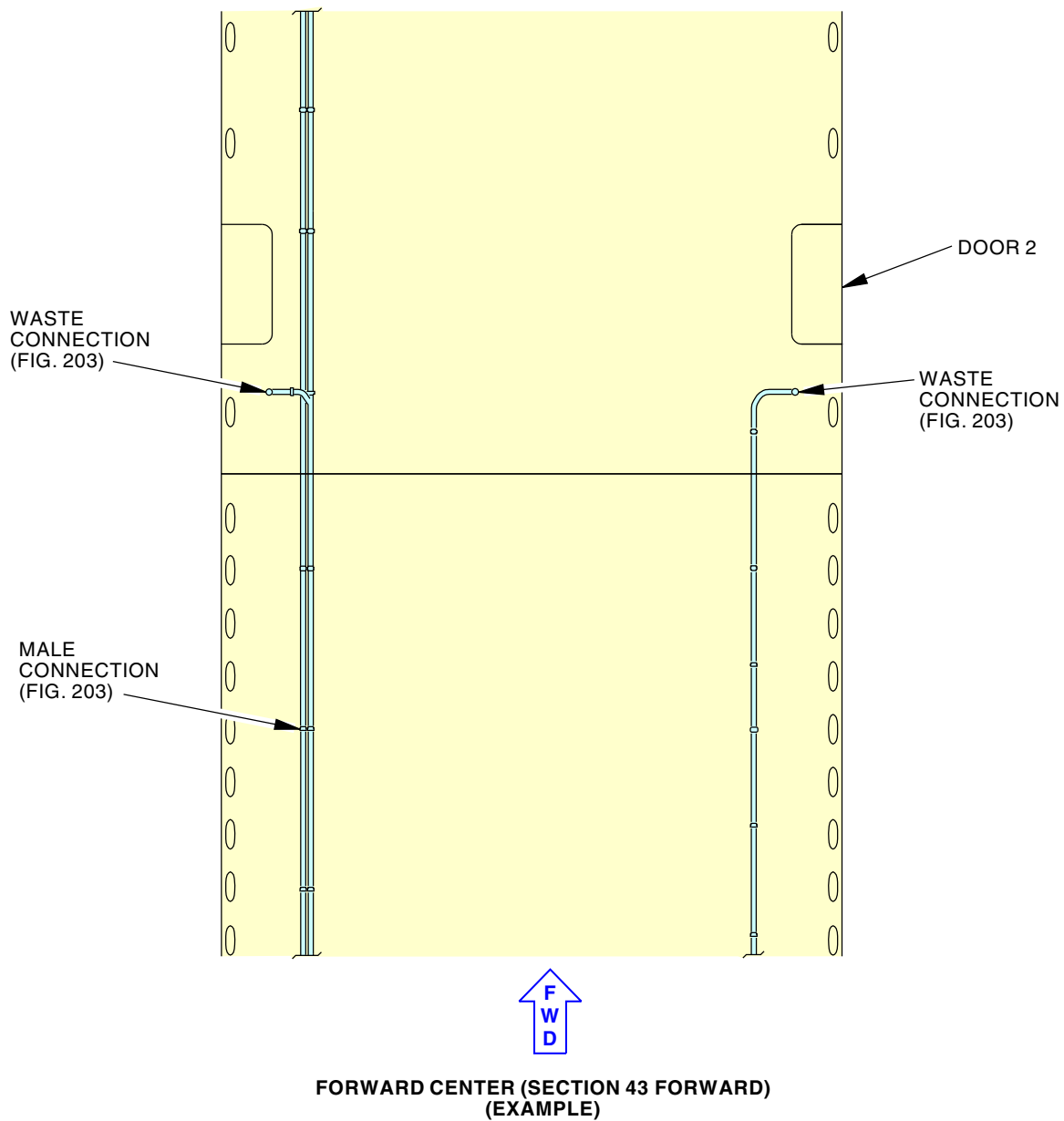
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L22368 S0006422676_V3

Waste System - Primary Routing
Figure 202/38-30-00-990-802 (Sheet 2 of 7)

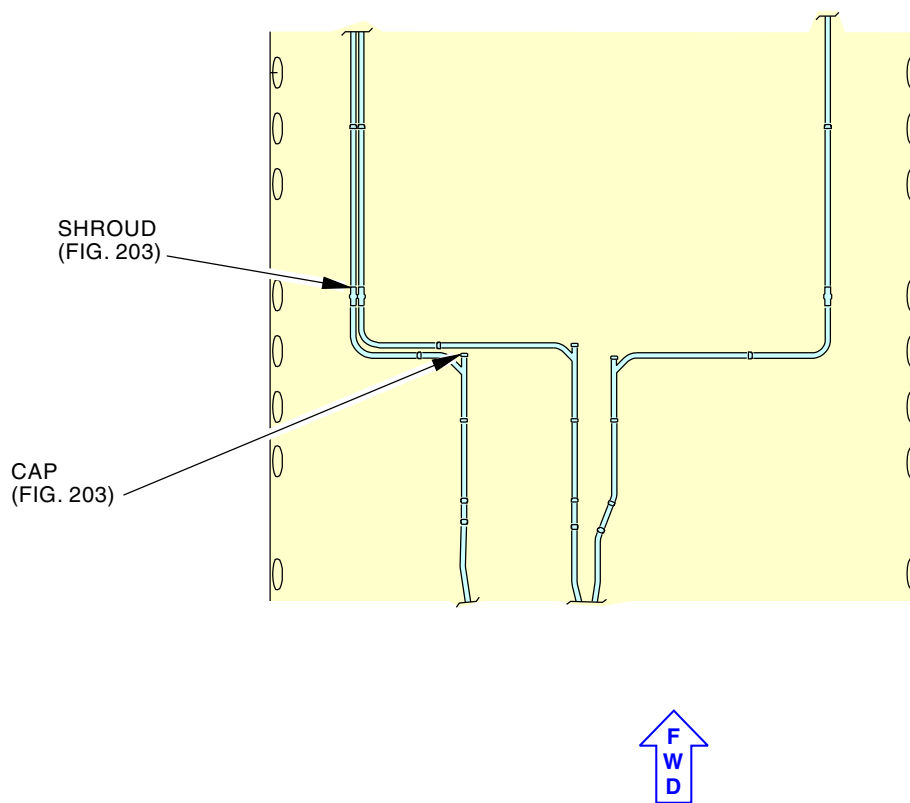
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AFT CENTER (SECTION 43 AFT)
(EXAMPLE)

L22371 S0006422680_V3

Waste System - Primary Routing
Figure 202/38-30-00-990-802 (Sheet 3 of 7)

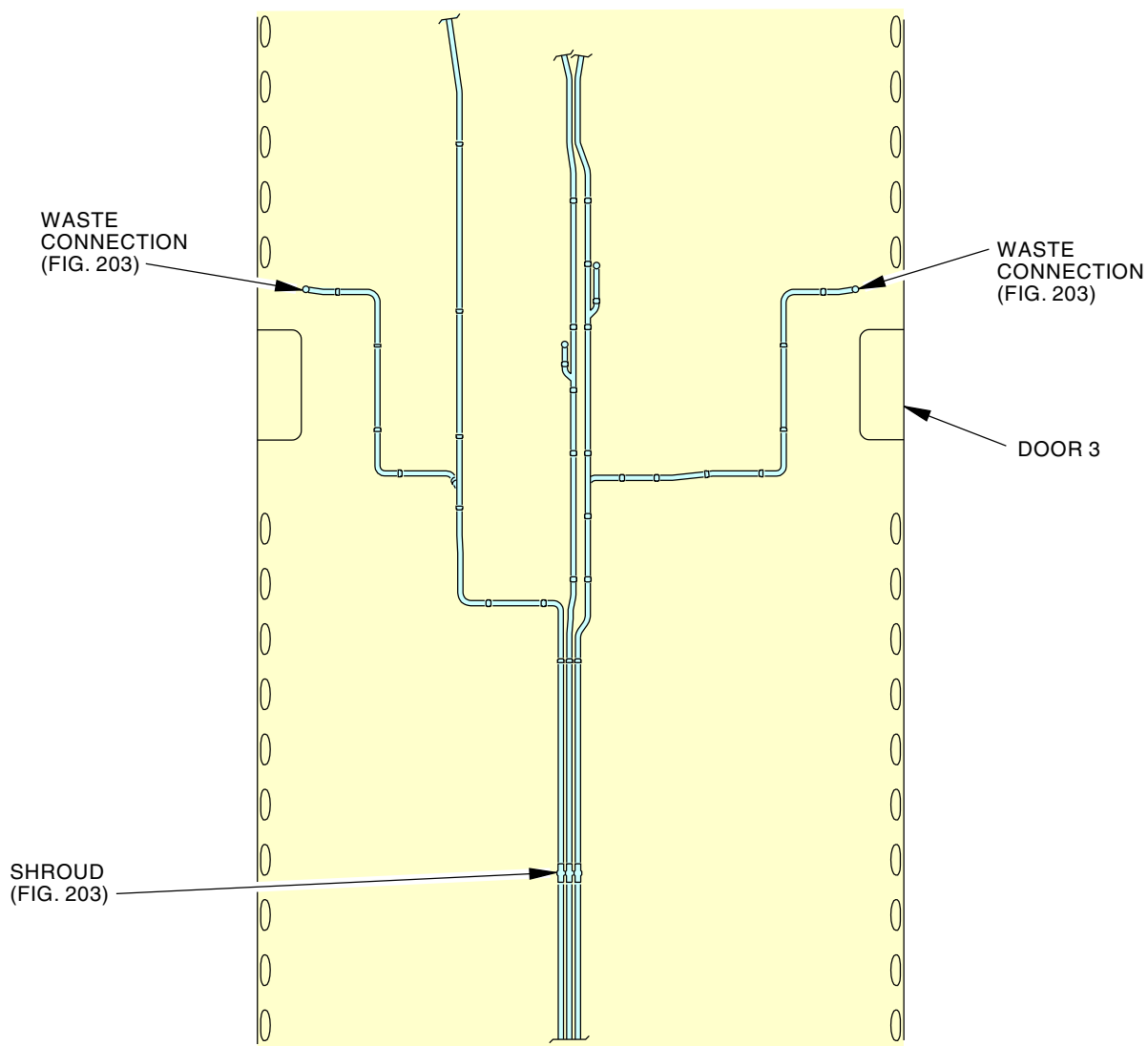
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**AFT CENTER (SECTION 44)
(EXAMPLE)**

L22372 S0006422684_V3

**Waste System - Primary Routing
Figure 202/38-30-00-990-802 (Sheet 4 of 7)**

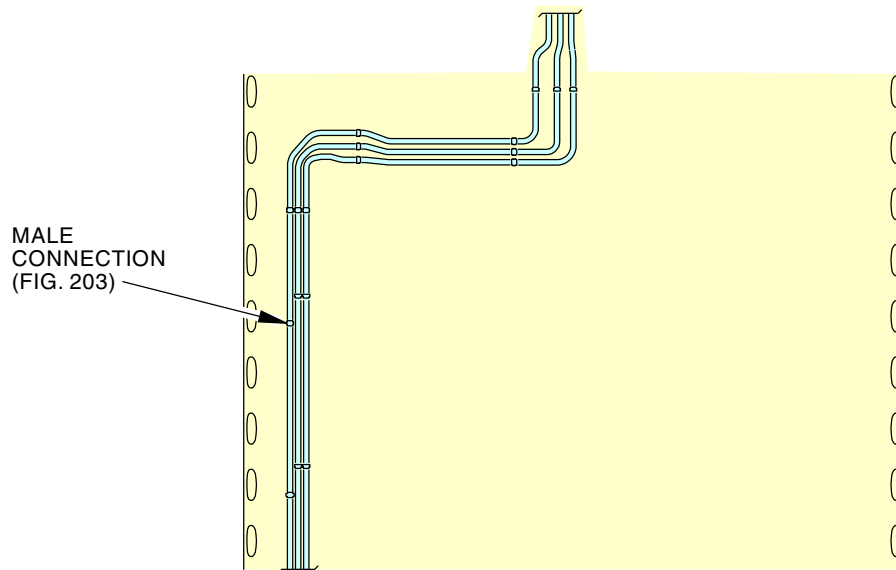
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**AFT CENTER (SECTION 46 FORWARD)
(EXAMPLE)**

L22374 S0006422687_V3

Waste System - Primary Routing
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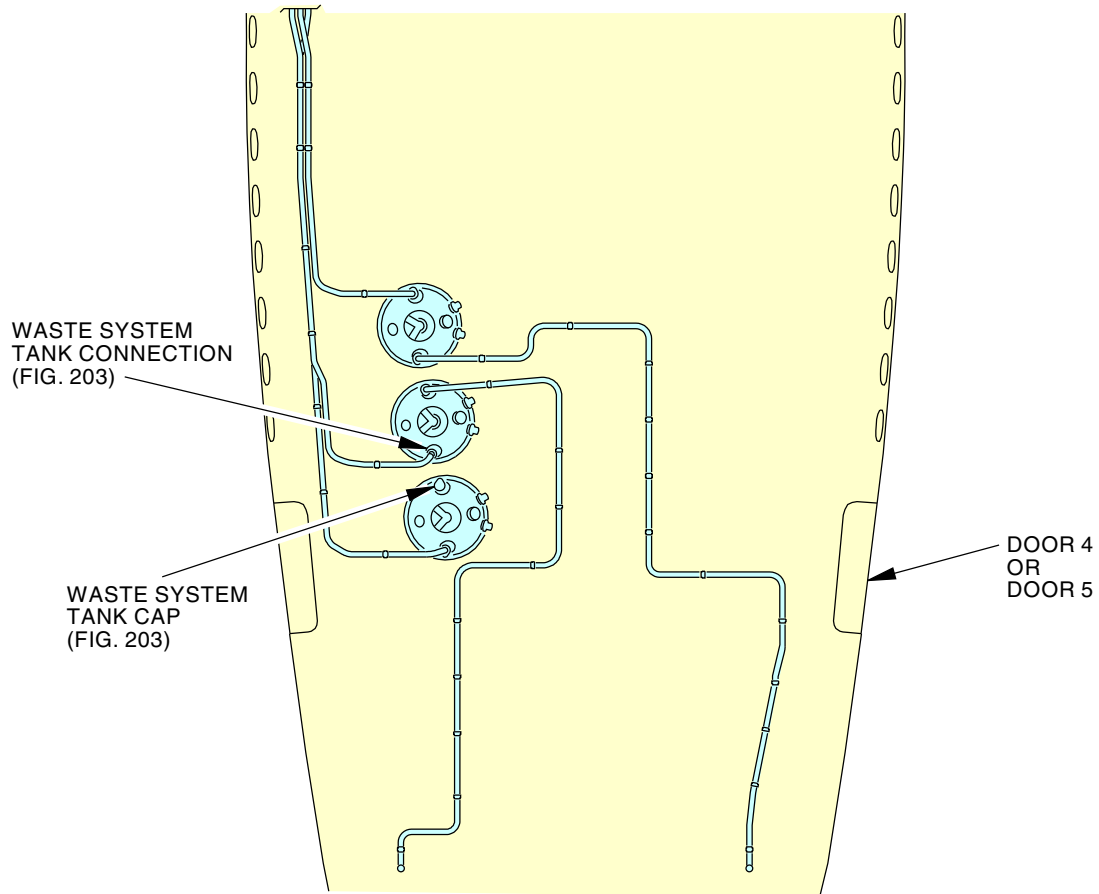
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AFT (SECTION 47)
(EXAMPLE)

L24241 S0006422690_V3

Waste System - Primary Routing
Figure 202/38-30-00-990-802 (Sheet 6 of 7)

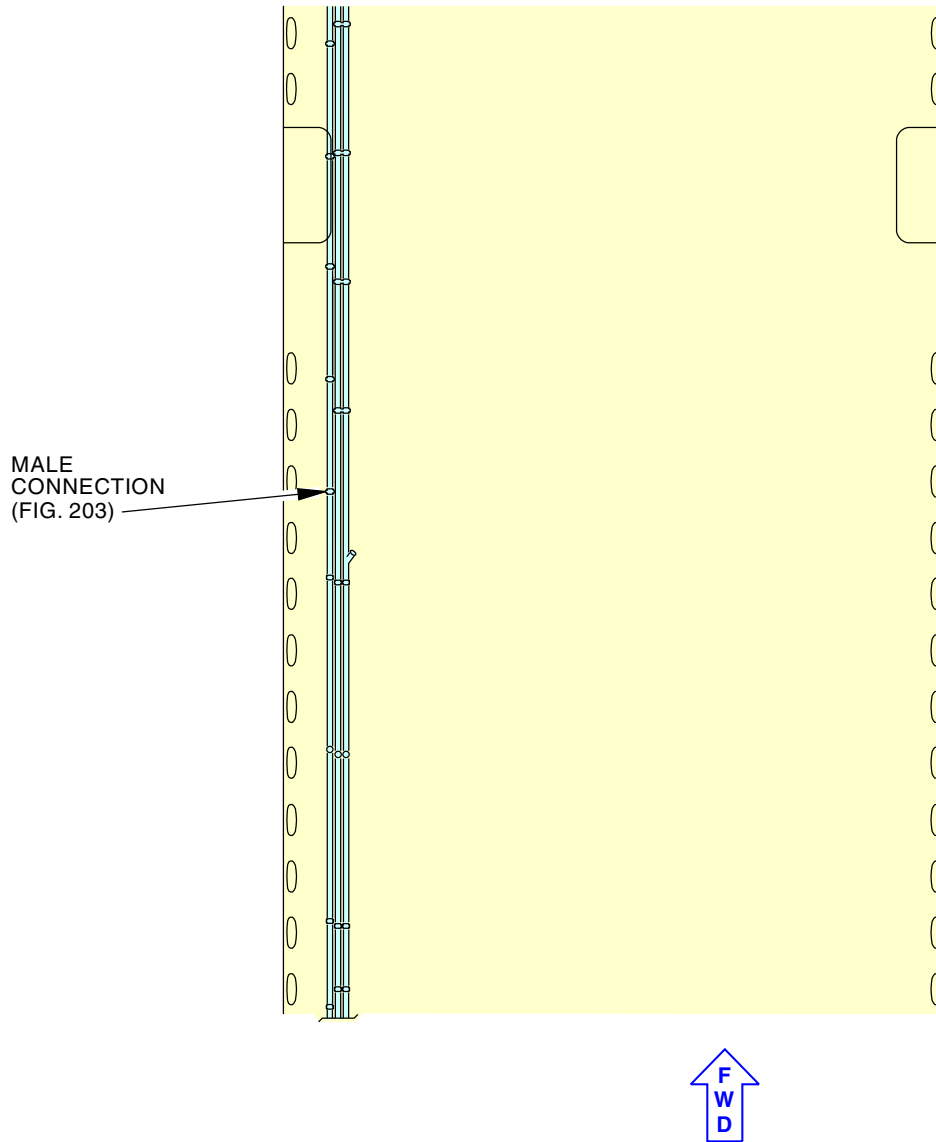
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AFT CENTER (SECTION 46 AFT)
(EXAMPLE)

L22375 S0006422689_V3

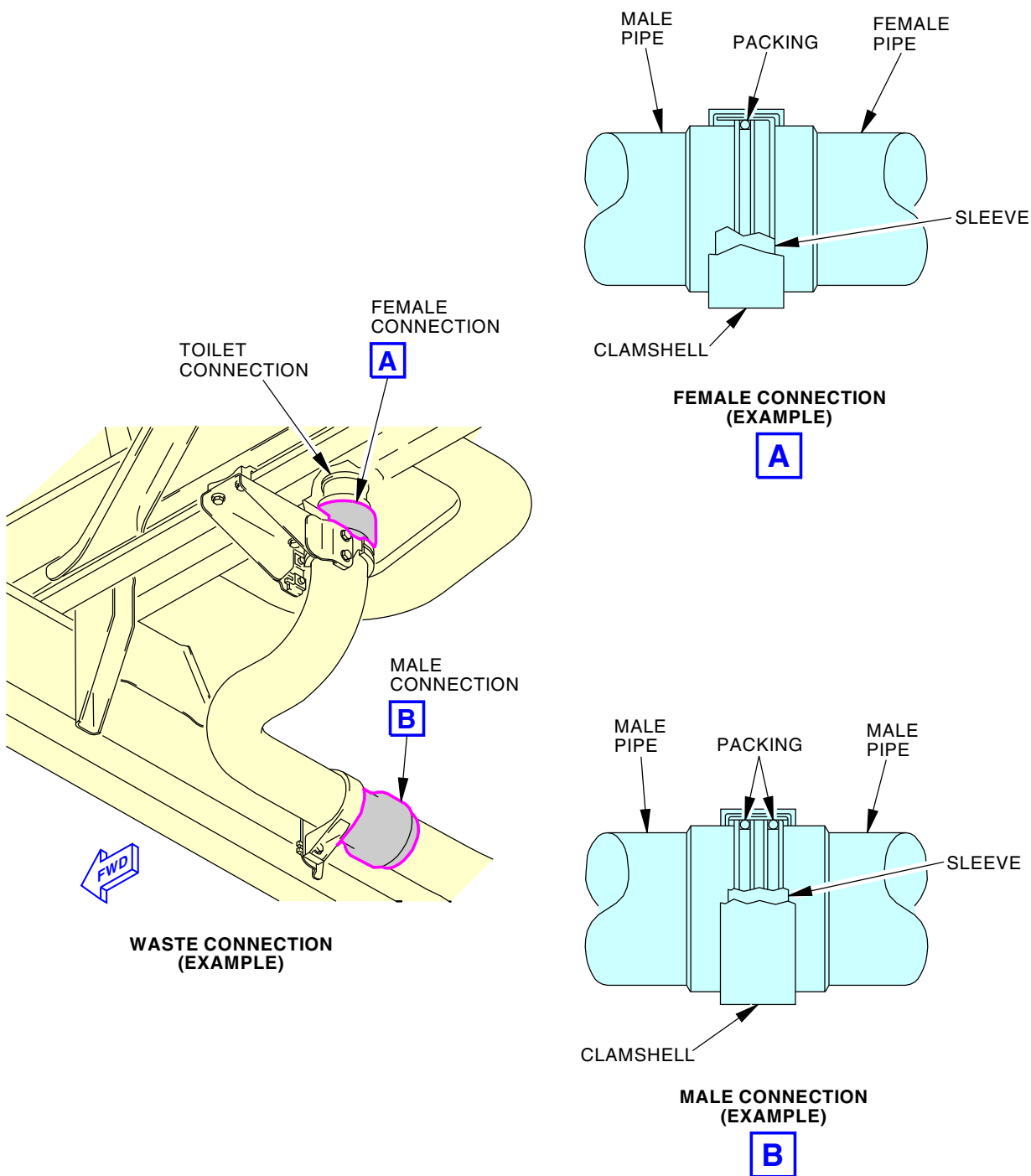
Waste System - Primary Routing
Figure 202/38-30-00-990-802 (Sheet 7 of 7)

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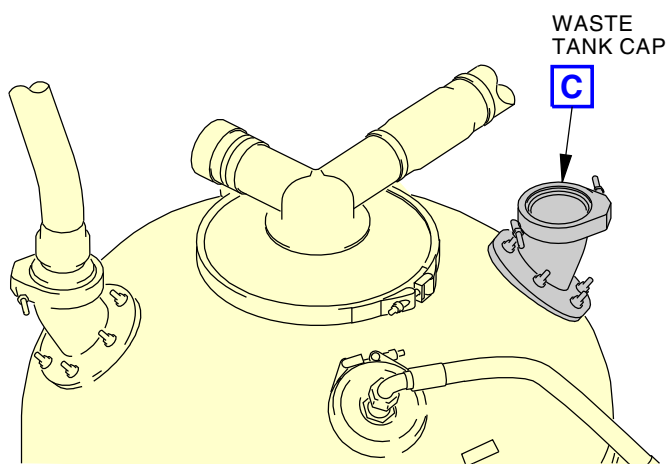
E43703 S0006422694_V2

Waste System - Details
Figure 203/38-30-00-990-803 (Sheet 1 of 4)

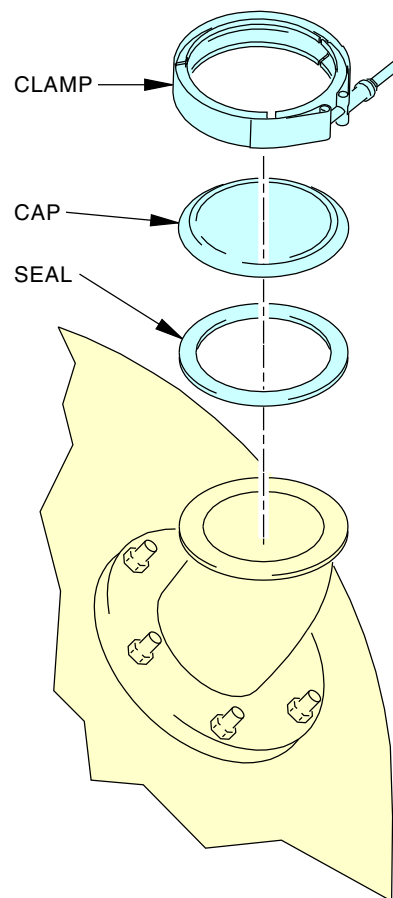
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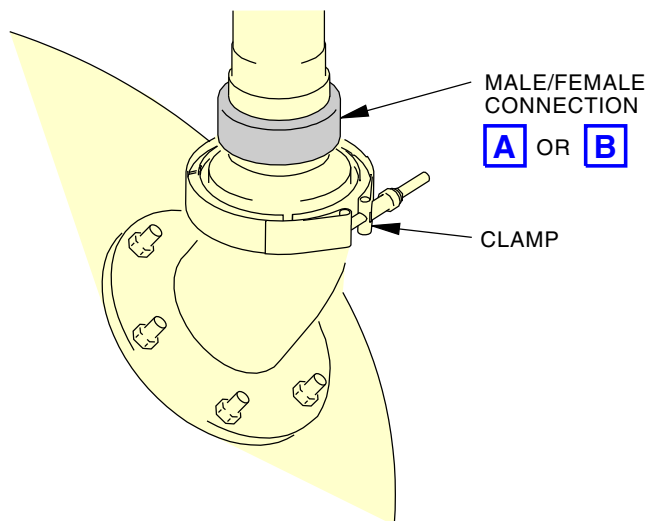


WASTE SYSTEM - TANK CAP

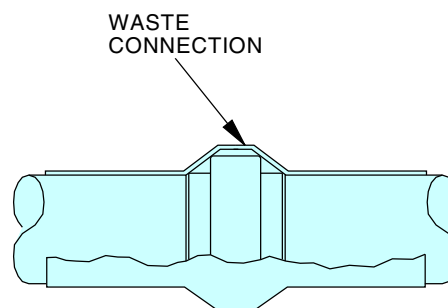


WASTE TANK CAP

C



WASTE SYSTEM - TANK CONNECTION



**SHROUD
(EXAMPLE)**

E43712 S0006422695_V2

**Waste System - Details
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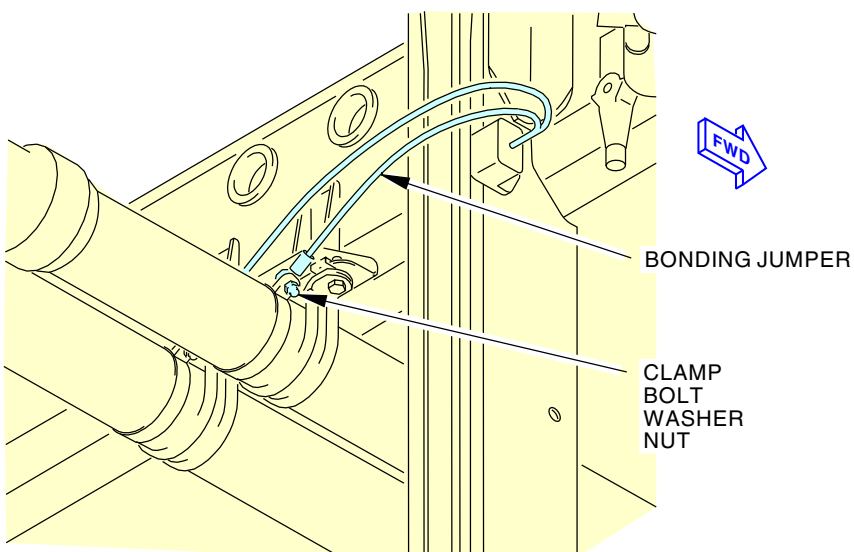
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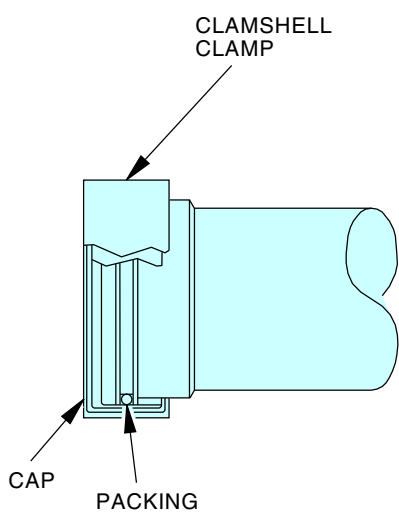
ECCN 9E991 BOEING PROPRIETARY - Copyright © Unpublished Work - See title page for details

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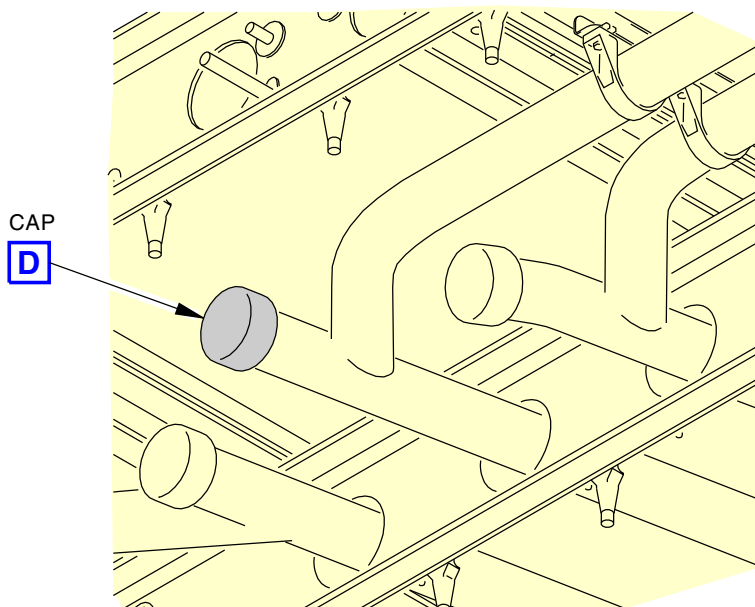
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**BONDING JUMPER
(EXAMPLE)**



**CAP
(EXAMPLE)**



**CLEANOUT
(EXAMPLE)**

E43720 S0006422696_V3

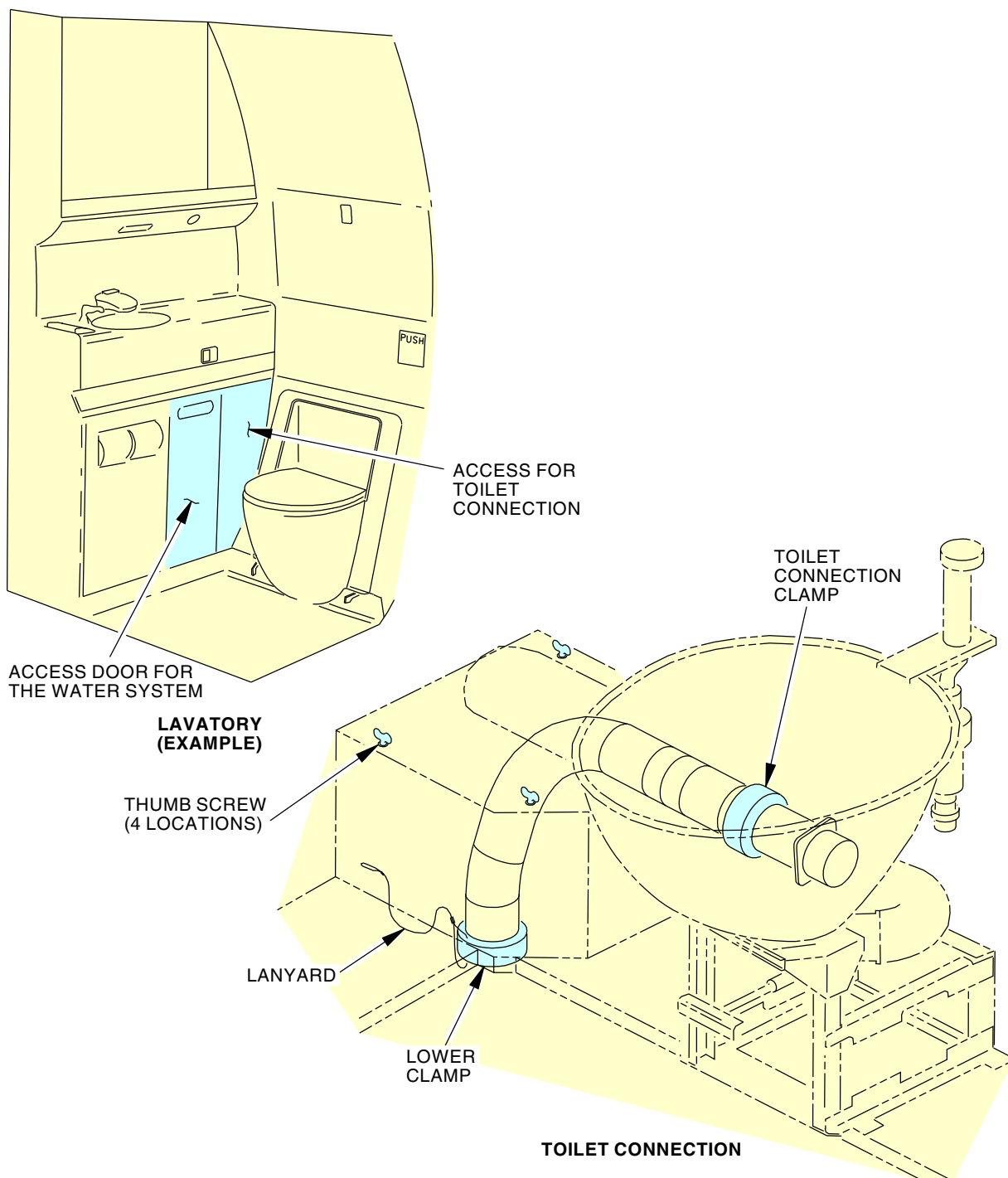
**Waste System - Details
Figure 203/38-30-00-990-803 (Sheet 3 of 4)**

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E75489 S0006422697_V2

Waste System - Details
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GRAY WATER/DRAIN SYSTEM (RECONFIGURATION) - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) The general procedures that are necessary to reconfigure these systems.
 - (a) The gray water drain system
 - (b) The potable water drain system
- B. This procedure gives the primary configuration items that are necessary to change the passenger compartment configuration. This procedure is only a basic configuration of the gray water drain and potable water drain systems. For the accurate configuration of your airplane, it is necessary for you to refer to the approved configuration data.
- C. This procedure gives the primary configuration items that are necessary to change the passenger compartment configuration. This procedure is only for the basic configuration of the potable water system. For the accurate configuration of your airplane, it is necessary for you to refer to the approved configuration data.
- D. This procedure has these illustrations:
- (1) (Figure 201) shows all of the locations of the galleys and lavatories.
 - (2) (Figure 202) shows the primary routing of the tubes for the forward gray water system.
 - (3) (Figure 203) shows the primary routing of the tubes for the forward drain system.
 - (4) (Figure 204) shows the primary routing of the tubes for the aft gray water system.
 - (5) (Figure 205) shows the primary routing of the tubes for the aft drain system.
 - (6) (Figure 206) shows the details of the gray water/drain system.

TASK 38-31-00-910-810

2. Gray Water Tube - Maintenance Practice

(Figure 201, Figure 202, Figure 204)

A. **Location Zones**

Zone	Area
100	Lower Half of Fuselage

B. **Gray Water Tube - Maintenance Practice**

SUBTASK 38-31-00-860-004

- (1) To access the gray water tube and components use (Figure 201).
 - (a) (Figure 201) shows the locations of the galleys and lavatories.
 - (b) (Figure 202, Figure 204) shows the primary routing of the tubes for the gray water system.

———— **END OF TASK** ————

TASK 38-31-00-910-811

3. Water Drain Tube - Maintenance Practice

(Figure 201, Figure 203, Figure 205)

A. **Location Zones**

Zone	Area
100	Lower Half of Fuselage

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B. Water Drain Tube - Maintenance Practice

SUBTASK 38-31-00-860-005

- (1) To access the water drain tube and components use (Figure 201).
 - (a) (Figure 201) shows the locations of the galleys and lavatories.
 - (b) (Figure 203, Figure 205) shows the primary routing of the tubes for the water drain system.
 - (c) (Figure 207) shows the changes for the water drain system to prevent damage if the weldments are frozen.

————— END OF TASK —————

TASK 38-31-00-910-801

4. Gray Water/Drain System - Cap Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Location Zones

Zone	Area
100	Lower Half of Fuselage

B. Gray Water/Drain System - Cap Removal

SUBTASK 38-31-00-860-002

- (1) Remove the cap from the water system component.

————— END OF TASK —————

TASK 38-31-00-910-802

5. Gray Water/Drain System - Cap Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

B. Location Zones

Zone	Area
100	Lower Half of Fuselage

C. Gray Water/Drain System - Cap Installation

SUBTASK 38-31-00-640-001

- (1) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the O-ring.

SUBTASK 38-31-00-420-002

- (2) Install the O-ring.

SUBTASK 38-31-00-420-003

- (3) Install the cap for the water system component.

D. Gray Water and Potable Water Drain System - Cap Installation Test

SUBTASK 38-31-00-860-003

- (1) Open the water faucet for a lavatory or galley attached to the system with the cap.

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SUBTASK 38-31-00-710-001

- (2) Make sure the water flows from the drain mast without leakage.

————— END OF TASK —————

TASK 38-31-00-910-803

6. Lavatory Gray Water/Drain System - Hose Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Location Zones

Zone	Area

100	Lower Half of Fuselage

B. Lavatory Gray Water/Drain System - Hose Removal

SUBTASK 38-31-00-010-001

- (1) To get access to the lavatory connections, do these steps:
 - (a) Turn the latch handle away from the toilet to open the toilet shroud.
 - (b) Pull the bottom edge of the toilet shroud out.
 - (c) Move the toilet shroud down until the top edge disengages from the trim strip on the lavatory wall.
 - (d) Loosen the screws to remove the cover from the lavatory drain area.

SUBTASK 38-31-00-020-003

- (2) Remove the clamp and then move the sleeve off the hose connection from the water drain system.

SUBTASK 38-31-00-020-004

- (3) Disconnect the hose from the lavatory.

SUBTASK 38-31-00-020-005

- (4) Remove the straps from the clamps that attach the hose to the structure.

SUBTASK 38-31-00-020-006

- (5) Remove the hose.

SUBTASK 38-31-00-420-004

- (6) If it is not necessary to use this connection, do this task: Gray Water/Drain System - Cap Installation (Reconfiguration), TASK 38-31-00-910-802.

————— END OF TASK —————

TASK 38-31-00-910-804

7. Lavatory Gray Water/Drain System - Hose Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

B. Location Zones

Zone	Area

100	Lower Half of Fuselage

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C. Lavatory Gray Water/Drain System - Hose Installation

SUBTASK 38-31-00-020-007

- (1) If the connection has a cap, do this task: Gray Water/Drain System - Cap Removal (Reconfiguration), TASK 38-31-00-910-801.

SUBTASK 38-31-00-640-002

- (2) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the O-rings.

SUBTASK 38-31-00-420-005

- (3) Install the O-rings.

SUBTASK 38-31-00-420-006

- (4) Install the coupler to connect the hose.

SUBTASK 38-31-00-420-007

- (5) Install the coupler to connect the hose to the lavatory.

NOTE: The lanyard for the coupler attaches to the clip in the area of the fittings.

SUBTASK 38-31-00-420-008

- (6) Install the straps for the clamps that attach the hose to the structure.

SUBTASK 38-31-00-790-001

- (7) Do these steps to do a test of the gray water system for leakage:
 - (a) Open the water faucet for a lavatory attached to the system.
 - (b) Make sure the water flows from the drain mast without leakage.
 - (c) Close the water faucet you opened.

SUBTASK 38-31-00-790-002

- (8) Do these steps to do a test of the potable water system for leakage:
 - (a) Open the drain valve for a lavatory attached to the system.
 - (b) Make sure the water flows from the drain port without leakage.
 - (c) Close the drain valve you opened.

SUBTASK 38-31-00-410-002

- (9) To close the access to the lavatory connections, do these steps:
 - (a) Put the cover from the lavatory drain area in its position.
 - (b) Tighten the screws to install the cover from the lavatory drain area.
 - (c) Move the toilet shroud up until the top edge engages in the trim strip on the lavatory wall.
 - (d) Push the bottom edge of the toilet shroud into its position.
 - (e) Turn the latch handle to the toilet to close the toilet shroud.

————— **END OF TASK** —————

TASK 38-31-00-910-805

8. Galley Gray Water System - Drain Fitting (Through Floor) Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 204, Figure 206)

A. References

Reference	Title
53-01-01-400-801	Floor Panel Installation (P/B 401)

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B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Location Zones

Zone	Area
100	Lower Half of Fuselage

D. Galley Gray Water Drain System - Drain Fitting (Through Floor) Removal

SUBTASK 38-31-00-020-008

- (1) Remove the clamp to disconnect the hose from the drain fitting.

SUBTASK 38-31-00-020-009

- (2) Remove the drain fitting from the galley drain fitting.

SUBTASK 38-31-00-020-010

- (3) To remove the galley from its position, do the applicable procedure in Chapter 25.

SUBTASK 38-31-00-020-011

- (4) If it is necessary, remove the straps for the clamps that attach the galley drain fitting to the structure.

SUBTASK 38-31-00-020-012

- (5) Remove the coupler and sleeve that attaches the galley drain fitting to the galley drain system.

SUBTASK 38-31-00-020-013

- (6) Remove the nut and pressure plate that attach the galley drain fitting to the floor plate.

SUBTASK 38-31-00-420-009

- (7) If it is not necessary to use this connection, do the steps to install a floor panel without a hole, do this task: Floor Panel Installation, TASK 53-01-01-400-801.

E. Galley Gray Water Drain System - Drain Fitting (Through Floor) Installation

SUBTASK 38-31-00-020-014

- (1) If you do not have a hole in the floor panel, do the steps to install a floor panel with a hole, do this task: Floor Panel Installation, TASK 53-01-01-400-801.

SUBTASK 38-31-00-390-001

- (2) Apply sealant, A00247, to the faying surface of the floor panel hole, the galley drain fitting, and the pressure plate.

SUBTASK 38-31-00-420-010

- (3) Install the galley drain fitting, pressure plate, and nut on the floor panel.

SUBTASK 38-31-00-420-011

- (4) To install the galley in its position, do the applicable procedure in Chapter 25.

SUBTASK 38-31-00-420-012

- (5) Install the drain fitting in the galley drain fitting.

SUBTASK 38-31-00-420-013

- (6) Install the clamp to connect the galley hose to the gray water drain system.

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SUBTASK 38-31-00-640-004

- (7) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the O-rings.

————— END OF TASK —————

TASK 38-31-00-910-806

9. Galley Gray Water System - Forward Drain Tube Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Location Zones

Zone	Area
100	Lower Half of Fuselage

B. Galley Gray Water Drain System - Forward Drain Tube Removal

SUBTASK 38-31-00-020-015

- (1) Remove the clamp to disconnect the hose from the drain tube.

SUBTASK 38-31-00-020-016

- (2) Remove the coupler to disconnect the drain tube from the gray water system.

SUBTASK 38-31-00-020-017

- (3) Remove the strap for the clamp that attach the drain tube to the structure.

SUBTASK 38-31-00-020-018

- (4) Remove the drain tube from the gray water system.

————— END OF TASK —————

TASK 38-31-00-910-807

10. Galley Gray Water/Drain System - Forward Drain Tube Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

B. Location Zones

Zone	Area
100	Lower Half of Fuselage

C. Galley Gray Water Drain System - Forward Drain Tube Installation

SUBTASK 38-31-00-420-014

- (1) Put the drain tube in its position in the gray water system.

SUBTASK 38-31-00-420-015

- (2) Install the clamp to connect the galley hose to the drain tube.

SUBTASK 38-31-00-640-005

- (3) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the O-rings.

SUBTASK 38-31-00-420-016

- (4) Install the O-rings.

SUBTASK 38-31-00-420-017

- (5) Install the coupler to connect the drain tube to the gray water drain system.

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SUBTASK 38-31-00-790-003

- (6) Do these steps to do a test of the gray water system for leakage:
 - (a) Pour water in the galley drain attached to the system.
 - (b) Make sure the water flows from the drain mast without leakage.

SUBTASK 38-31-00-420-018

- (7) Install the strap for the clamp that attaches the drain tube to the structure.

————— END OF TASK —————

TASK 38-31-00-910-808

11. Galley Gray Water System - Aft Drain Removal (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Location Zones

Zone	Area

100	Lower Half of Fuselage

B. Galley Gray Water Drain System - Aft Drain Removal

SUBTASK 38-31-00-020-019

- (1) Remove the clamp to disconnect the galley drain hose from the bulkhead fitting.

SUBTASK 38-31-00-020-020

- (2) Remove the clamp to disconnect the gray water drain hose from the bulkhead fitting.

SUBTASK 38-31-00-020-021

- (3) Remove the nut and washer that attach the bulkhead fitting to the structure.

SUBTASK 38-31-00-020-022

- (4) Remove the bulkhead fitting from the structure.

————— END OF TASK —————

TASK 38-31-00-910-809

12. Galley Gray Water System - Aft Drain Installation (Reconfiguration)

(Figure 201, Figure 202, Figure 203, Figure 204, Figure 205, Figure 206)

A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

B. Location Zones

Zone	Area

100	Lower Half of Fuselage

C. Galley Gray Water System - Aft Drain Installation

SUBTASK 38-31-00-390-002

- (1) Apply sealant, A00247, to the faying surface of the bulkhead fitting and the structure.

SUBTASK 38-31-00-420-019

- (2) Put the bulkhead fitting in its position in the structure.

SUBTASK 38-31-00-420-020

- (3) Install the nut and washer that attach the bulkhead fitting to structure.

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SUBTASK 38-31-00-420-021

- (4) Install the clamp to connect the galley drain hose to the bulkhead fitting.

SUBTASK 38-31-00-420-022

- (5) Install the clamps to connect the hose to the gray water drain system.

SUBTASK 38-31-00-790-004

- (6) Do these steps to do a test of the gray water system for leakage:
- (a) Pour water in the galley drain attached to the system.
 - (b) Make sure the water flows from the drain mast without leakage.

———— **END OF TASK** ————

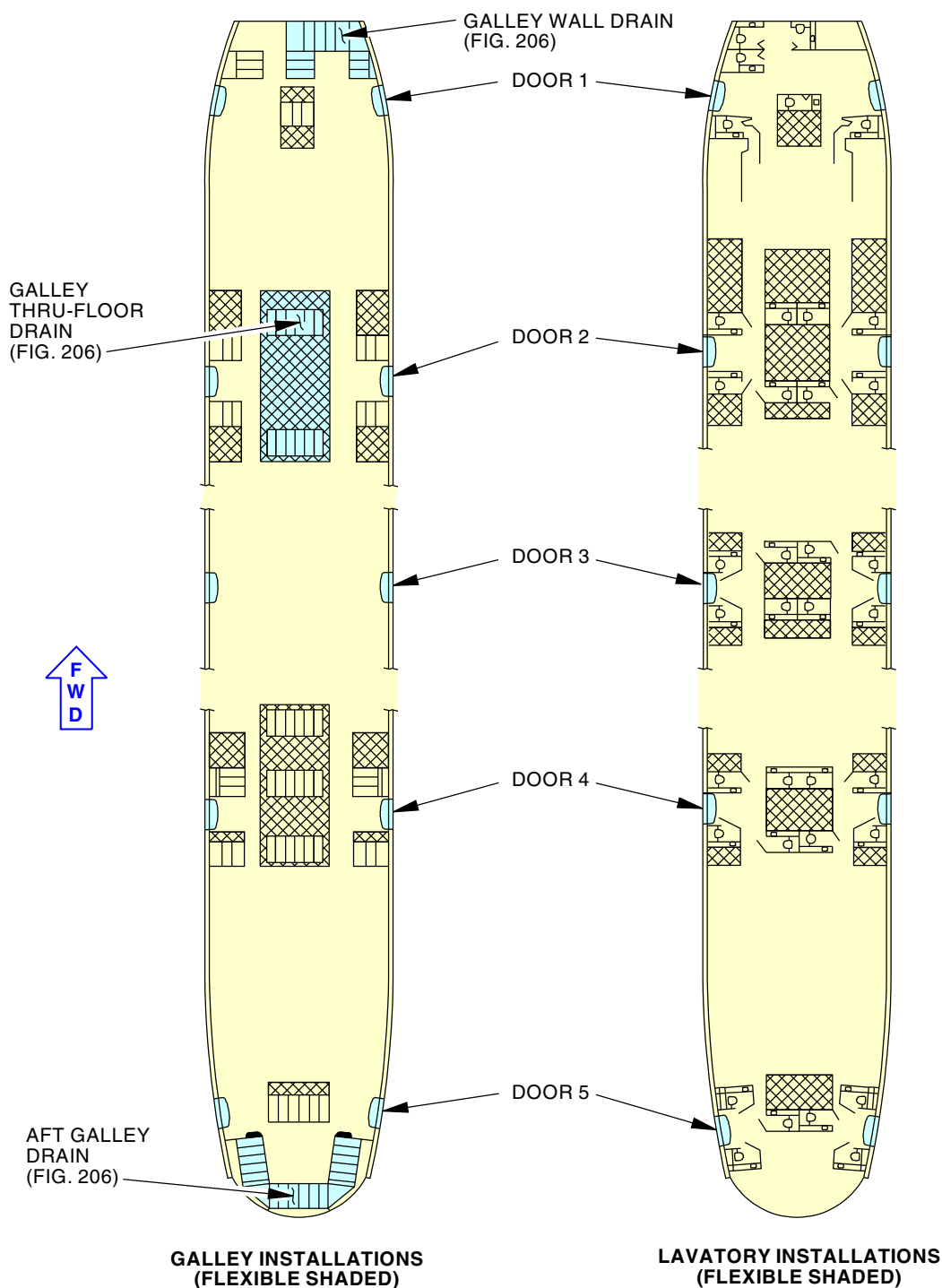
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**Gray Water/Drain System - Location
Figure 201/38-31-00-990-801**

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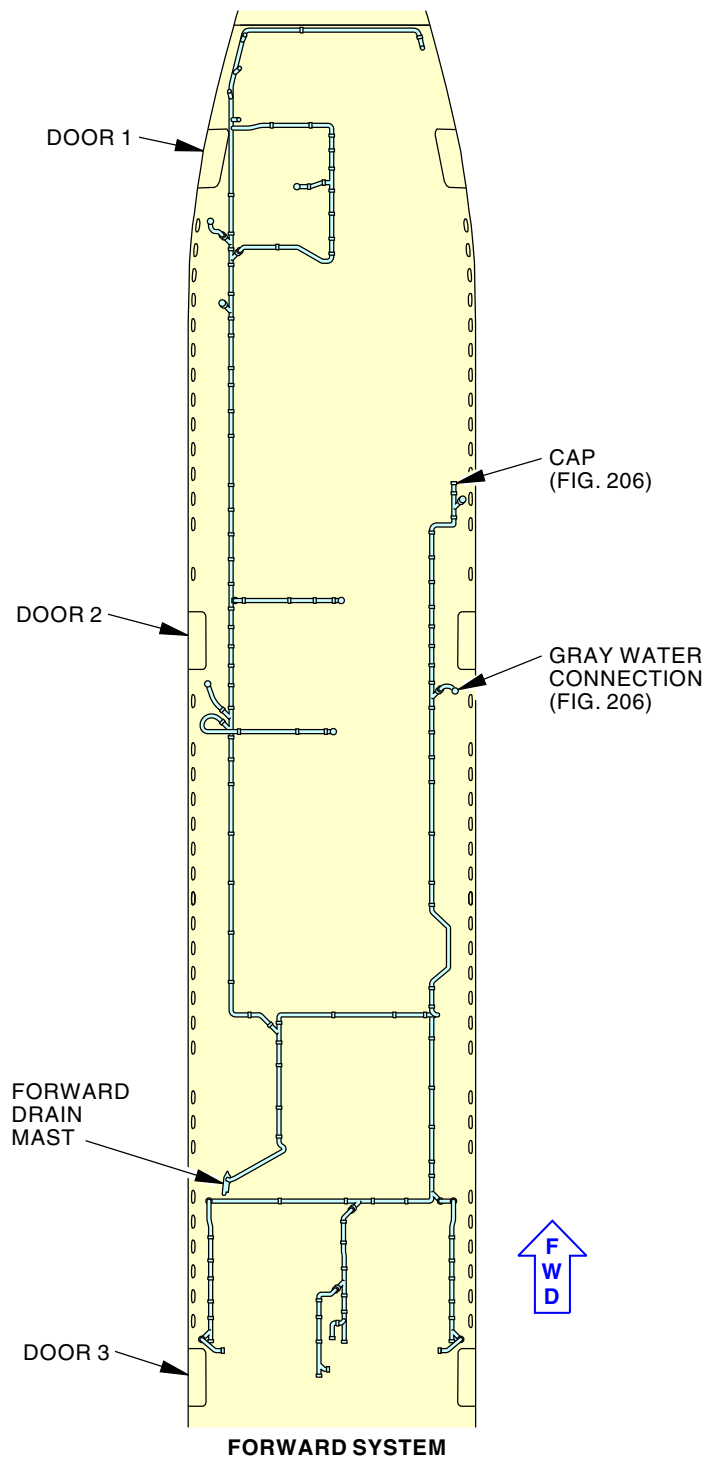
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Gray Water System - Primary Routing
Figure 202/38-31-00-990-802

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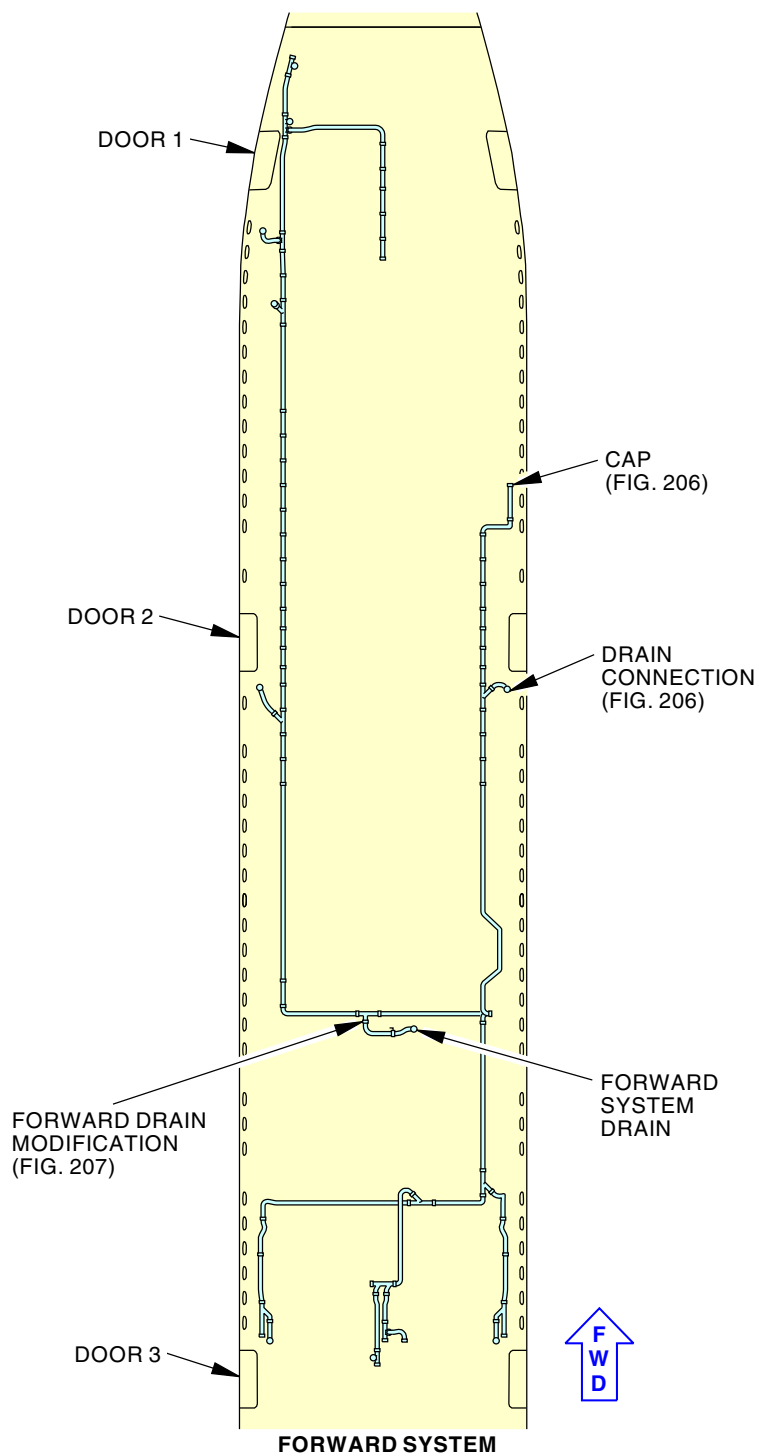
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L22450 S0006422724_V2

Drain System - Primary Routing
Figure 203/38-31-00-990-803

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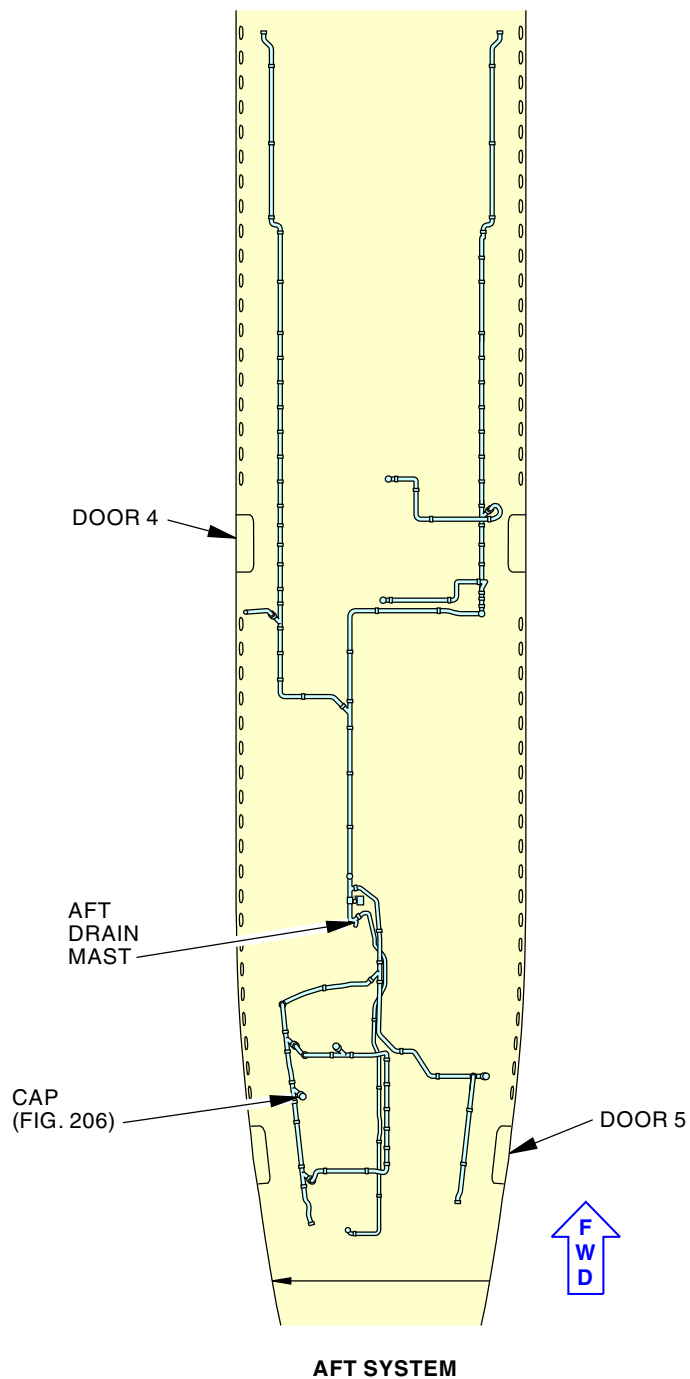
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L22451 S0006422729_V2

Gray Water System - Primary Routing
Figure 204/38-31-00-990-804

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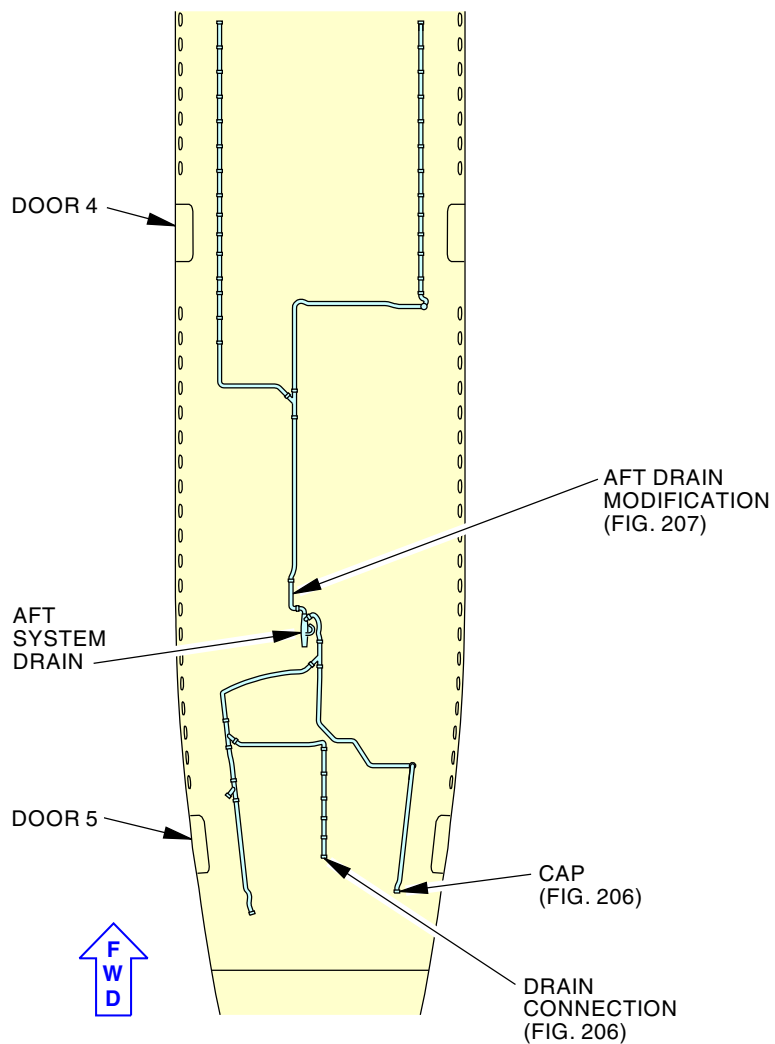
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SYSTEM

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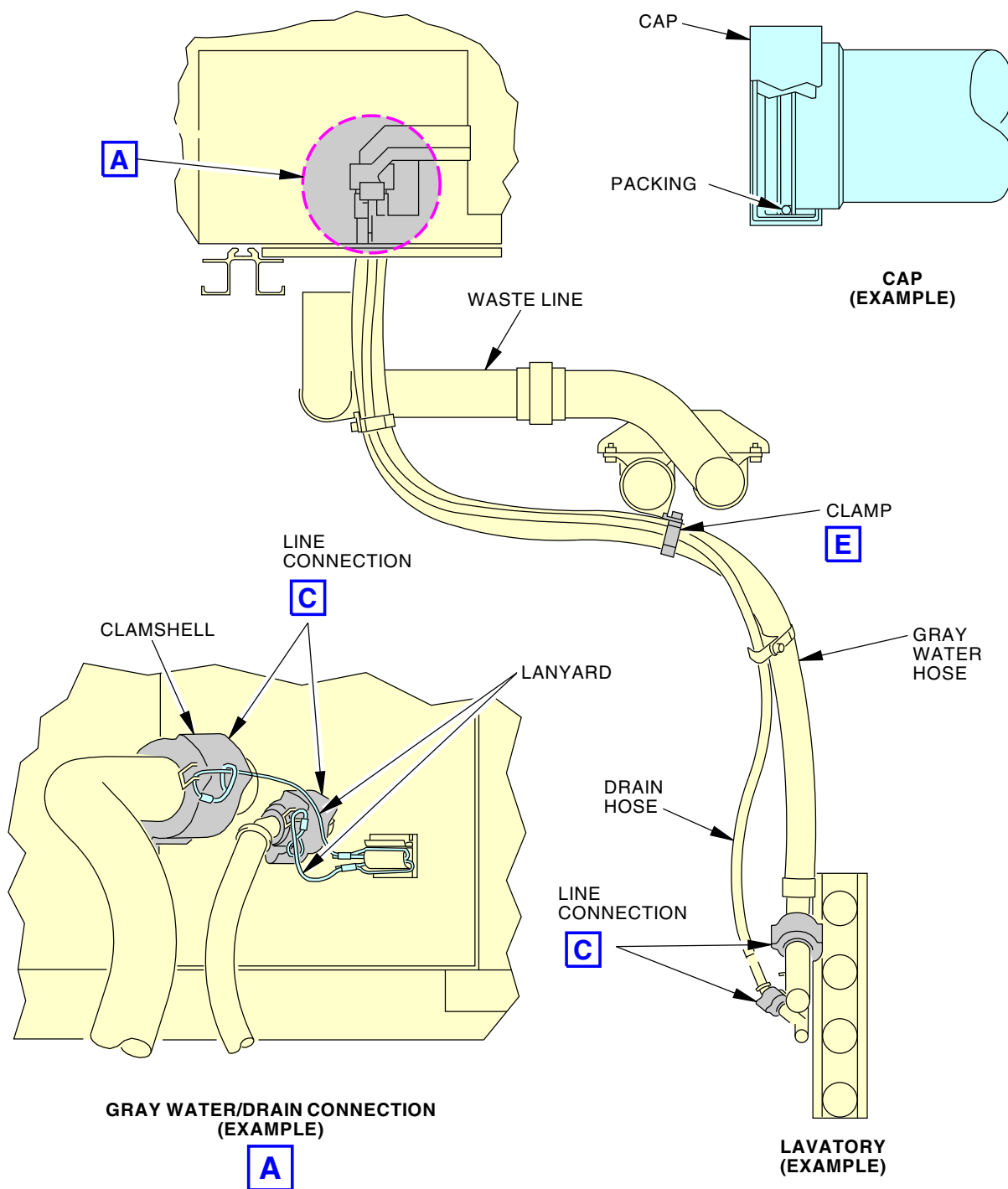
Drain System - Primary Routing
Figure 205/38-31-00-990-805

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E43766 S0006422737_V2

**Gray Water/Drain System - Details
Figure 206/38-31-00-990-806 (Sheet 1 of 3)**

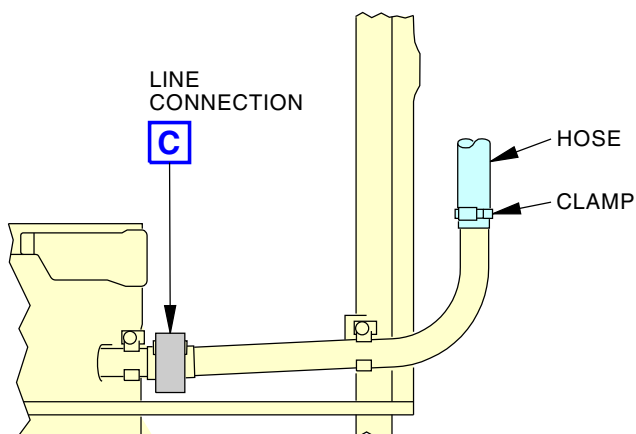
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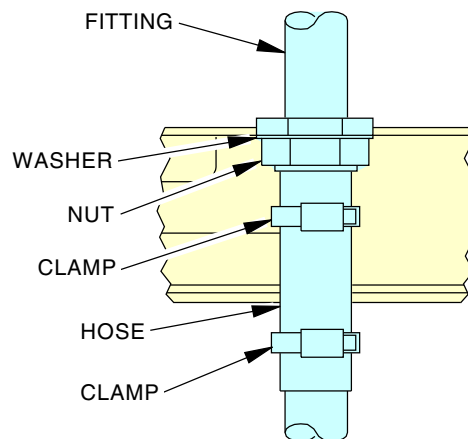
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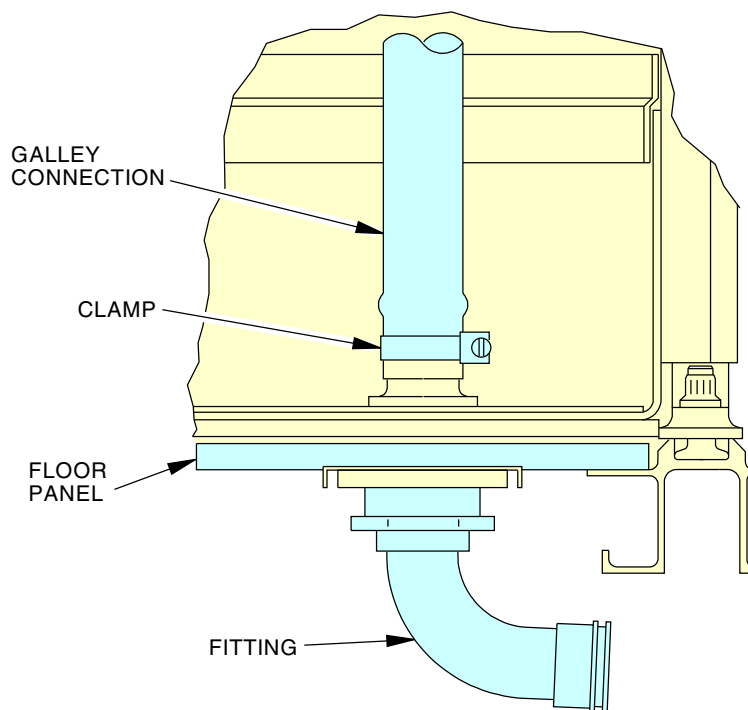
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FORWARD GALLEY DRAIN



AFT GALLEY DRAIN



GALLEY THRU-FLOOR DRAIN

E43776 S0006422738_V2

**Gray Water/Drain System - Details
Figure 206/38-31-00-990-806 (Sheet 2 of 3)**

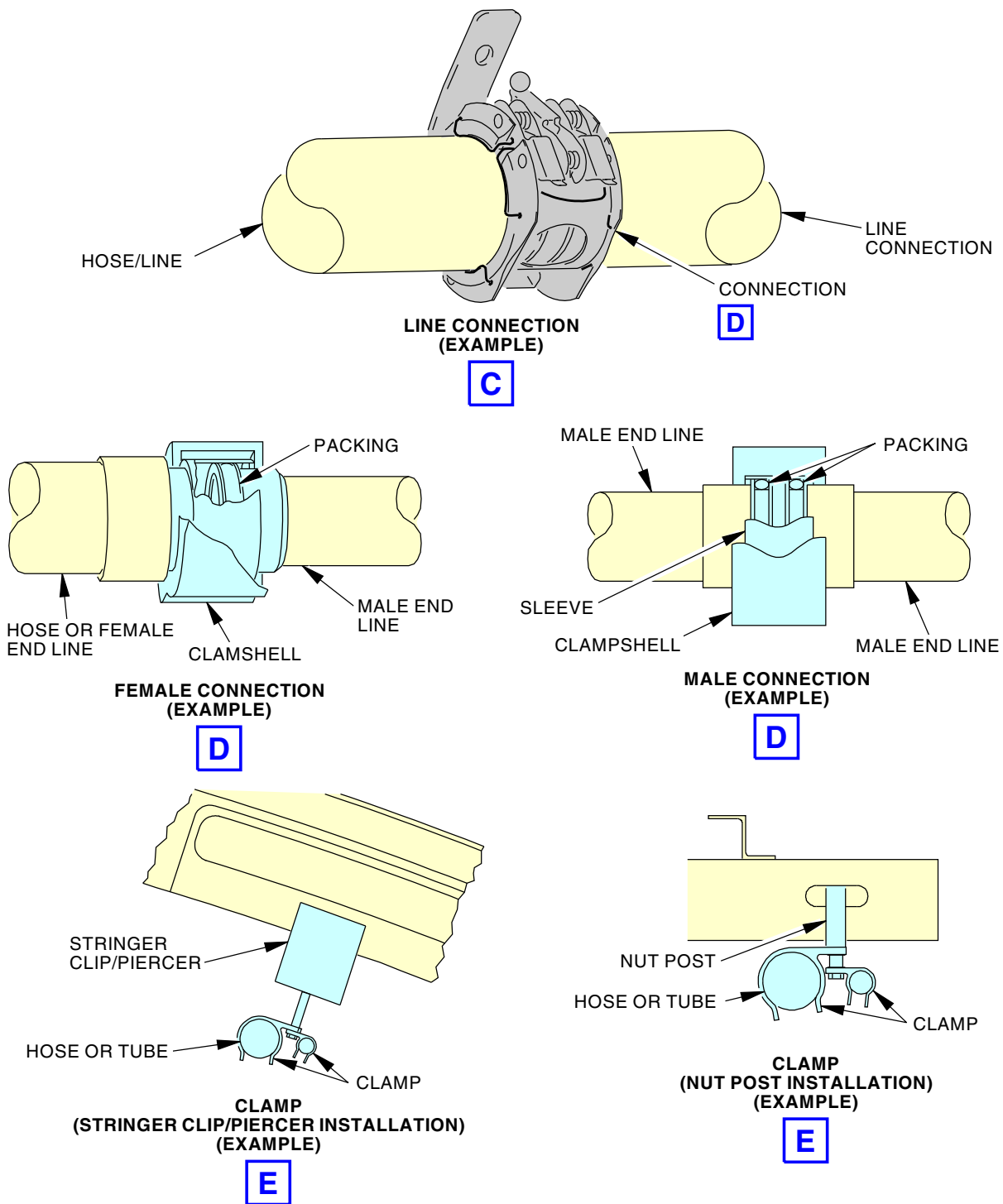
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E98226 S0006422739_V2

**Gray Water/Drain System - Details
Figure 206/38-31-00-990-806 (Sheet 3 of 3)**

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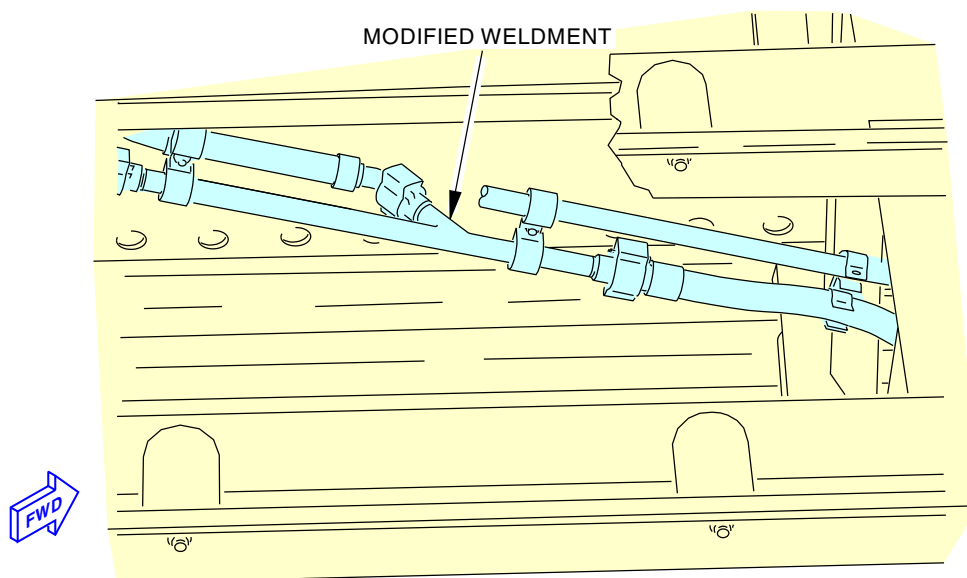
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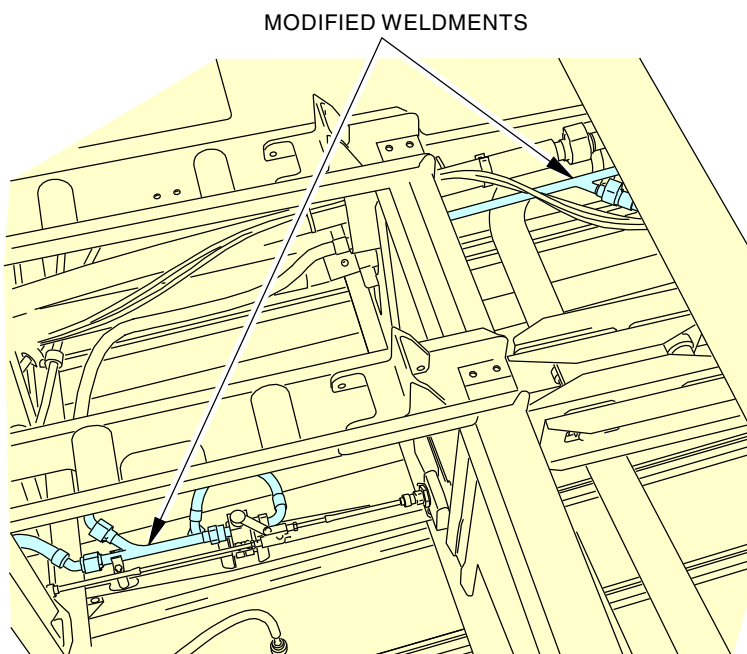
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**FORWARD DRAIN MODIFICATION
(FLOOR PANEL REMOVED FOR CLARITY)**



**AFT DRAIN MODIFICATION
(FLOOR PANEL REMOVED FOR CLARITY)**

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**Drain Modification - Details
Figure 207/38-31-00-990-807**

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GRAY WATER/DRAIN SYSTEM - ADJUSTMENT/TEST

1. General

A. This procedure has this task:

- (1) A operational test of the drain mast restrictor valve.

TASK 38-31-00-700-801

2. Drain Mast Restrictor Valve Operational Test

A. **General**

- (1) This procedure gives you the instructions to make sure the drain line restrictor valve is operating correctly.

B. **References**

Reference	Title
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
32-09-00-440-801	Air Mode Simulation - Restoration (P/B 201)
32-09-00-860-801	Air/Ground Mode Simulation (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-1951	Plug - Waste Water Drain Mast Part #: C38001-29 Supplier: 81205 Opt Part #: C38001-23 Supplier: 81205

D. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left
200	Upper Half of Fuselage

E. **Prepare for the test:**

SUBTASK 38-31-00-860-006

- (1) Put the airplane into air mode, do this task: Air/Ground Mode Simulation, TASK 32-09-00-860-801.

F. **Drain Mast Restrictor Valve Test:**

SUBTASK 38-31-00-020-023

- (1) Disconnect the drain mast heater.

SUBTASK 38-31-00-020-024

- (2) Put the waste water drain mast plug, SPL-1951, waste water drain mast plug, SPL-1951, or drain mast plug waste water drain mast plug, SPL-1951 in the drain mast.

SUBTASK 38-31-00-860-007

- (3) Fill the drain system with water from a lavatory sink.

NOTE: When the water is backed up approximately 55 inches (2.0 PSI) higher than the pressure sensor, the actuator should cycle to the open position. It should take about 3 gallons or more to fill up the tubing to that height.

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SUBTASK 38-31-00-860-008

- (4) Look at the actuator arm to make sure that it cycles to the non restricted (OPEN) position.

SUBTASK 38-31-00-080-001

- (5) Remove the drain mast plug.

SUBTASK 38-31-00-860-009

- (6) Look at the actuator to make sure that it cycles to the restricted (CLOSED) position.

SUBTASK 38-31-00-420-023

- (7) Reconnect drain mast heater.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-00-410-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) To install the floor panels, do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-31-00-860-010

- (2) Put the airplane into ground mode, do this task: Air Mode Simulation - Restoration, TASK 32-09-00-440-801.

————— END OF TASK —————

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GRAY WATER SYSTEM - CLEANING/PAINTING

1. General

- A. This procedure gives the steps to remove a blockage from a clogged drain line.
- B. The lavatory and galley drain lines get clogged when material other than water is in the drain lines. Only use the drain lines for water.

TASK 38-31-00-100-801

2. Gray Water System - Cleaning

A. General

- (1) Use one or more of the procedures that follow to clean a clogged drain line.
 - (a) If the drain line has a strainer or a drain cup, start with procedure 1.
 - (b) Procedure 2 uses air pressure to clean the clogged drain line.
 - (c) Procedure 3 uses a plumbers snake to remove the blockage.
 - (d) Procedure 4 uses chemicals to clean the clogged drain line.
 - (e) Procedures 2, 3, and 4 are best for small or local blockages.
 - (f) Procedure 5 is best for large blockages.

B. References

Reference	Title
25-52-06-000-801	Sidewall Liner Removal (P/B 401)
25-52-06-400-801	Sidewall Liner Installation (P/B 401)
25-52-09-000-801	Ceiling Liner Removal (P/B 401)
25-52-09-400-801	Ceiling Liner - Installation (P/B 401)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
25-52-19-000-801	Bulk Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-19-400-801	Bulk Cargo Compartment Aft End Wall Installation (P/B 401)
30-71-02-000-801	Gray Water Drain Line Hose Heater Removal (P/B 401)
30-71-02-400-801	Gray Water Drain Line Hose Heater Installation (P/B 401)
38-31-00-910-810	Gray Water Tube - Maintenance Practice (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-5695	Cap - Drain Line Part #: LC200-08C Supplier: 24984
SPL-1951	Plug - Waste Water Drain Mast Part #: C38001-29 Supplier: 81205 Opt Part #: C38001-23 Supplier: 81205

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Reference	Description
SPL-1988	Barrier - Safety, Large Cargo Door Part #: J52011-1 Supplier: 81205 Part #: J52011-2 Supplier: 81205 Opt Part #: D0136-030 Supplier: 2S363
STD-1174	Snake - Plumbers

D. Consumable Materials

Reference	Description	Specification
B00126	Cleaner - Non-Etch Alkaline, Turco Altrex 24 (Supersedes Altrex Cleaner)	BAC5749
B00636	Acid, Acetic (Vinegar) (5%-10% Acetic Acid)	Commercially available product

E. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

F. Procedure 1

SUBTASK 38-31-00-020-026

- (1) If installed, remove the drain cup from below the sink.

NOTE: The drain cup in the drain tube is found below the galley sink.

SUBTASK 38-31-00-210-005

- (2) Make sure the drain cup is not clogged.

SUBTASK 38-31-00-020-001

- (3) If installed, remove the strainer (filter) from below the sink.

NOTE: The strainer in the drain tube is found below the galley sink.

SUBTASK 38-31-00-210-001

- (4) Make sure the strainer is not clogged.

SUBTASK 38-31-00-210-002

- (5) Make sure the drain tube upstream of the strainer is not clogged.

SUBTASK 38-31-00-100-001

- (6) If you did not find the blockage in the area close to the strainer, use procedure 2, 3, 4, or 5. Do procedure 2, 3, 4, or 5 at the end of the drain tube below the strainer, not at the sink.

G. Procedure 2

SUBTASK 38-31-00-170-001

- (1) If the drain tube has a strainer, pressurize the drain tube downstream of the strainer with air or water (do not use more than 35 psi pressure).

NOTE: The strainer in the drain tube is found below the galley sink.

SUBTASK 38-31-00-170-002

- (2) If the drain tube does not have a strainer, pressurize the drain tube at the sink with water (do not use more than 35 psi pressure).

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H. Procedure 3

SUBTASK 38-31-00-140-001



DO NOT LET TOOLS OR PARTS TOUCH THE ELECTRICAL COMPONENTS ON THE APU START RELAY. THE APU START RELAY CAN HAVE HIGH VOLTAGE, IF TOOLS OR PARTS TOUCH THE TERMINALS OF THE RELAY, ELECTRICAL ARCING CAN OCCUR. DAMAGE TO EQUIPMENT OR INJURIES TO PERSONS CAN OCCUR.



DO NOT PUSH WITH TOO MUCH FORCE ON THE SNAKE. IF YOU PUSH WITH TOO MUCH FORCE ON THE SNAKE, YOU CAN CAUSE DAMAGE TO THE DRAIN LINE.

- (1) Use a plumbers snake, STD-1174 to mechanically clean the drain tube until the clogged drain line is clear.

NOTE: If the drain tube has a strainer, put the snake in the drain tube downstream of the strainer.

I. Procedure 4

SUBTASK 38-31-00-110-001



OBEY THE VENDOR SAFETY PROCEDURES FOR THE ALKALINE CLEANER. CONTACT WITH THE SKIN OR EYES MAY CAUSE IRRITATION OR BURNS.

- (1) If the sinks or grey water lines drain slowly, use a chemical cleaner (Turco Altrex 24 Cleaner, B00126 or acid, B00636) to remove the blockage.

NOTE: Altrex is a stronger solution than the acetic acid and generally is most effective on organic clogs. The acetic acid is most effective on scale or lime obstructions.

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

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DO NOT TOUCH THE DRAIN MASTS UNTIL THEY BECOME COOL. DRAIN MASTS BECOME VERY HOT. INJURIES TO PERSONNEL CAN OCCUR.

- (b) Put the waste water drain mast plug, SPL-1951, or an equivalent tool, on the drain mast outlet.
- (c) To prevent overflow of the drain cleaner solution into the lower lobe aft galley chillers, do these steps:

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INSTALL THE SAFETY BARRIER CORRECTLY WHEN THE CARGO DOOR IS OPEN. IF YOU DO NOT CORRECTLY INSTALL THE SAFETY BARRIER, PERSONS CAN FALL OUT OF THE CARGO COMPARTMENT AND INJURY CAN OCCUR.

- 1) If necessary, install the large cargo door safety barrier, SPL-1988 across the cargo door opening.
 - 2) Do this task: Bulk Cargo Compartment Aft End Wall Removal, TASK 25-52-19-000-801.
 - 3) Locate the drain line extending below the aft bottom corner of the fwd and aft galley chiller(s).
 - 4) Locate the connection between the flexible hose and the horizontal drain tube, at approximate STA 2105 , LBL 22 WL 150 for the aft galley and STA 300, LBL 22 WL 150 for the fwd galley.
 - 5) Remove the clamp from the flexible connection and disconnect the hose from the horizontal tube.
 - 6) Plug the horizontal line by adding a temporary drain line cap, COM-5695, to the tube connection and reinstall the clamp.
- (d) For cleaning the gray water drains, add the cleaner to the forward most galley or lavatory wash basin, as applicable.

NOTE: This is to prevent the cleaner from overflowing into the forward most galley sink or lavatory wash basin when the airplane is nose down.



DO NOT BREATHE THE FUMES FROM THIS MATERIAL. PUT ON A RESPIRATOR WHEN YOU USE THIS MATERIAL. MAKE SURE THAT THERE IS SUFFICIENT AIRFLOW. THIS MATERIAL CAN CAUSE INJURIES TO PERSONNEL OR DAMAGE TO EQUIPMENT.



DO NOT LET HOT LIQUID GET ON YOU. PUT ON GOGGLES AND OTHER EQUIPMENT FOR PROTECTION. HOT LIQUID CAN CAUSE INJURIES TO PERSONNEL.

- (e) Make the alkaline cleaner solution as follows:

NOTE: The amount required to completely fill the line varies, dependent on airplane configuration and the amount of blockage.

- 1) Add 8 ounces of Turco Altrex 24 Cleaner, B00126 for each gallon of hot water to make the alkaline cleaner solution.

NOTE: The product advised temperature is 120°F (49°C) to 160°F (71°C).

NOTE: Heating the liquid will cause strong odors and require special handling to avoid burns. Closed containers are recommended.

- a) Forward gray water drain: 10 gal (38 l) (approximate).
- b) Aft gray water drain: 10 gal (38 l) (approximate).

- (f) Use the optional acetic acid, B00636 cleaner, at full strength.

- 1) Put the required amount of acetic acid, B00636 into containers.

NOTE: The amount required to completely fill the line varies, dependent on airplane configuration and the amount of blockage.

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- a) Forward gray water drain: 10 gal (38 l) (approximate).
- b) Aft gray water drain: 10 gal (38 l) (approximate).



WARNING DO NOT BREATHE THE FUMES FROM THIS MATERIAL. PUT ON A RESPIRATOR WHEN YOU USE THIS MATERIAL. MAKE SURE THAT THERE IS SUFFICIENT AIRFLOW. THIS MATERIAL CAN CAUSE INJURIES TO PERSONNEL OR DAMAGE TO EQUIPMENT.



WARNING DO NOT LET HOT LIQUID GET ON YOU. PUT ON GOGGLES AND OTHER EQUIPMENT FOR PROTECTION. HOT LIQUID CAN CAUSE INJURIES TO PERSONNEL.

- 2) For best results, warm the acetic acid, B00636 acid to a temperature of 160°F (71°C).

NOTE: Heating the liquid will cause strong odors and require special handling to avoid burns. Closed containers are recommended.

- (g) Fill the drain tube with the alkaline cleaner solution or the acetic acid.

NOTE: Both cleaners should not be used together (at the same time).

NOTE: Altrex is a stronger solution than Acetic Acid and generally is most effective on organic clogs. The acetic acid works best on scale or lime clogs.

- 1) Monitor the other sinks on the system for flooding.
- (h) Keep the drain tube full of the cleaner solution for approximately one hour.
NOTE: Let the cleaner solution soak for the applicable length of time. Use your experience to adjust the length of time.
- (i) Open the drain valve on the waste water drain mast plug, SPL-1951, or remove the tool from the drain mast and drain the cleaner solution from the drain tubes.
- (j) Reconnect the lower lobe fwd and aft galley chiller drain(s) by doing these steps:
 - 1) Remove the temporary cap.
 - 2) Make sure that the O-ring (NAS1611-015) on the connection is serviceable.
 - 3) Re-connect the flexible hose from the galley chiller drain to the horizontal drain tube, using the clamp.
 - 4) Do this task: Bulk Cargo Compartment Aft End Wall Installation, TASK 25-52-19-400-801.
 - 5) If necessary, remove the large cargo door safety barrier, SPL-1988.
- (k) Remove the safety tags and close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

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J. Procedure 5

SUBTASK 38-31-00-160-001

- (1) Do the steps that follow to remove the section of the drain tube that you think is clogged.

NOTE: You will usually find the blockage at one of these locations: - The elbow fitting below the sink

- The drain tubes in the area of the drain mast
- The "Y" fittings where the drain tubes connect.

- (a) Do the applicable steps to get access to the drain lines:

- 1) Do this task: Sidewall Liner Removal, TASK 25-52-06-000-801.
- 2) Do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.
- 3) Do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.
- 4) Do this task: Ceiling Liner Removal, TASK 25-52-09-000-801.

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
H	1	C30402	WATER DRAIN LINE HEATING FWD
J	13	C30500	DRAIN MAST HTRS GND

ARO 001

L	3	C30422	DRAIN MAST HTRS FLS

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L	9	C30403	WATER DRAIN LINE HEATING AFT

- (c) If the drain tube has heater tape on it, do this task: Gray Water Drain Line Hose Heater Removal, TASK 30-71-02-000-801.
- (d) Remove the clamps and fasteners for the drain tube, do this task: Gray Water Tube - Maintenance Practice, TASK 38-31-00-910-810.
- (e) Remove the drain tube.
- (f) Blow the blockage out of the drain tube with air.



DO NOT LET TOOLS OR PARTS TOUCH THE ELECTRICAL COMPONENTS ON THE APU START RELAY. THE APU START RELAY CAN HAVE HIGH VOLTAGE, IF TOOLS OR PARTS TOUCH THE TERMINALS OF THE RELAY, ELECTRICAL ARCING CAN OCCUR. DAMAGE TO EQUIPMENT OR INJURIES TO PERSONS CAN OCCUR.

- (g) If it is necessary, use a plumbers snake, STD-1174 to remove the blockage from the drain tube.
- (h) Clean the drain tube with the alkaline cleaner.
- (i) Install the drain tube.
- (j) If the drain tube has a heater tape on it, do this task: Gray Water Drain Line Hose Heater Installation, TASK 30-71-02-400-801.

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K. Put the Airplane Back to Its Usual Condition.

SUBTASK 38-31-00-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do the applicable steps to complete this task:
- (a) Do this task: Sidewall Liner Installation, TASK 25-52-06-400-801.
 - (b) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.
 - (c) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.
 - (d) Do this task: Ceiling Liner - Installation, TASK 25-52-09-400-801.
 - (e) Install the strainer, if it was removed for this procedure.

SUBTASK 38-31-00-860-001

- (2) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
H	1	C30402	WATER DRAIN LINE HEATING FWD
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS
ARO ALL			
L	9	C30403	WATER DRAIN LINE HEATING AFT

————— **END OF TASK** —————

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DRAIN MAST - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the forward drain mast.
- (2) An installation of the forward drain mast.
- (3) A removal of the aft drain mast.
- (4) An installation of the aft drain mast.

TASK 38-31-01-000-801

2. Forward Drain Mast Removal

(Figure 401)

A. Location Zones

<u>Zone</u>	<u>Area</u>

191	Forward Wing-to-Body Fairings, Left

B. Access Panels

<u>Number</u>	<u>Name/Location</u>

195BL	ECS High Pressure Connection Door

C. Prepare for the Removal

SUBTASK 38-31-01-010-001

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>

195BL	ECS High Pressure Connection Door

to get access to the forward drain mast.

SUBTASK 38-31-01-860-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

J	13	C30500	DRAIN MAST HTRS GND

ARO 001

L	3	C30422	DRAIN MAST HTRS FLS

ARO ALL

D. Forward Drain Mast Removal

SUBTASK 38-31-01-020-022

- (1) COMPOSITE DRAIN MAST;

Remove the nut [11], lock washer [12] and washer [13] to disconnect the ground connection [2], bonding jumper [16], and switch [15] from the clamp [14].

SUBTASK 38-31-01-020-001

- (2) Loosen the clamp [7] to disconnect the hose assembly [6] from the forward drain.

SUBTASK 38-31-01-020-002

- (3) Remove the wire ties to release the wires for the drain mast heaters [1].

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SUBTASK 38-31-01-020-003

- (4) Disconnect the electrical splice connections to the drain mast heaters [1].

SUBTASK 38-31-01-020-004

- (5) ALUMINUM DRAIN MAST;

Remove the screw [3], nut [5] and washers [4] that attach the ground connection [2] and bonding jumper [17] to structure.

SUBTASK 38-31-01-020-026

- (6) COMPOSITE DRAIN MAST;

If the composite mast will be replaced with an aluminum mast do the following steps:

- (a) Remove the screw [3], nut [5] and washers [4] that attach the bonding jumper [16] and bonding jumper [17] to structure.
- (b) Retain the screw [3], nut [5], washers [4] and bonding jumper [16].

NOTE: The bonding jumper and attaching parts should be retained for any future composite mast installation.

SUBTASK 38-31-01-020-023

- (7) Remove the nut [42], screw [44], washer [43], clamp [41] and clamp [40].

SUBTASK 38-31-01-020-005

- (8) Remove the bolts [10] that attach the forward drain mast assembly [9] to the structure.

SUBTASK 38-31-01-020-006

- (9) Remove the forward drain mast assembly [9].

SUBTASK 38-31-01-020-007

- (10) DRAIN MASTS 5E2675-11, 478W1610-8 OR 478W1610-9

Remove the rigid seal [8] from the forward drain mast assembly [9].

————— END OF TASK —————

TASK 38-31-01-400-801

3. Forward Drain Mast Installation

(Figure 401)

A. References

Reference	Title
20-10-22 P/B 701	METAL SURFACES - CLEANING/PAINTING
20-10-22-110-801	Remove Paint from Metal Surfaces with Lacquer Thinner or Solvent (P/B 701)
20-30-90 P/B 201	AIRPLANE STRUCTURE CLEANING SOLVENTS (Series 90) - MAINTENANCE PRACTICES
24-22-00-860-805	Supply Electrical Power (P/B 201)
30-71-00-720-801	Drain Mast and Gray Water Drain Line Heaters Operational Test (P/B 501)
51-31-01-390-805	Fastener Seal Application (P/B 201)
51-31-01-390-806	Aerodynamic Smoother Application (P/B 201)

B. Tools/Equipment

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

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Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 260 Supplier: 55026 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A00900	Sealant - Silicone, RTV - Dow Corning 93-006-1RF (Formerly 93-006-1. Use until Stock depleted)	
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
A50142	Sealant - Fuel Tank	BMS5-45 Class B-1/2
B01010	Final Cleaning Before Non-Structural Bonding To Solvent Resistant Organic Coatings - Series 90	

D. Location Zones

Zone	Area
191	Forward Wing-to-Body Fairings, Left

E. Access Panels

Number	Name/Location
195BL	ECS High Pressure Connection Door

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F. Prepare for Installation

SUBTASK 38-31-01-860-010

- (1) Check the drain mast installation for the correct ground path configuration.

NOTE: Aluminum drain masts are conditionally interchangeable with composite drain masts. Composite masts, require a 135A bonding jumper grounded to structure for lightning strike protection. A bonding jumper can be installed per Service Bulletin 30-0014 or 30-0022.

- (a) For composite mast installations, check for 135A bonding jumper grounded to structure.
- (b) Install the bonding jumper to structure if necessary.

NOTE: The initial installation of the bonding jumper must be done with SB 30-0014 or SB 30-0022. Subsequent removal and installation of the bonding jumper can be completed with these instructions.

- 1) For initial installation of the bonding jumper, install with SB 30-0014 or SB 30-0022.
- 2) For subsequent installation of the bonding jumper, do these steps:
 - a) Clean the faying surfaces of the structure, and the bonding jumper terminals for electrical bonding following standard practices (METAL SURFACES - CLEANING/PAINTING, PAGEBLOCK 20-10-22/701).
 - b) Install the screw [3], washers [4], nut [5], bonding jumper [16], and bonding jumper [17] to the structure.
 - c) Tighten the nut [5] to 25 in-lb (3 N·m) - 38 in-lb (4 N·m).
 - d) Check that the resistance between the bonding jumper [16] terminal and the structure does not exceed 1. milliohms. Use the intrinsically safe approved bonding meter, COM-1550, or equivalent.
 - e) Apply the sealant, A50142 to cover screw [3], washers [4], nut [5], bonding jumper [16] terminal, and bonding jumper [17] terminal.

G. Forward Drain Mast Installation

SUBTASK 38-31-01-390-001



DO NOT GET SOLVENTS IN YOUR MOUTH, YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE DANGEROUS MATERIALS. SOLVENTS CAN BE FLAMMABLE. OBEY THE MATERIAL SAFETY DATA SHEETS (MSDS) FOR SOLVENTS. OBEY LOCAL REGULATIONS FOR THE CORRECT PROCEDURES TO USE OR DISCARD SOLVENTS. SOLVENTS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Clean the mounting surface with Series 90 solvent, B01010, AIRPLANE STRUCTURE CLEANING SOLVENTS (Series 90) - MAINTENANCE PRACTICES, PAGEBLOCK 20-30-90/201 following standard practices Remove Paint from Metal Surfaces with Lacquer Thinner or Solvent, TASK 20-10-22-110-801.

SUBTASK 38-31-01-420-001

- (2) DRAIN MASTS 5E2675-11, 478W1610-8 OR 478W1610-9;
Install the seal [8] on the forward drain mast assembly [9].

- (a) Make sure the seal is installed with the flat side toward the drain mast.

NOTE: The seal is marked with THIS SIDE TO MATE-UP WITH WING DRAIN MAST EXTENSION or THIS SIDE TO MATE-UP WITH DRAIN MAST FLANGE.

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SUBTASK 38-31-01-390-008

- (3) Apply sealant to threaded end of the bolts [10] using Fastener Sealing for Corrosion Prevention Procedure 3, Fastener Seal Application, TASK 51-31-01-390-805.

SUBTASK 38-31-01-390-009

- (4) ALUMINUM DRAIN MASTS;

Install bolts [10] (wet) with sealant, A00247 using Fastener Sealing for Corrosion Prevention Procedure 2, Fastener Seal Application, TASK 51-31-01-390-805.

SUBTASK 38-31-01-420-002

- (5) Put the forward drain mast assembly [9] in its position.

SUBTASK 38-31-01-420-003

- (6) Loosely install the bolts [10] for the forward drain mast assembly [9].

SUBTASK 38-31-01-420-004

- (7) Tighten the bolts [10] for the forward drain mast assembly [9] as follows:

- (a) DRAIN MASTS 478W1610-6, 478W1610-7, 5E2675-7;

Tighten the bolts [10] in a standard cross pattern to snug up, then to 25 $\pm$ 2 in-lb (3 $\pm$ 0 N·m), and then to a final value of 50 $\pm$ 2 in-lb (6 $\pm$ 1 N·m)

- (b) DRAIN MASTS 478W1610-8, 478W1610-9, 5E2675-11;

Tighten the bolts [10] using the run-out torque until the bolts are seated, then in a standard cross pattern to increase the torque in 10 in-lb (1 N·m) increments until an additional 50 in-lb (6 N·m) has been accomplished.

NOTE: The final torque may vary as the run-out torque can be different for each self-locking nutplate. The final torque will be the run-out value plus 50 in-lb (6 N·m).

SUBTASK 38-31-01-390-007

- (8) Apply the aerodynamic seal with sealant, A02315 to the area around the base of the drain mast and to the installation grooves on the surfaces of the forward drain mast (Aerodynamic Smoother Application, TASK 51-31-01-390-806).

- (9) Apply Dow Corning 93-006-1 RF sealant, A00900 to fill the area around the drain tube.

- (a) Completely plug the entire hole cavity.

- (b) Make sure you do not put sealant inside the drain mast extension.

SUBTASK 38-31-01-420-006

- (10) Install the clamp [7] and the hose assembly [6] to the forward drain mast assembly [9].

SUBTASK 38-31-01-420-017

- (11) Loosely install the nut [42], screw [44], washer [43], wire retaining clamp [41] and clamp [40].

SUBTASK 38-31-01-420-005

- (12) ALUMINUM DRAIN MAST;

Install the screw [3], nut [5] and washers [4] to attach the ground connection [2] and bonding jumper [17] to structure.

- (a) Clean the faying surfaces of the structure, and the bonding jumper terminals for electrical bonding following standard practices (METAL SURFACES - CLEANING/PAINTING, PAGEBLOCK 20-10-22/701).

- (b) Tighten the nut [5] to 25 in-lb (3 N·m) - 38 in-lb (4 N·m)

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SUBTASK 38-31-01-420-015

(13) COMPOSITE DRAIN MAST;

Install the thermostat switch [15], bonding jumper [16], and the ground connection [2] to the clamp [14] with the lock washer [12], washer [13], and nut [11] at the top of the drain tube.

- (a) Make sure the thermostat switch does not touch the hose.
- (b) Tighten nut [11] 18 ft-lb (24 N·m)-25 ft-lb (34 N·m).

SUBTASK 38-31-01-020-024

(14) ALUMINUM DRAIN MAST;

Loosen the thermostat switch [15] and attaching hardware and move to the top of the drain tube.

- (a) Make sure the thermostat switch does not touch the hose.
- (b) Tighten nut [11] 18 ft-lb (24 N·m)-25 ft-lb (34 N·m).

SUBTASK 38-31-01-420-016

(15) Move the wire retaining clamp [41], clamp [40] up the tube to provide as much room as possible for the sealant.

- (a) Make sure the wires do not touch the airplane structure.
- (b) Tighten the nut [42], screw [44] and washer [43].

SUBTASK 38-31-01-420-018

(16) Connect the electrical splice connections to the drain mast heaters [1].

SUBTASK 38-31-01-420-021

(17) Install the wire ties for the wires of the drain mast heaters [1].

SUBTASK 38-31-01-200-001

(18) Do an electrical resistance test of the drain mast.

(a) ALUMINUM DRAIN MAST;

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain tube and structure of the airplane does not exceed .03 ohms.

(b) COMPOSITE DRAIN MAST;

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain mast tube and the bonding jumper terminal does not exceed 1.5 milliohm.

(c) COMPOSITE DRAIN MAST;

With a digital/analog multimeter, COM-1793, check that resistance between the unpainted area around the mounting bolts on the mast and the structure of the airplane does not exceed 300,000 ohms.

(d) ALUMINUM DRAIN MASTS;

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain hole on the mast and the structure of the airplane does not exceed .10 ohms.

SUBTASK 38-31-01-800-001

(19) ALUMINUM DRAIN MAST;

Apply the sealant, A50142 to cover the ground connection [2] terminal, bonding jumper [17], screw [3], nut [5] and washers [4].

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SUBTASK 38-31-01-390-013

(20) COMPOSITE DRAIN MAST;

Apply the sealant, A50142 to cover the bonding jumper [16] terminal, thermostat switch [15] stud, ground connection [2] terminal, lock washer [12], washer [13], and nut [11].

H. Forward Drain Mast Installation Test

SUBTASK 38-31-01-860-002

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-31-01-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

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SUBTASK 38-31-01-860-003

(3) Open the water faucet for a forward lavatory.

SUBTASK 38-31-01-710-001

(4) Make sure the water flows from the forward drain mast without leakage.

SUBTASK 38-31-01-710-002

(5) To make sure the drain mast heater is in operation, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, TASK 30-71-00-720-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-01-410-001

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
195BL	ECS High Pressure Connection Door

————— **END OF TASK** —————

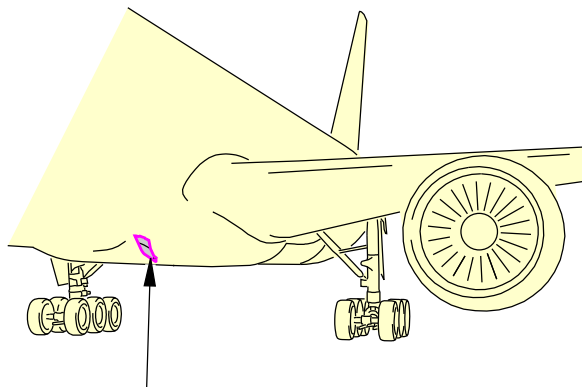
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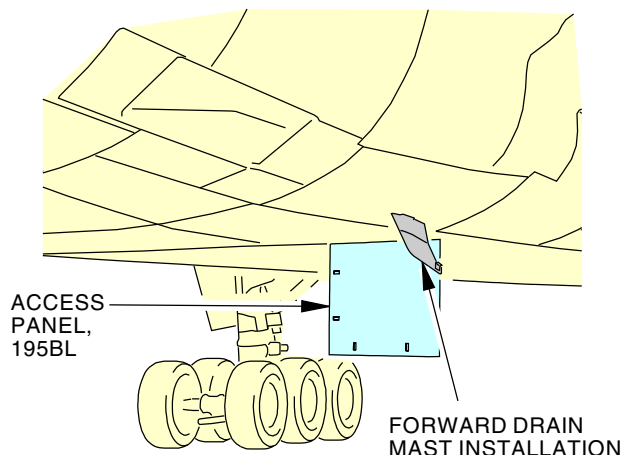
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FORWARD
DRAIN
MAST

A



B

FORWARD DRAIN MAST

A

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Forward Drain Mast Installation
Figure 401/38-31-01-990-803 (Sheet 1 of 3)

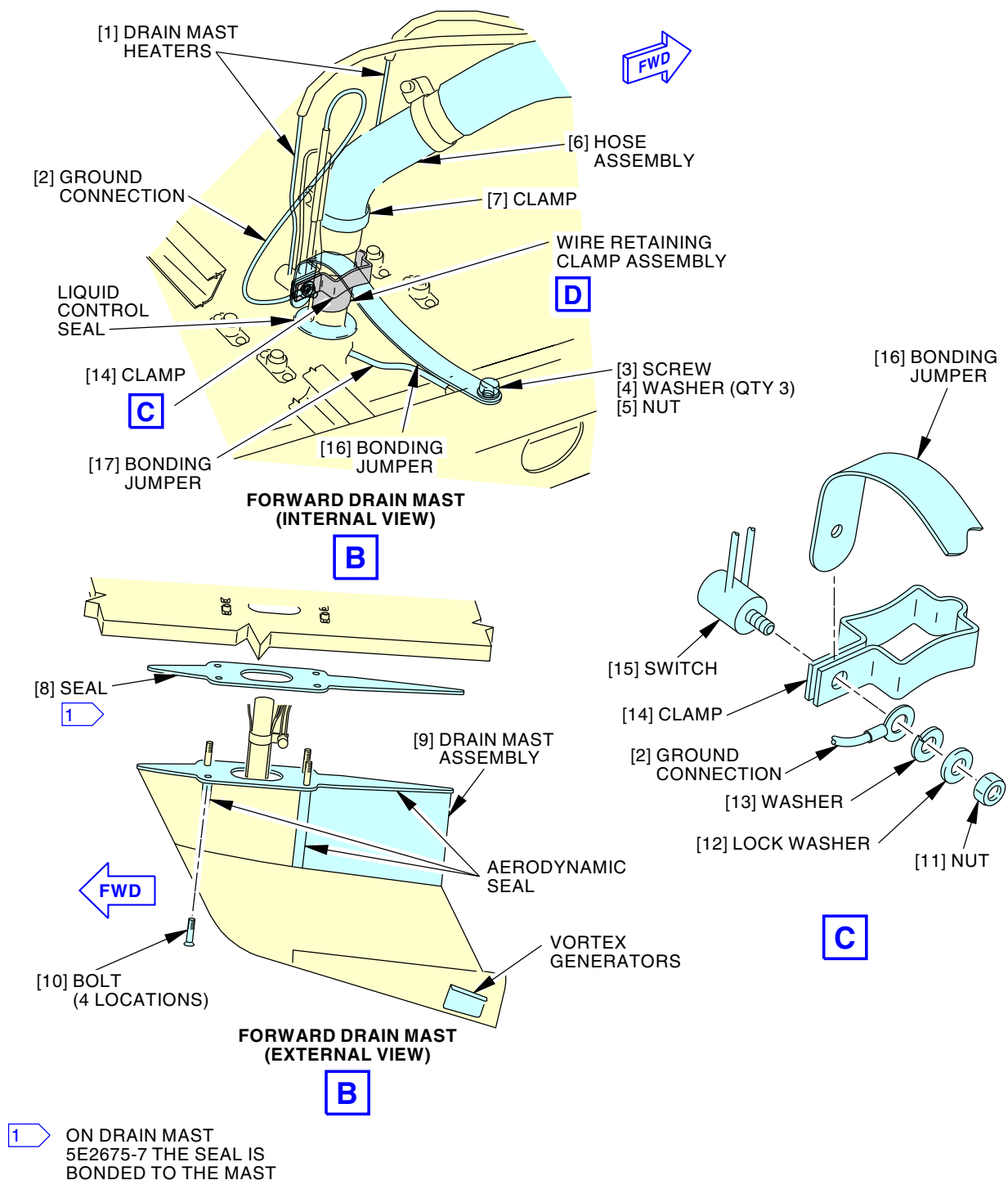
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**Forward Drain Mast Installation
Figure 401/38-31-01-990-803 (Sheet 2 of 3)**

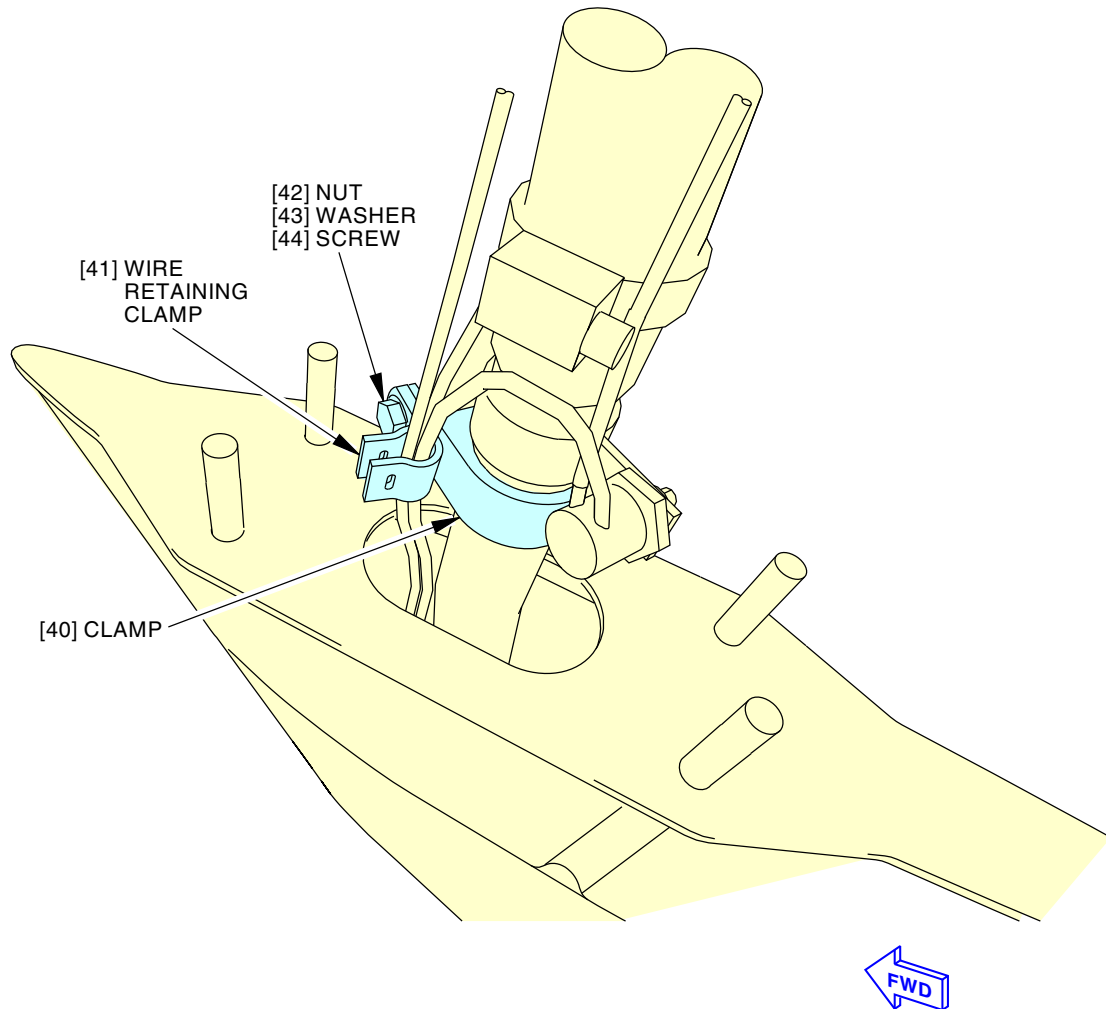
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WIRE RETAINING CLAMP ASSEMBLY

D

1860067 S0000333316_V2

Forward Drain Mast Installation
Figure 401/38-31-01-990-803 (Sheet 3 of 3)

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TASK 38-31-01-000-802

4. Aft Drain Mast Removal

(Figure 402 and Figure 403)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)

B. Location Zones

Zone	Area
153	Area Below Aft Cargo Compartment, Left

C. Prepare for the Removal

SUBTASK 38-31-01-010-002

- (1) Get access to the aft cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-31-01-860-008

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

ARO ALL

D. Aft Drain Mast Removal

SUBTASK 38-31-01-020-015

- (1) ALUMINUM DRAIN MAST;

Remove the nut [32] and washer [33] to disconnect the ground connection [27], bonding jumper [31] and switch [30] from the clamp [26].

SUBTASK 38-31-01-020-020

- (2) COMPOSITE DRAIN MAST WITH CASE GROUND CONNECTION:

Remove the nut [32] and washer [33] to disconnect the ground connection [27], bonding jumper [31] and switch [30] from the clamp [26].

SUBTASK 38-31-01-020-029

- (3) COMPOSITE DRAIN MAST WITHOUT CASE GROUND CONNECTION:

Remove the nut [32] and washer [33] to disconnect the bonding jumper [31] and switch [30] from the clamp [26].

SUBTASK 38-31-01-020-025

- (4) COMPOSITE DRAIN MAST;

If the composite mast will be replaced with an aluminum mast do the following steps:

- (a) Remove the screw [37], nut [35] and washers [36] that attach the bonding jumper [31] to the ground support bracket [38].

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- (b) Retain the screw [37], nut [35], washers [36] and bonding jumper [31].

NOTE: The bonding jumper and attaching parts should be retained for any future composite mast installation.

NOTE: The ground support bracket may be left in place for any future composite mast installation.

SUBTASK 38-31-01-020-013

- (5) Remove the wire ties to release the wires for the drain mast heaters [24].

SUBTASK 38-31-01-020-014

- (6) Disconnect the electrical splice connections to the drain mast heaters [24].

SUBTASK 38-31-01-020-021

- (7) Loosen the hose clamp [45] to disconnect the hose assembly [25] from the aft drain mast assembly [28].

SUBTASK 38-31-01-020-016

- (8) Remove the bolts [29] that attach the aft drain mast assembly [28] to the structure.

SUBTASK 38-31-01-020-017

- (9) Remove the aft drain mast assembly [28].

SUBTASK 38-31-01-020-018

- (10) Remove the seal from the aft drain mast assembly [28].

————— **END OF TASK** —————

TASK 38-31-01-400-802

5. Aft Drain Mast Installation

(Figure 402 and Figure 403)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
20-10-22 P/B 701	METAL SURFACES - CLEANING/PAINTING
20-10-22-110-801	Remove Paint from Metal Surfaces with Lacquer Thinner or Solvent (P/B 701)
20-30-90 P/B 201	AIRPLANE STRUCTURE CLEANING SOLVENTS (Series 90) - MAINTENANCE PRACTICES
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
30-71-00-720-801	Drain Mast and Gray Water Drain Line Heaters Operational Test (P/B 501)
51-31-01-390-805	Fastener Seal Application (P/B 201)

B. Tools/Equipment

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

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Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A01076	Adhesive - Synthetic Rubber	BAC5010 Type 93 (BMS5-95 Class B)
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
A50142	Sealant - Fuel Tank	BMS5-45 Class B-1/2
B01010	Final Cleaning Before Non-Structural Bonding To Solvent Resistant Organic Coatings - Series 90	

D. Location Zones

Zone	Area
153	Area Below Aft Cargo Compartment, Left

E. Prepare for Installation

SUBTASK 38-31-01-860-009

- (1) Check the drain mast installation for the correct ground path configuration.

NOTE: Aluminum drain masts are conditionally interchangeable with composite drain masts. Composite masts, require a 135A bonding jumper and ground support bracket for lightning strike protection. A bonding jumper and ground support bracket can be installed per Service Bulletin 30-0014 or 30-0022.

- (a) For composite mast installations, check for 135A bonding jumper and structure mounted ground support bracket.
- (b) Install a ground support bracket [38] and 135A bonding jumper as necessary.

NOTE: The initial installation of the bonding jumper must be done with SB 30-0014 or SB 30-0022. Subsequent removal and installation of the bonding jumper can be completed with these instructions.

- 1) For initial installation of the bonding jumper, install with SB 30-0014 or SB 30-0022.
- 2) For subsequent installation of the bonding jumper, do these steps:
 - a) Clean the faying surfaces of the structure, and the bonding jumper terminals for electrical bonding following standard practices (METAL SURFACES - CLEANING/PAINTING, PAGEBLOCK 20-10-22/701).
 - b) Install the screw [37], washers [36], nut [35] and bonding jumper [31] to the ground support bracket [38].
 - c) Tighten the nut [35] to 25 in-lb (3 N·m) - 38 in-lb (4 N·m).

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- d) Check that the resistance between the bonding jumper [31] terminal and the ground support bracket [38] does not exceed 1. milliohms. Use the intrinsically safe approved bonding meter, COM-1550, or equivalent.
- e) Apply the adhesive, A01076 or sealant, A50142 to cover screw [37], washers [36], nut [35] and bonding jumper [31] terminal.

F. Aft Drain Mast Installation

SUBTASK 38-31-01-390-004



DO NOT GET SOLVENTS IN YOUR MOUTH, YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE DANGEROUS MATERIALS. SOLVENTS CAN BE FLAMMABLE. OBEY THE MATERIAL SAFETY DATA SHEETS (MSDS) FOR SOLVENTS. OBEY LOCAL REGULATIONS FOR THE CORRECT PROCEDURES TO USE OR DISCARD SOLVENTS. SOLVENTS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Clean the mounting surface with Series 90 solvent, B01010, AIRPLANE STRUCTURE CLEANING SOLVENTS (Series 90) - MAINTENANCE PRACTICES, PAGEBLOCK 20-30-90/201 following standard practices TASK 20-10-22-110-801.

SUBTASK 38-31-01-420-022

- (2) DRAIN MAST 478W1610-5;
Make sure that the seal and adapter plate are installed on the drain mast assembly [28].

SUBTASK 38-31-01-420-008

- (3) Put the aft drain mast assembly [28] in its position.

SUBTASK 38-31-01-390-010

- (4) Apply seal to threaded end of the bolts [29] using Fastener Sealing for Corrosion Prevention Procedure 3, do this task: Fastener Seal Application, TASK 51-31-01-390-805.

SUBTASK 38-31-01-390-011

- (5) ALUMINUM DRAIN MASTS;
Install bolts [29] (wet) with sealant, A00247 using Fastener Sealing for Corrosion Prevention Procedure 2, do this task: Fastener Seal Application, TASK 51-31-01-390-805.

SUBTASK 38-31-01-420-009

- (6) Loosely install the bolts [29] for the aft drain mast assembly [28].

SUBTASK 38-31-01-430-001

- (7) Tighten the bolts [29] in a standard cross pattern to snug up, then to 25 $\pm$ 2 in-lb (3 $\pm$ 0 N·m), and then to a final value of 50 $\pm$ 2 in-lb (6 $\pm$ 1 N·m).

SUBTASK 38-31-01-420-012

- (8) Install the hose clamp [45] and the hose assembly [25] to the aft drain mast assembly [28].

SUBTASK 38-31-01-420-011

- (9) ALUMINUM DRAIN MAST;
Install the switch [30], bonding jumper [31], and ground connection [27], to the clamp [26] with the washer [33], lock washer [34] and nut [32].
 - (a) Clean the faying surfaces of the structure, and the bonding jumper terminals for electrical bonding following standard practices (METAL SURFACES - CLEANING/PAINTING, PAGEBLOCK 20-10-22/701).

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SUBTASK 38-31-01-420-014

(10) COMPOSITE DRAIN MAST WITH CASE GROUND CONNECTION:

Install the switch [30], bonding jumper [31], and ground connection [27], to the clamp [26] with the washer [33], lock washer [34] and nut [32].

SUBTASK 38-31-01-420-023

(11) COMPOSITE DRAIN MAST WITHOUT CASE GROUND CONNECTION:

Install the switch [30], bonding jumper [31], and to the clamp [26] with the washer [33], lock washer [34] and nut [32].

SUBTASK 38-31-01-020-010

(12) Connect the electrical splice connections to the drain mast heaters [24].

SUBTASK 38-31-01-020-011

(13) Install the wire ties to attach the wires for the drain mast heaters [24].

SUBTASK 38-31-01-200-004

(14) Do an electrical resistance test of the drain mast.

(a) ALUMINUM DRAIN MAST;

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain mast tube and structure of the airplane does not exceed .03 ohms.

(b) ALUMINUM DRAIN MASTS;

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain hole on the mast and the structure of the airplane does not exceed .10 ohms.

(c) COMPOSITE DRAIN MAST WITH CASE GROUND CONNECTION:

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain mast tube and the bonding jumper [31] terminal does not exceed 1.5 milliohm. Check that resistance between the drain mast tube ground connection [27] terminal does not exceed 0.5 milliohm.

(d) COMPOSITE DRAIN MAST WITHOUT CASE GROUND CONNECTION:

With an intrinsically safe approved bonding meter, COM-1550, check that resistance between the drain mast tube and the bonding jumper [31] terminal does not exceed 1.5 milliohm.

SUBTASK 38-31-01-390-014

(15) ALUMINUM DRAIN MAST;

Apply the adhesive, A01076 or sealant, A02315 to cover the bonding jumper [31] terminal, thermostat switch [30] stud, ground connection [27] terminal, washer [33], lock washer [34] and nut [32].

SUBTASK 38-31-01-390-015

(16) COMPOSITE DRAIN MAST;

Apply the adhesive, A01076 or sealant, A02315 to cover the bonding jumper [31] terminal, thermostat switch [30] stud, ground connection [27] terminal, washer [33], lock washer [34] and nut [32].

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G. Aft Drain Mast Installation Test

SUBTASK 38-31-01-040-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

ARO ALL

SUBTASK 38-31-01-860-005

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-31-01-860-006

- (3) Open the water faucet for an aft lavatory.

SUBTASK 38-31-01-710-003

- (4) Make sure the water flows from the aft drain mast without leakage.

SUBTASK 38-31-01-710-004

- (5) To make sure the drain mast heater is in operation, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, TASK 30-71-00-720-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-01-410-002



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-31-01-410-003

- (2) Close the access to the aft cargo compartment (TASK 06-46-00-800-801).

————— **END OF TASK** —————

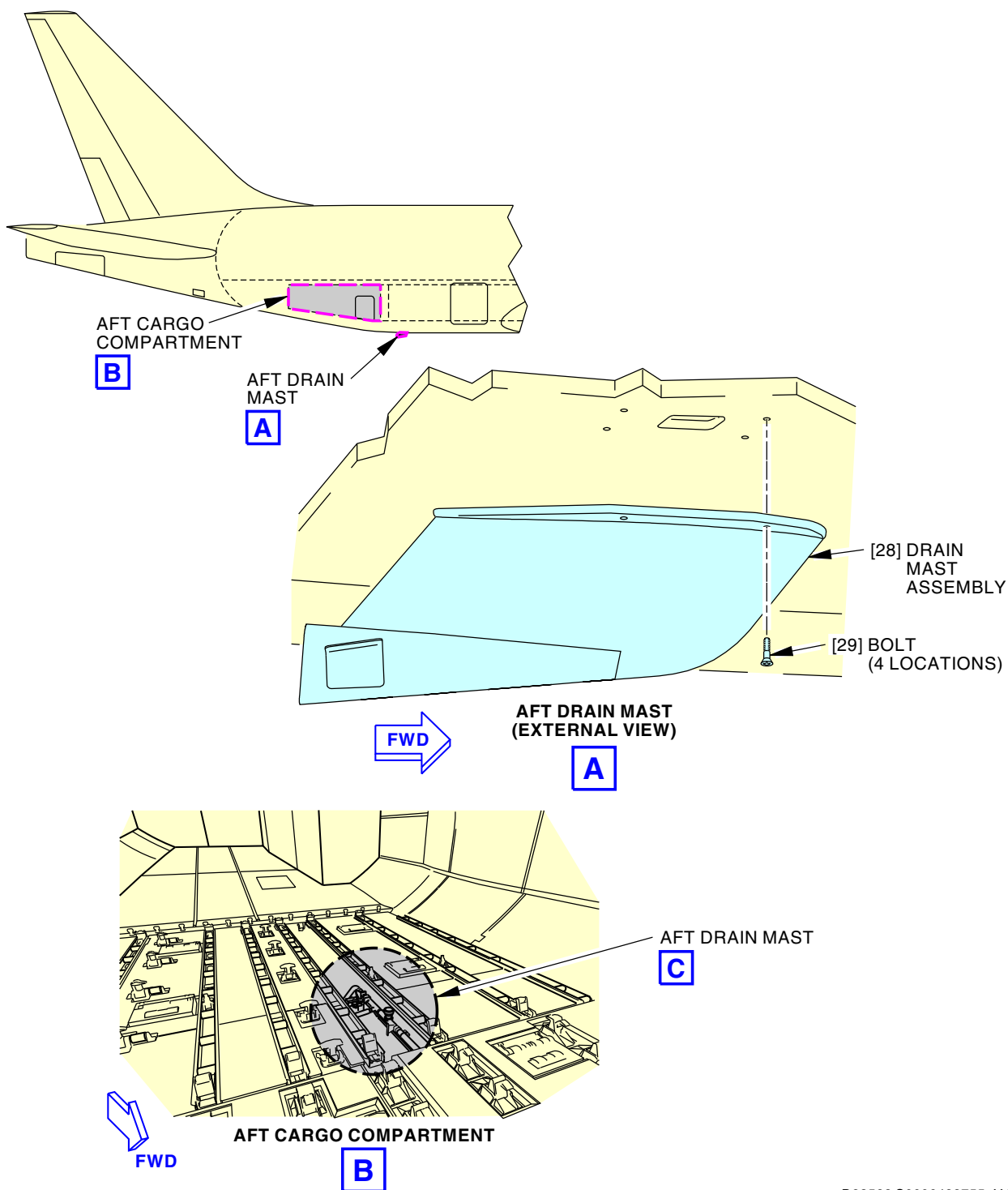
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D23528 S0006422755_V4

**Aft Drain Mast Installation with Case Ground Connection
Figure 402/38-31-01-990-801 (Sheet 1 of 3)**

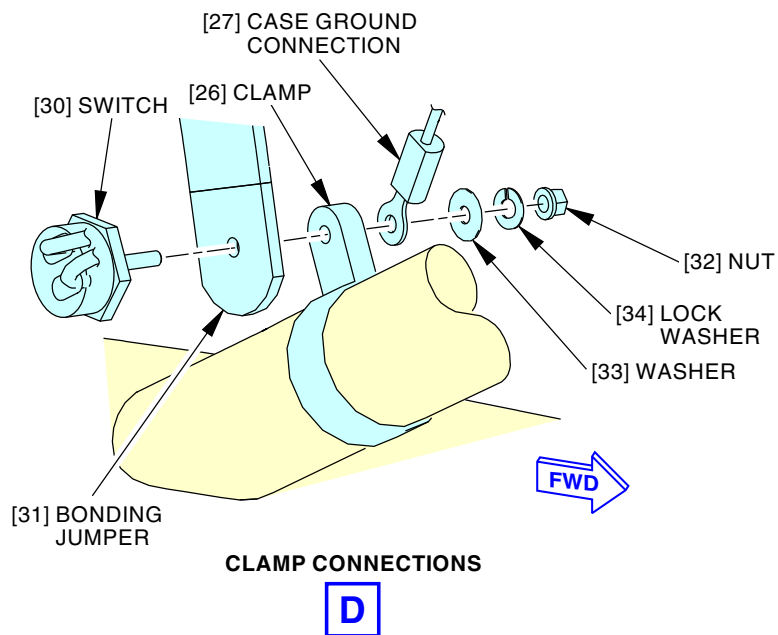
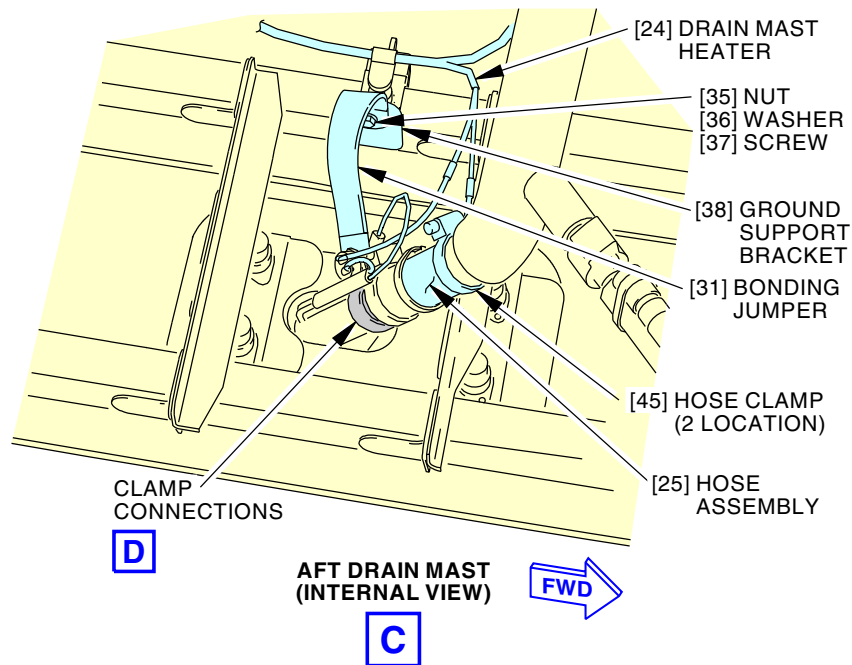
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J65769 S0000175027_V9

Aft Drain Mast Installation with Case Ground Connection
Figure 402/38-31-01-990-801 (Sheet 2 of 3)

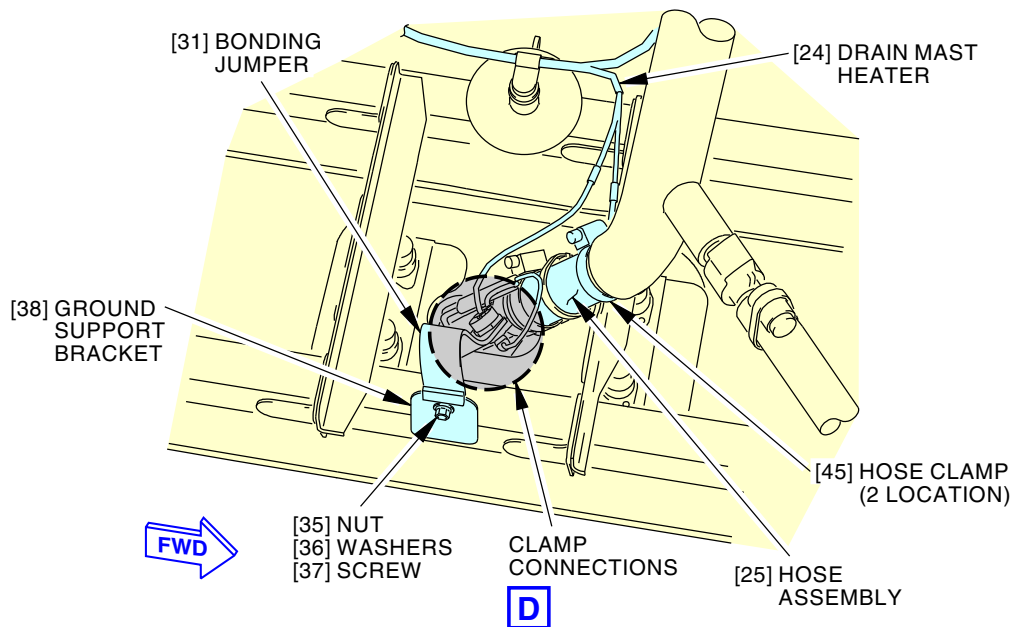
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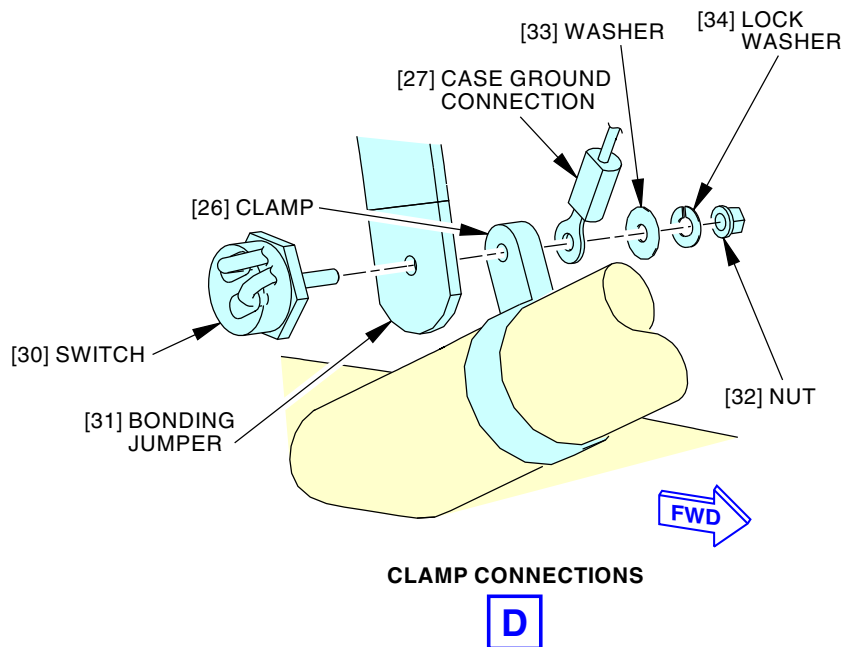
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**AFT DRAIN MAST
(INTERNAL VIEW)**



2283920 S0000516195_V3

**Aft Drain Mast Installation with Case Ground Connection
Figure 402/38-31-01-990-801 (Sheet 3 of 3)**

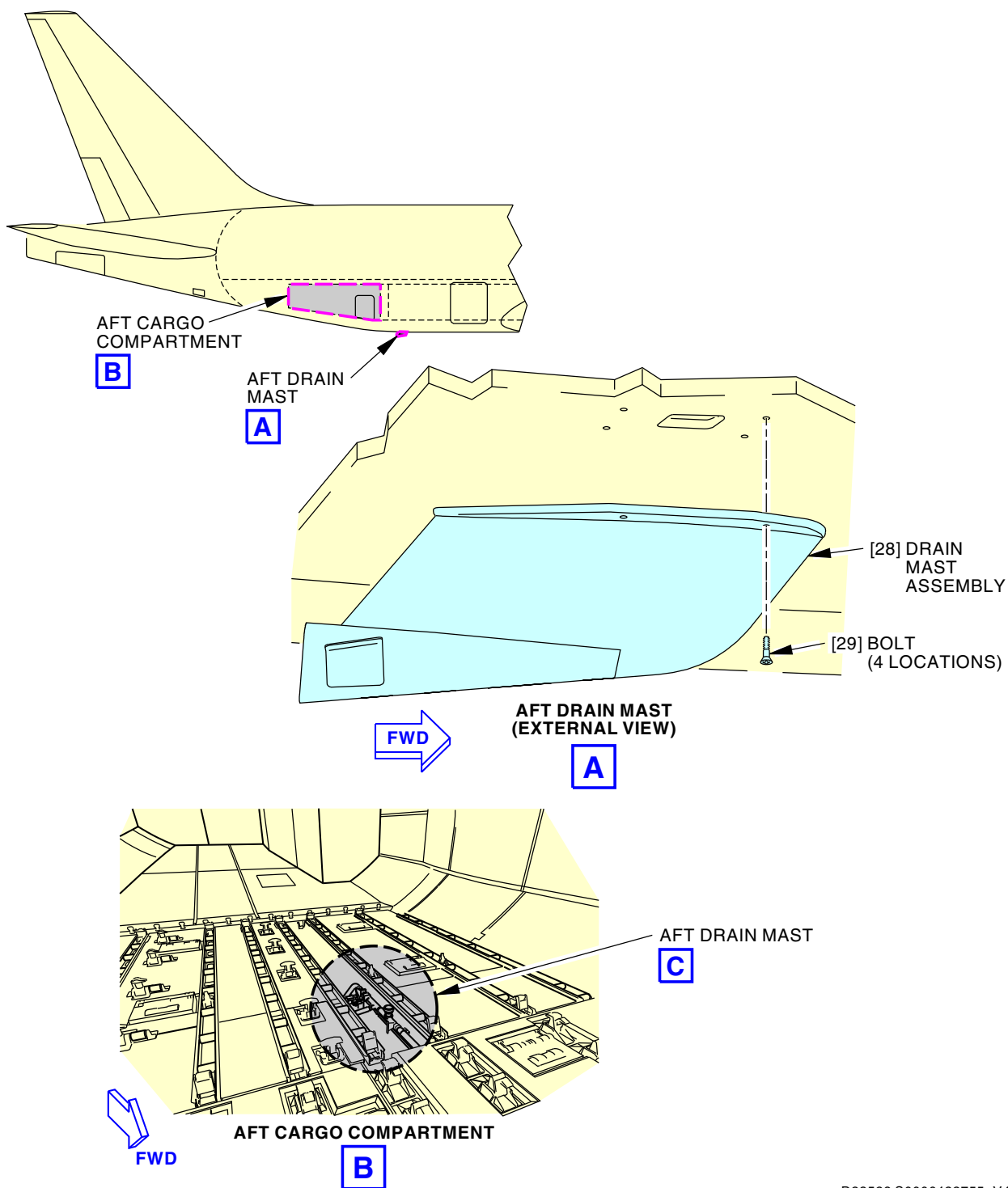
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D23528 S0006422755_V4

**Aft Drain Mast Installation Without Case Ground Connection
Figure 403/38-31-01-990-805 (Sheet 1 of 3)**

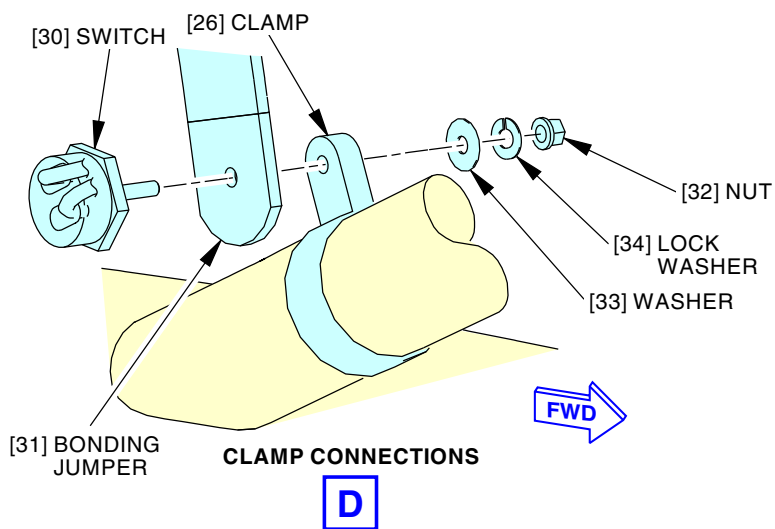
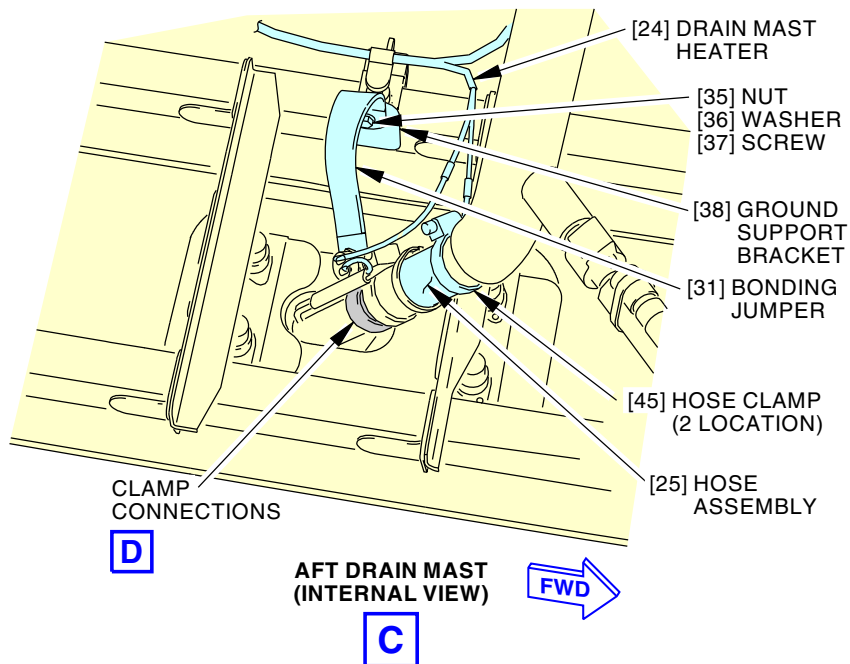
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2791687 S0000635395_V1

**Aft Drain Mast Installation Without Case Ground Connection
Figure 403/38-31-01-990-805 (Sheet 2 of 3)**

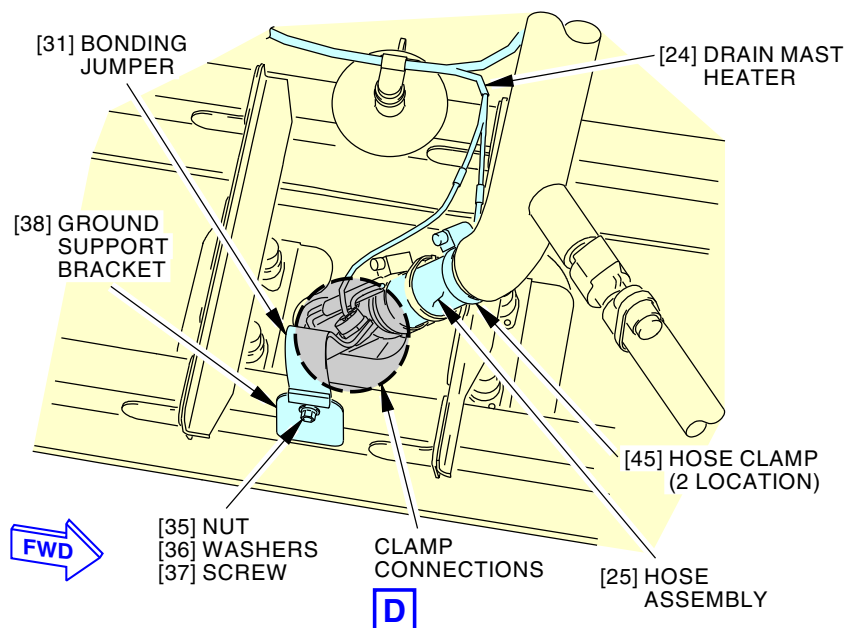
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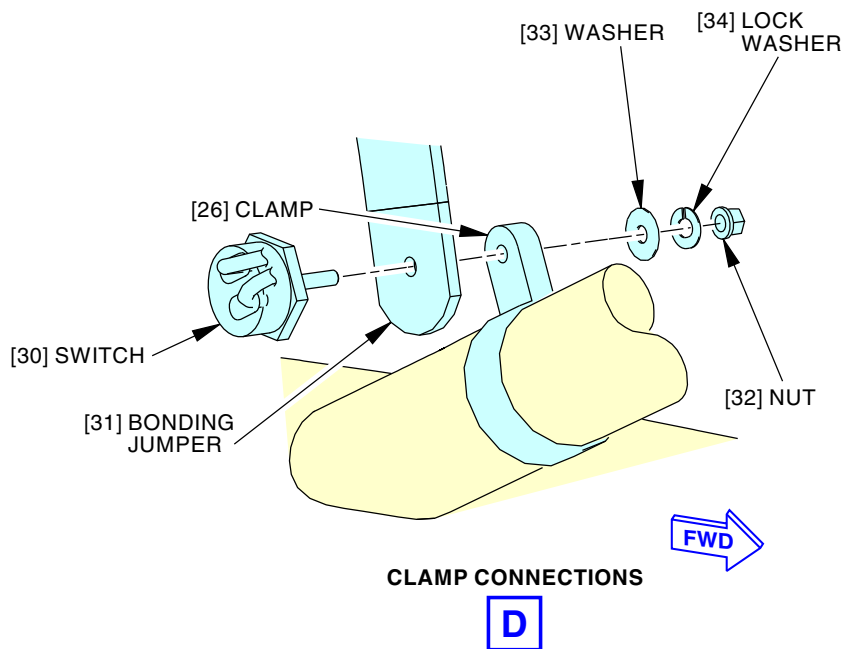
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**AFT DRAIN MAST
(INTERNAL VIEW)**

C



2791689 S0000635396_V1

**Aft Drain Mast Installation Without Case Ground Connection
Figure 403/38-31-01-990-805 (Sheet 3 of 3)**

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GRAY WATER DRAIN RESTRICTOR VALVE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) An activation of the restrictor valve.
- (2) A deactivation of the restrictor valve.
- (3) A removal of the restrictor valve for the forward drain mast.
- (4) An installation of the restrictor valve for the forward drain mast.
- (5) A removal of the restrictor valve for the aft drain mast.
- (6) An installation of the restrictor valve for the aft drain mast.
- (7) A removal of the restrictor valve actuator for the forward drain mast.
- (8) An installation of the restrictor valve actuator for the forward drain mast.
- (9) A removal of the restrictor valve actuator for the aft drain mast.
- (10) An installation of the restrictor valve actuator for the aft drain mast.

TASK 38-31-02-800-801

2. Gray Water Drain Restrictor Valve Deactivation

(Figure 402)

A. General

- (1) There are two restrictor valves; one in the forward drain mast drain line, and one in the aft drain mast drain line. If operators consider freezing of the drain line due to the restrictor valve to be a significant problem, operators can deactivate the restrictor valve, which leaves the restrictor valve open. Either or both valves may be deactivated.

This task has these procedures:

- (a) A deactivation of both restrictor valves (forward and aft).

NOTE: This is done by opening and tagging one circuit breaker.

- (b) A deactivation of the restrictor valve for the forward drain mast only.

NOTE: This is done by disconnecting the wire connector at the valve or the wire at the P210 panel.

- (c) A deactivation of the restrictor valve for the aft drain mast only.

NOTE: This is done by disconnecting the wire connector at the valve or the wire at the P210 panel.

B. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
WDM 38-14-21	Wiring Diagram Manual

C. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left
153	Area Below Aft Cargo Compartment, Left

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D. Procedure to Deactivate both Forward and Aft Restrictor Valves

SUBTASK 38-31-02-040-005

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

NOTE: Removal of the restrictor valve creates the potential for excessive noise due to the additional air flow through the lavatory and galley sink drains.

E. Procedure to Deactivate the Forward Restrictor Valve Only

NOTE: Removal of the restrictor valve creates the potential for excessive noise due to the additional air flow through the lavatory and galley sink drains.

SUBTASK 38-31-02-010-009

- (1) To get access to the forward cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.

SUBTASK 38-31-02-860-013

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-040-006

- (3) To deactivate only the forward restrictor valve, do one of the following two subtasks:

SUBTASK 38-31-02-020-054

- (4) Disconnect the connector at the restrictor valve actuator [1].
 - (a) Get access to the forward cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.
 - (b) To remove the floor panel to get access to the restrictor valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.
 - (c) Disconnect the forward valve electrical connector [8] DV38103 for the motor of the restrictor valve actuator [1].
 - (d) Cap and stow the DV38103 connector.



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (e) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.
- (f) Close the access to the cargo compartment, Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.

SUBTASK 38-31-02-030-001

- (5) Disconnect the wire at the P210 panel.
 - (a) Get access to the Right Power Management Panel, P210.

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- (b) Disconnect wire W4232-0027-20 from pin 27 of connector D21034P at the P210 panel.
- (c) Cap and stow the wire.

SUBTASK 38-31-02-040-007

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

F. Procedure to Deactivate the Aft Restrictor Valve Only

NOTE: Removal of the restrictor valve creates the potential for excessive noise due to the additional air flow through the lavatory and galley sink drains.

SUBTASK 38-31-02-010-010

- (1) Get access to the aft cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.

SUBTASK 38-31-02-860-014

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-040-008

- (3) To deactivate only the aft restrictor valve, do one of the following two subtasks:

SUBTASK 38-31-02-030-002

- (4) Disconnect the connector at the restrictor valve.
 - (a) Get access to the aft cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.
 - (b) To remove the floor panel to get access to the restrictor valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.
 - (c) Disconnect the aft valve electrical connector [8] DV38104 (WDM 38-14-21) for the motor of the restrictor valve tube assembly [4].
 - (d) Cap and stow the DV38104 connector.



WARNING

SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (e) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.
- (f) Close the access to the cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-31-02-030-003

- (5) Disconnect the wire at the P210 panel.
 - (a) Get access to the Right Power Management Panel, P210.
 - (b) Disconnect wire W4232-0150-18 from pin 15 of connector D21034P at the P210 panel.
 - (c) Cap and stow the wire.

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SUBTASK 38-31-02-010-011

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

————— END OF TASK —————

TASK 38-31-02-800-802

3. Gray Water Drain Restrictor Valve Reactivation

(Figure 402)

A. General

- (1) This task has these procedures:
- (a) A reactivation of both restrictor valves (forward and aft).
 - (b) A reactivation of the restrictor valve for the forward drain mast only.
 - (c) A reactivation of the restrictor valve for the aft drain mast only.

B. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
38-31-00-700-801	Drain Mast Restrictor Valve Operational Test (P/B 501)
WDM 38-14-21	Wiring Diagram Manual

C. Procedure to Reactivate both Forward and Aft Restrictor Valves

NOTE: You use this procedure if you deactivated both the forward and aft restrictor valve.

SUBTASK 38-31-02-440-001

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-013

- (2) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

D. Procedure to Reactivate the Forward Restrictor Valve Only

SUBTASK 38-31-02-010-012

- (1) To get access to the forward cargo compartment, do (Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801).

SUBTASK 38-31-02-010-013

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

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SUBTASK 38-31-02-440-002

- (3) To reactivate only the forward restrictor valve, do one of the following two subtasks:

NOTE: You use one of these two subtasks depending on the subtask you used to deactivate the forward restrictor valve.

If you used SUBTASK 38-31-02-020-054 to deactivate the valve at the fwd valve connector, do SUBTASK 38-31-02-430-001 to reactivate.

If you used SUBTASK 38-31-02-030-001 to deactivate the valve at the P210 panel, do SUBTASK 38-31-02-430-002 to reactivate.

SUBTASK 38-31-02-430-001

- (4) Connect the connector at the restrictor valve actuator [1].

NOTE: Do this subtask if you did SUBTASK 38-31-02-020-054 to deactivate the forward restrictor valve.

- (a) Get access to the forward cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.
- (b) To remove the floor panel to get access to the restrictor valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.
- (c) Un-stow and un-cap the DV38103 connector.
- (d) Connect the forward valve electrical connector [8] DV38103 WDM 38-14-21 for the motor of the restrictor valve actuator [1].



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (e) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.
- (f) Close the access to the cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-31-02-430-002

- (5) Connect the wire at the P210 panel.

NOTE: Do this subtask if you did SUBTASK 38-31-02-030-001 to deactivate the forward restrictor valve.

- (a) Get access to the Right Power Management Panel, P210.
- (b) Un-stow and un-cap the wire W4232-0027-20 for pin 27 of connector D21034P at the P210 panel.
- (c) Connect wire W4232-0027-20 to pin 27 of connector D21034P.

SUBTASK 38-31-02-010-014

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-005

- (7) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

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E. Procedure to Reactivate the Aft Restrictor Valve Only

SUBTASK 38-31-02-010-015

- (1) Get access to the aft cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.

SUBTASK 38-31-02-860-015

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-440-003

- (3) To reactivate only the aft restrictor valve, do one of the following two subtasks:

NOTE: You use one of these two subtasks depending on the subtask you used to deactivate the aft restrictor valve.

If you used SUBTASK 38-31-02-030-002 to deactivate the valve at the aft valve connector, do SUBTASK 38-31-02-430-003 to reactivate.

If you used SUBTASK 38-31-02-030-003 to deactivate the valve at the P210 panel, do SUBTASK 38-31-02-430-004 to reactivate.

SUBTASK 38-31-02-430-003

- (4) Connect the connector at the restrictor valve actuator [1].

NOTE: Do this subtask if you did SUBTASK 38-31-02-030-002 to deactivate the forward restrictor valve

- (a) Get access to the aft cargo compartment, do this task: Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.
- (b) To remove the floor panel to get access to the restrictor valve, do this task: Floor Panels and Walkways Removal, TASK 25-52-10-000-801.
- (c) Un-stow and un-cap the DV38104 connector.
- (d) Connect the aft valve electrical connector [8] DV38104 (WDM 38-14-21) for the motor of the restrictor valve actuator [1].



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN CAUSE INJURIES.

- (e) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.
- (f) Close the access to the cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-31-02-430-004

- (5) Connect the wire at the P210 panel.

NOTE: Do this subtask if you did SUBTASK 38-31-02-030-003 to deactivate the forward restrictor valve

- (a) Get access to the Right Power Management Panel, P210.
- (b) Un-stow and un-cap the wire W4232-0150-18 for pin 15 of connector D21034P at the P210 panel.
- (c) Connect wire W4232-0150-18 to pin 15 of connector D21034P.

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SUBTASK 38-31-02-860-016

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

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-006

- (7) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

————— END OF TASK —————

TASK 38-31-02-000-801

4. Forward Gray Water Drain Restrictor Valve Removal

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
123	Area Below Forward Cargo Compartment, Left

C. Prepare for the Removal

SUBTASK 38-31-02-010-001

- (1) To get access to the forward cargo compartment, refer to (TASK 06-46-00-800-801).

SUBTASK 38-31-02-010-018

- (2) To remove the floor panel to get access to the restrictor valve, refer to (Floor Panels and Walkways Removal, TASK 25-52-10-000-801).

SUBTASK 38-31-02-860-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
L	9	C38614	DRAIN LINE VALVES

D. Forward Gray Water Drain Restrictor Valve Removal

SUBTASK 38-31-02-020-001

- (1) Disconnect the electrical connector [5] for the heated tube assembly [6].

SUBTASK 38-31-02-020-002

- (2) Remove the wire ties to release the wires for the heated tube assembly [6].

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SUBTASK 38-31-02-020-003

- (3) Disconnect the electrical connector [9] for the motor of the restrictor valve tube assembly [4].

SUBTASK 38-31-02-020-033

- (4) Do one of the two steps that follow to disconnect the thermostat [30]:
- (a) Remove the nut [31] and washer [32] that attach the thermostat [30] to the bracket [37].
 - (b) Disconnect the electrical connections for the thermostat [30] at the splices.

SUBTASK 38-31-02-020-004

- (5) Remove the coupling [2], sleeve [21] and packings [3] to disconnect the heated tube assembly [6] from the restrictor valve tube assembly [4].
- (a) Discard the packings [3].

SUBTASK 38-31-02-020-005

- (6) Remove the coupling [2], sleeve [21] and packings [3] to disconnect the hose assembly [1] from the restrictor valve tube assembly [4].
- (a) Discard the packings [3].

SUBTASK 38-31-02-020-006

- (7) Remove the screws [7] and washers [8] that attach the restrictor valve tube assembly [4] to the structure.

SUBTASK 38-31-02-020-007

- (8) Remove the restrictor valve tube assembly [4].

SUBTASK 38-31-02-020-060

- (9) If necessary, remove the heated tube assembly for the disassembly of the restrictor valve (Figure 401).
- (a) Remove the tape [46] from the heated tube assembly.
 - 1) Discard the tape [46].
 - (b) Remove and keep the insulation blanket [45] from the heated tube assembly.
 - (c) Remove the clamp [40] from the heated tube assembly.
 - 1) Remove the nut [41], screw [38], washers [39] and the bonding jumper from the heated tube assembly.
 - (d) Remove and keep the heater assembly [44] from the heated tube assembly.

————— END OF TASK —————

TASK 38-31-02-400-801

5. Forward Gray Water Drain Restrictor Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-22 P/B 701	METAL SURFACES - CLEANING/PAINTING
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
30-71-00-720-805	Drain Line Heaters Test (P/B 501)
38-31-00-700-801	Drain Mast Restrictor Valve Operational Test (P/B 501)

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B. Tools/Equipment

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

Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650
G50099	Tape - Pressure Sensitive Insulation Cover Splicing - 78-C or 70-1C or OT?49W	BMS5-149 Type XI Class 1 Grade C Form I

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Packing	38-31-53-81-255	ARO 001-005
30	Thermostat	30-71-08-81-110	ARO 001-005

E. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left

F. Forward Gray Water Drain Restrictor Valve Installation

SUBTASK 38-31-02-420-007

- (1) If removed, install the heated tube assembly to assemble the restrictor valve.
 - (a) Make sure that the heater assembly [44] is installed on the heated tube assembly with the flow marker [43] pointing in the direction of flow.
 - (b) Install the clamp [40] on the tube assembly.
 - 1) Clean the mating surfaces of the clamp [40] and the bonding jumper terminal for electrical bonding, refer to METAL SURFACES - CLEANING/PAINTING, PAGEBLOCK 20-10-22/701.
 - 2) Install the clamp [40], bonding jumper, screw [38], washers [39] and nut [41] to the structure.
 - 3) Tighten the nut [41] to 25 in-lb (3 N·m)-38 in-lb (4 N·m).
 - 4) Measure the bonding resistance between the ground stud and the heated tube assembly with an intrinsically safe approved bonding meter, COM-1550.
 - a) Make sure that the bonding resistance from the ground stud to the heated tube assembly is 0.005 ohm (5 milliohm) or less.
 - 5) Make sure that there is a 0.50 in. (13 mm) clearance between the clamp assembly and any electrical component.

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- (c) Install the insulation blanket [45] on the heated tube assembly.
- (d) Install the new tape [46] (78-C or 70-1C tape, G50099) on the heated tube assembly.

SUBTASK 38-31-02-020-008

- (2) Put the restrictor valve tube assembly [4] in its position.

SUBTASK 38-31-02-020-009

- (3) Install the screws [7] and washers [8] that attach the restrictor valve tube assembly [4] to the structure.

SUBTASK 38-31-02-020-031

- (4) Apply grease, D00463 or Molykote 111 Compound, D00189 to the packings [3] and sleeves [21] for the connections to the restrictor valve tube assembly [4].

SUBTASK 38-31-02-020-010

- (5) Install the coupling [2], sleeve [21] and packings [3] to connect the hose assembly [1] to the restrictor valve tube assembly [4].

SUBTASK 38-31-02-020-011

- (6) Install the clamshell coupling [2], sleeve [21] and packings [3] to connect the heated tube assembly [6] to the restrictor valve tube assembly [4].

SUBTASK 38-31-02-420-001

- (7) Do one of the two steps that follow to connect the thermostat [30]:
 - (a) Install the nut [31] and washer [32] to attach the thermostat [30] and bracket [37].

NOTE: If the thermostat [30] is not vertical, move the clamp [33], screw [34], nut [36] and washer [35] until the thermostat [30] is in the vertical position.
 - (b) Connect the electrical connections for the thermostat [30] at the splices.

SUBTASK 38-31-02-020-012

- (8) Connect the electrical connector [5] for the heated tube assembly [6].

SUBTASK 38-31-02-020-013

- (9) Connect the electrical connector [9] for the motor of the restrictor valve tube assembly [4].

SUBTASK 38-31-02-020-014

- (10) Install the wire ties to attach the wires for the heated tube assembly [6].

G. Forward Gray Water Drain Restrictor Valve Installation Test

SUBTASK 38-31-02-040-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-007

- (2) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

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SUBTASK 38-31-02-710-003

- (3) To make sure that the heaters for the gray water drain are in operation, do this task: Drain Line Heaters Test, TASK 30-71-00-720-805.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-02-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Install the floor panel that was removed for the access, refer to Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-31-02-410-002

- (2) Close the access to the cargo compartment.

————— END OF TASK —————

TASK 38-31-02-000-802

6. Aft Gray Water Drain Restrictor Valve Removal

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-10-000-801	Floor Panels and Walkways Removal (P/B 401)

B. Location Zones

Zone	Area
153	Area Below Aft Cargo Compartment, Left

C. Prepare for the Removal

SUBTASK 38-31-02-010-003

- (1) Get access to the aft cargo compartment, refer to Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors, TASK 06-46-00-800-801.

SUBTASK 38-31-02-010-019

- (2) To remove the floor panel to get access to the restrictor valve, refer to Floor Panels and Walkways Removal, TASK 25-52-10-000-801.

SUBTASK 38-31-02-860-005

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

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ARO 001 (Continued)

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

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L	9	C38614	DRAIN LINE VALVES

D. Aft Gray Water Drain Restrictor Valve Removal

SUBTASK 38-31-02-020-015

- (1) Disconnect the electrical connector [16] for the heated tube assembly [17].

SUBTASK 38-31-02-020-016

- (2) Remove the wire ties to release the wires for the heated tube assembly [17].

SUBTASK 38-31-02-020-017

- (3) Disconnect the electrical connector [18] for the motor of the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-018

- (4) Remove the coupling [11], sleeve [22] and packings [12] to disconnect the heated tube assembly [17] from the restrictor valve tube assembly [13].

- (a) Discard the packings [12].

SUBTASK 38-31-02-020-019

- (5) Remove the coupling [11], sleeve [22] and packings [12] to disconnect the hose assembly [10] from the restrictor valve tube assembly [13].

- (a) Discard the packings [12].

SUBTASK 38-31-02-020-020

- (6) Remove the coupling [11], sleeve [22] and packings [12] to disconnect the hose assembly [19] from the restrictor valve tube assembly [13].

- (a) Discard the packings [12].

SUBTASK 38-31-02-020-021

- (7) Remove the screws [14], screws [20] and washers [15] that attach the restrictor valve tube assembly [13] to the structure.

SUBTASK 38-31-02-020-022

- (8) Remove the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-062

- (9) If necessary, remove the heated tube assembly for the disassembly of the restrictor valve (Figure 401).

- (a) Remove the tape [46] from the heated tube assembly.

- 1) Discard the tape [46].

- (b) Remove and keep the insulation blanket [45] from the heated tube assembly.

- (c) Remove the clamp [40] from the heated tube assembly.

- 1) Remove the nut [41], screw [38], washers [39] and the bonding jumper from the heated tube assembly.

- (d) Remove and keep the heater assembly [44] from the heated tube assembly.

————— **END OF TASK** —————

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TASK 38-31-02-400-802

7. Aft Gray Water Drain Restrictor Valve Installation

(Figure 401)

A. References

Reference	Title
20-10-22 P/B 701	METAL SURFACES - CLEANING/PAINTING
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
30-71-00-720-805	Drain Line Heaters Test (P/B 501)
38-31-00-700-801	Drain Mast Restrictor Valve Operational Test (P/B 501)

B. Tools/Equipment

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

Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17

C. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650
G50099	Tape - Pressure Sensitive Insulation Cover Splicing - 78-C or 70-1C or OT?49W	BMS5-149 Type XI Class 1 Grade C Form I

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
12	Packing	30-71-05-21-205	ARO ALL
		30-71-05-21-240	ARO ALL

E. Location Zones

Zone	Area
151	Aft Cargo Compartment, Left

F. Aft Gray Water Drain Restrictor Valve Installation

SUBTASK 38-31-02-420-008

- (1) If removed, install the heated tube assembly to assemble the restrictor valve.
 - (a) Make sure that the heater assembly [44] is installed on the heated tube assembly with the flow marker [43] pointing in the direction of flow.
 - (b) Install the clamp [40] on the tube assembly.

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- 1) Clean the mating surfaces of the clamp [40] and the bonding jumper terminal for electrical bonding, refer to METAL SURFACES - CLEANING/PAINTING, PAGEBLOCK 20-10-22/701.
 - 2) Install the clamp [40], bonding jumper, screw [38], washers [39] and nut [41] to the structure.
 - 3) Tighten the nut [41] to 25 in-lb (3 N·m)-38 in-lb (4 N·m).
 - 4) Measure the bonding resistance between the ground stud and the heated tube assembly with an intrinsically safe approved bonding meter, COM-1550.
 - a) Make sure that the bonding resistance from the ground stud to the heated tube assembly is 0.005 ohm (5 milliohm) or less.
 - 5) Make sure that there is a 0.50 in. (13 mm) clearance between the clamp assembly and any electrical component.
- (c) Install the insulation blanket [45] on the heated tube assembly.
- (d) Install the new tape [46] (78-C or 70-1C tape, G50099) on the heated tube assembly.

SUBTASK 38-31-02-020-023

- (2) Put the restrictor valve tube assembly [13] in its position.

SUBTASK 38-31-02-020-024

- (3) Install the screws [14], screws [20] and washers [15] that attach the restrictor valve tube assembly [13] to the structure.

SUBTASK 38-31-02-020-032

- (4) Apply grease, D00463 or Molykote 111 Compound, D00189 to the new packings [12] and sleeves [22] for the connections to the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-025

- (5) Install the coupling [11], sleeve [22] and packings [12] to connect the hose assembly [10] to the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-026

- (6) Install the coupling [11], sleeve [22] and packings [12] to connect the hose assembly [19] to the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-027

- (7) Install the coupling [11], sleeve [22] and packings [12] to connect the heated tube assembly [17] to the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-028

- (8) Connect the electrical connector [16] for the heated tube assembly [17].

SUBTASK 38-31-02-020-029

- (9) Connect the electrical connector [18] for the motor of the restrictor valve tube assembly [13].

SUBTASK 38-31-02-020-030

- (10) Install the wire ties to attach the wires for the heated tube assembly [17].

G. Aft Gray Water Drain Restrictor Valve Installation Test

SUBTASK 38-31-02-040-002

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-008

- (2) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

SUBTASK 38-31-02-710-004

- (3) To make sure that the heaters for the gray water drain are in operation, do this task: Drain Line Heaters Test, TASK 30-71-00-720-805.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-02-410-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Install the floor panel that was removed for access, refer to Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-31-02-410-004

- (2) Close the access to the cargo compartment.

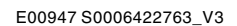
————— **END OF TASK** —————

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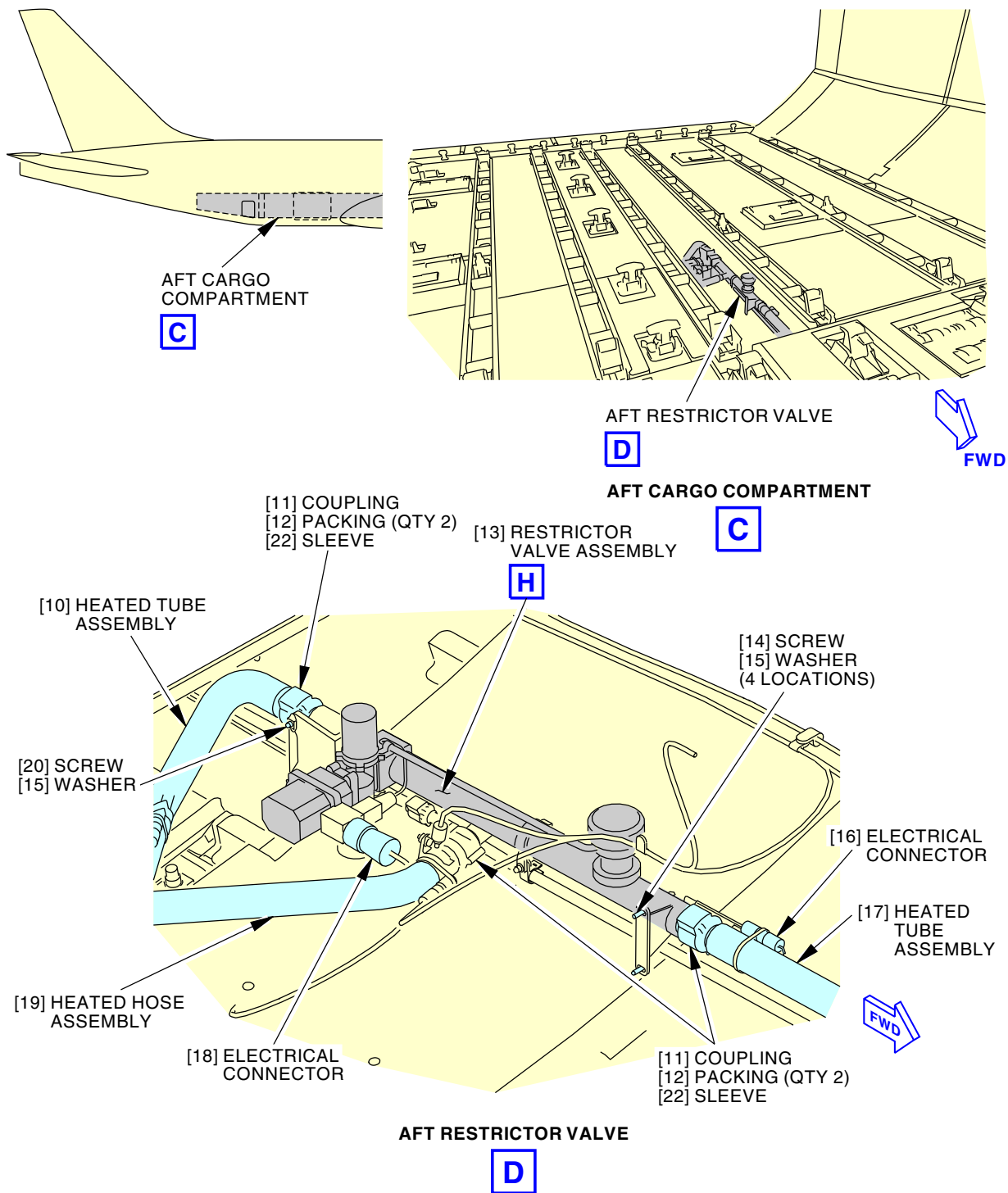
Gray Water Drain Restrictor Valve Installation

Figure 401/38-31-02-990-801 (Sheet 1 of 4)

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E00937 S0006422764_V3

**Gray Water Drain Restrictor Valve Installation
Figure 401/38-31-02-990-801 (Sheet 2 of 4)**

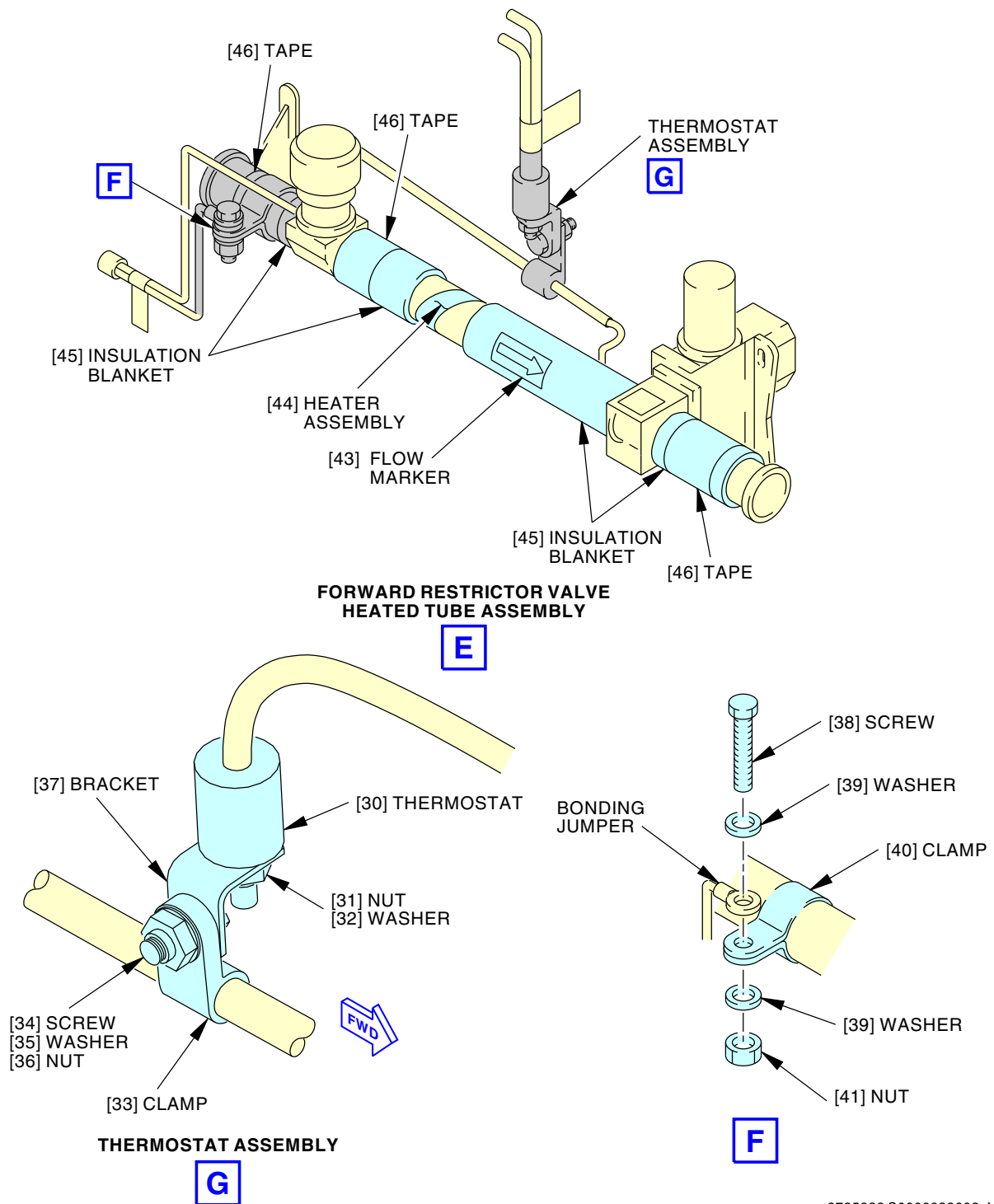
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2785832 S0000632602_V1

**Gray Water Drain Restrictor Valve Installation
Figure 401/38-31-02-990-801 (Sheet 3 of 4)**

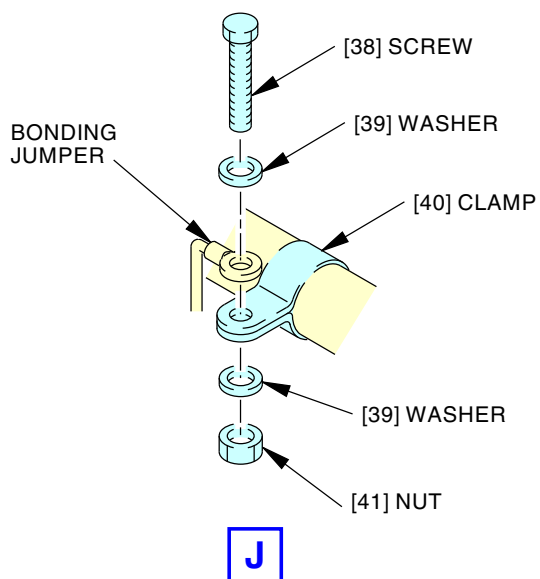
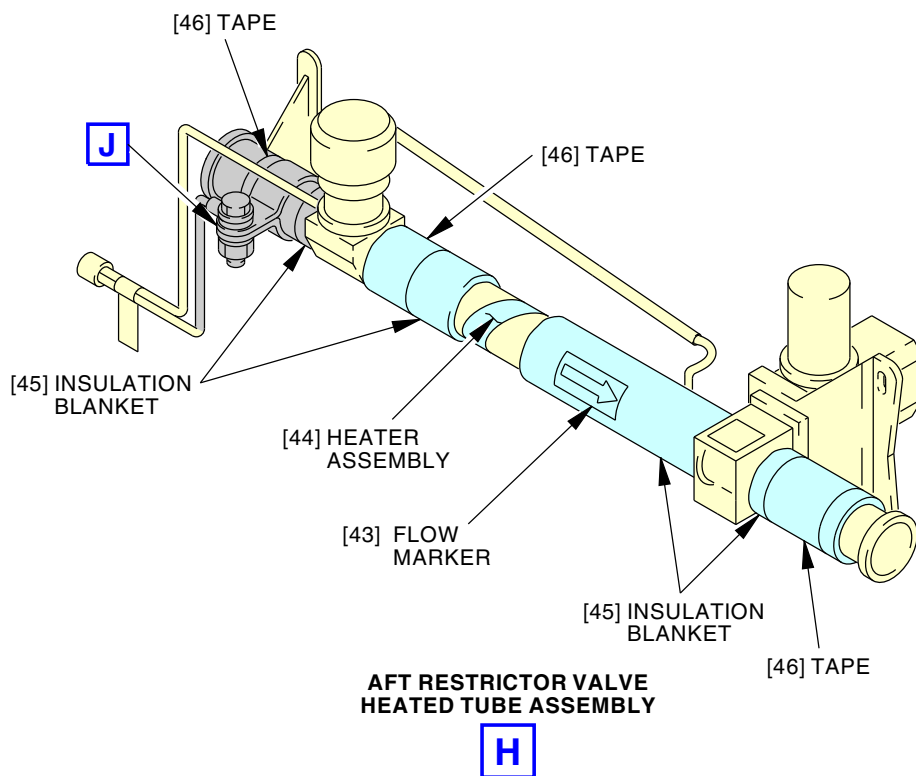
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2785833 S0000632603_V1

**Gray Water Drain Restrictor Valve Installation
Figure 401/38-31-02-990-801 (Sheet 4 of 4)**

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TASK 38-31-02-000-803

8. **Forward Gray Water Drain Restrictor Valve Actuator Removal**

(Figure 402)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)

B. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left

C. Prepare for the Removal

SUBTASK 38-31-02-010-005

- (1) To get access to the forward cargo compartment, (TASK 06-46-00-800-801).

SUBTASK 38-31-02-860-009

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
H	1	C30402	WATER DRAIN LINE HEATING FWD
J	13	C30500	DRAIN MAST HTRS GND

ARO 001

L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

Row	Col	Number	Name
ARO ALL			
L	9	C38614	DRAIN LINE VALVES

D. Forward Gray Water Drain Restrictor Valve Actuator Removal

SUBTASK 38-31-02-020-034

- (1) Disconnect electrical connector [8].

SUBTASK 38-31-02-020-035

- (2) Disconnect the remote pressure switch connector [7] from the actuator [1].

SUBTASK 38-31-02-020-036

- (3) Carefully depress spring [4] to release the cable [6] from the crank arm [5].

SUBTASK 38-31-02-020-037

- (4) Remove and retain the screws [2] and washers [3].

SUBTASK 38-31-02-020-038

- (5) Remove the actuator [1].

————— **END OF TASK** —————

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TASK 38-31-02-400-803

9. Forward Gray Water Drain Restrictor Valve Actuator Installation

(Figure 402)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
30-71-00-720-805	Drain Line Heaters Test (P/B 501)
38-31-00-700-801	Drain Mast Restrictor Valve Operational Test (P/B 501)

B. Location Zones

Zone	Area
123	Area Below Forward Cargo Compartment, Left

C. Forward Gray Water Drain Restrictor Valve Actuator Installation

SUBTASK 38-31-02-020-039

- (1) Put the restrictor valve actuator [1] in its position.

SUBTASK 38-31-02-020-040

- (2) Install the screws [2] and washers [3].

SUBTASK 38-31-02-020-041

- (3) Carefully depress spring [4] and attach cable [6] to the crank arm [5].

SUBTASK 38-31-02-020-042

- (4) Connect the remote pressure switch connector [7] to the actuator [1].

SUBTASK 38-31-02-020-043

- (5) Attach electrical connector [8].

D. Forward Gray Water Drain Restrictor Valve Actuator Installation Test

SUBTASK 38-31-02-040-003

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
H	1	C30402	WATER DRAIN LINE HEATING FWD
J	13	C30500	DRAIN MAST HTRS GND

ARO 001

L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

Row	Col	Number	Name
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-009

- (2) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

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SUBTASK 38-31-02-710-010

- (3) To make sure the heaters for the gray water drain are in operation, do this task: Drain Line Heaters Test, TASK 30-71-00-720-805.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-02-410-005



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-31-02-860-010

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-31-02-410-006

- (3) Close the access to the cargo compartment (TASK 06-46-00-800-801).

————— END OF TASK —————

TASK 38-31-02-000-804

10. Aft Gray Water Drain Restrictor Valve Actuator Removal

(Figure 402)

A. References

Reference	Title
24-22-00-860-806	Remove Electrical Power (P/B 201)

B. Location Zones

Zone	Area
153	Area Below Aft Cargo Compartment, Left

C. Prepare for the Removal

SUBTASK 38-31-02-010-007

- (1) Get access to the aft cargo compartment, do this task: Remove Electrical Power, TASK 24-22-00-860-806.

SUBTASK 38-31-02-860-011

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

Row	Col	Number	Name
ARO ALL			
L	9	C38614	DRAIN LINE VALVES

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D. Aft Gray Water Drain Restrictor Valve Actuator Removal

SUBTASK 38-31-02-020-044

- (1) Disconnect electrical connector [8].

SUBTASK 38-31-02-020-045

- (2) Disconnect the remote pressure switch connector [7] from the actuator [1].

SUBTASK 38-31-02-020-046

- (3) Carefully depress spring [4] to release the cable [6] from the crank arm [5].

SUBTASK 38-31-02-020-047

- (4) Remove and retain the screws [2] and washers [3].

SUBTASK 38-31-02-020-048

- (5) Remove the actuator [5].

————— END OF TASK —————

TASK 38-31-02-400-804

11. Aft Gray Water Drain Restrictor Valve Actuator Installation

(Figure 402)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-10-400-801	Floor Panels and Walkways Installation (P/B 401)
30-71-00-720-805	Drain Line Heaters Test (P/B 501)
38-31-00-700-801	Drain Mast Restrictor Valve Operational Test (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Actuator	38-31-02-81-055	ARO 001-005

C. Location Zones

Zone	Area
151	Aft Cargo Compartment, Left

D. Aft Gray Water Drain Restrictor Valve Actuator Installation

SUBTASK 38-31-02-020-049

- (1) Put the restrictor valve actuator [1] in its position.

SUBTASK 38-31-02-020-050

- (2) Install the screws [2] and washers [3].

SUBTASK 38-31-02-020-051

- (3) Carefully depress spring [4] and attach cable [6] to the crank arm [5].

SUBTASK 38-31-02-020-052

- (4) Connect the remote pressure switch connector [7] to the actuator [1].

SUBTASK 38-31-02-020-053

- (5) Attach electrical connector [8].

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E. Aft Gray Water Drain Restrictor Valve Actuator Test

SUBTASK 38-31-02-040-004

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	13	C30500	DRAIN MAST HTRS GND
ARO 001			
L	3	C30422	DRAIN MAST HTRS FLS

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
L	9	C38614	DRAIN LINE VALVES

SUBTASK 38-31-02-710-011

- (2) Do this task: Drain Mast Restrictor Valve Operational Test, TASK 38-31-00-700-801.

SUBTASK 38-31-02-710-012

- (3) To make sure the heaters for the gray water drain are in operation, do this task: Drain Line Heaters Test, TASK 30-71-00-720-805.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-31-02-860-012

- (1) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-31-02-410-007



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Floor Panels and Walkways Installation, TASK 25-52-10-400-801.

SUBTASK 38-31-02-410-008

- (3) Close the access to the cargo compartment (TASK 06-46-00-800-801).

————— END OF TASK —————

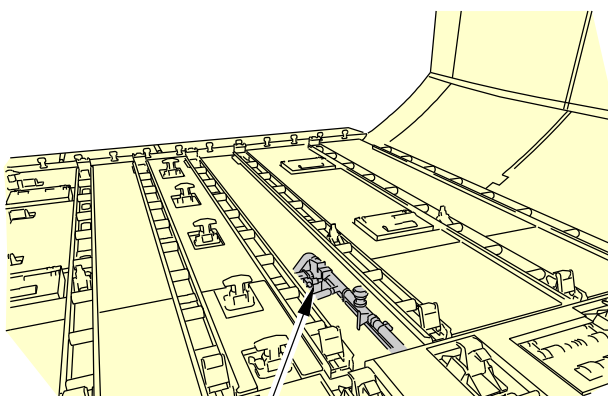
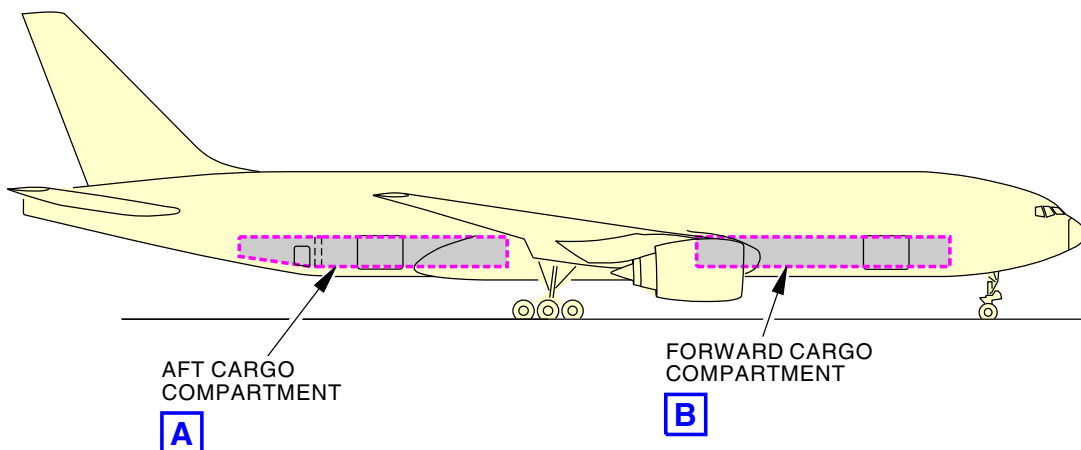
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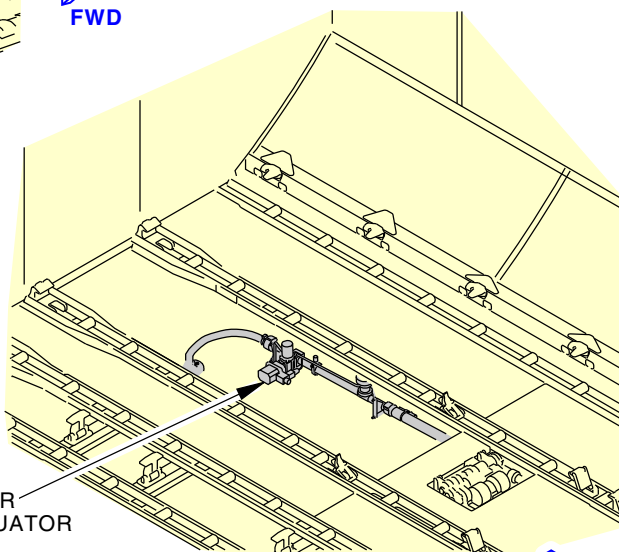


RESTRICTOR
VALVE ACTUATOR

C

AFT CARGO COMPARTMENT

A



RESTRICTOR
VALVE ACTUATOR

C

FORWARD CARGO COMPARTMENT

B



N36668 S0006422770_V2

Gray Water Drain Restrictor Valve Actuator Installation
Figure 402/38-31-02-990-802 (Sheet 1 of 2)

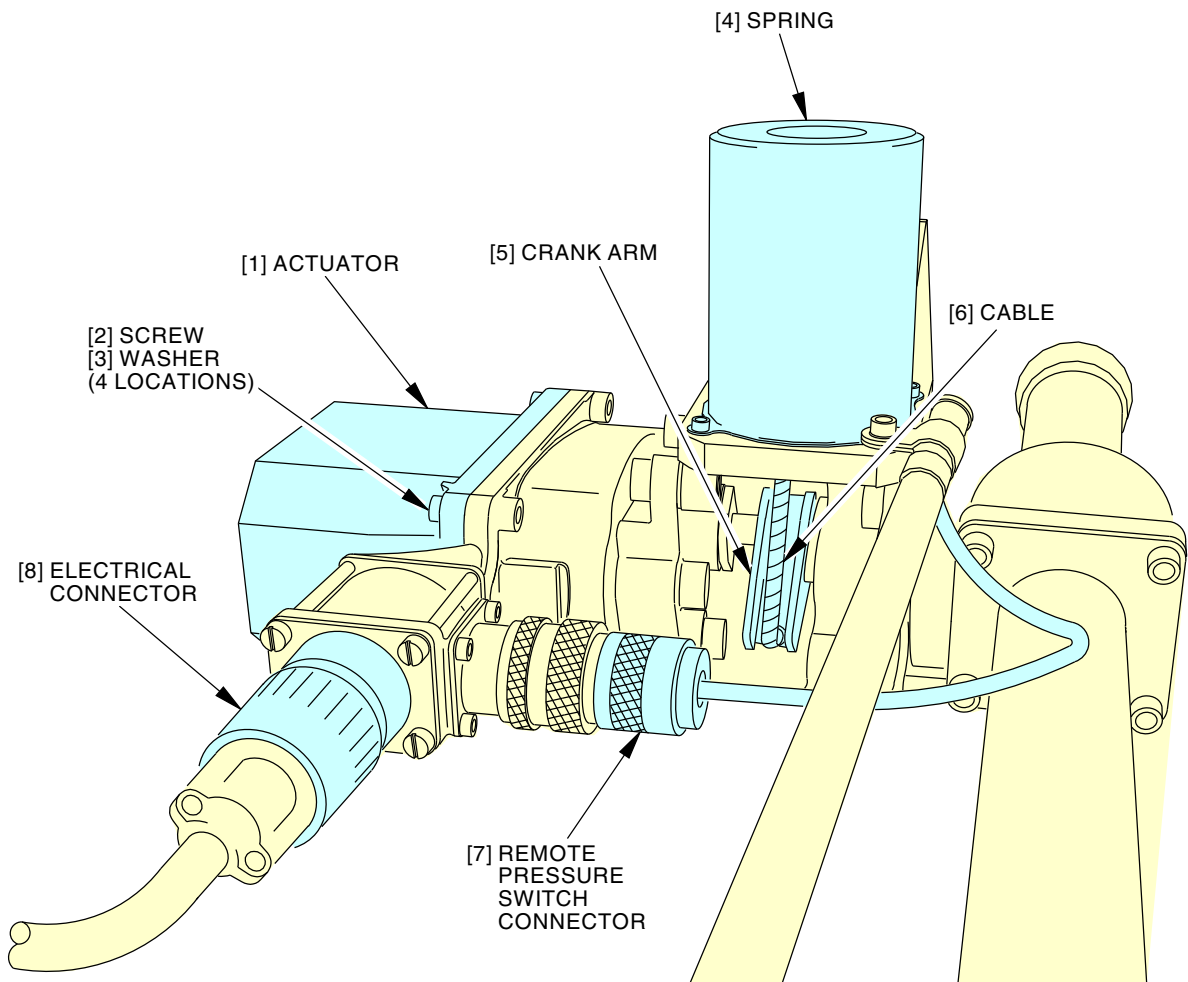
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**RESTRICTOR VALVE ACTUATOR
(EXAMPLE)**

C

N36693 S0006422771_V2

**Gray Water Drain Restrictor Valve Actuator Installation
Figure 402/38-31-02-990-802 (Sheet 2 of 2)**

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VACUUM WASTE SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:



WARNING

FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF THE PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.



WARNING

DO NOT TOUCH THE TOILET COMPONENTS OR MOVE OR SEND THEM TO A DIFFERENT LOCATION UNTIL THEY ARE CLEAN. DIRTY TOILET COMPONENTS CAN CAUSE ILLNESS AND INJURIES TO PERSONNEL.

- (1) Standard Practices for Work with the Toilet Waste and Equipment

NOTE: Refer to the general process manual of your airline for the necessary materials and instructions.

- (2) A removal of a blockage from the toilet.

NOTE: This task is for a blockage that is upstream of the toilet flush valve.

- (3) A removal of a blockage from the vacuum waste lines.

NOTE: This task is for a blockage that is between the toilet flush valve and the waste tank.

- (4) A removal of a blockage from the drain lines for the waste tanks from inside the airplane.

NOTE: This task is for a blockage that is between the waste tank and the service panel for the waste tank.

- (5) A deactivation of the toilet.

- (6) An activation of the toilet.

- (7) An inspection of the vacuum lines to isolate a blockage.

- (8) A task to open the toilet flush valve during the maintenance of the toilet.

NOTE: This task is for a blockage of the toilet or the toilet flush valve.

- (9) A test of the vacuum pressure in the waste system.

NOTE: Use this task when you think there is leakage of the vacuum waste system.

- (10) A removal of a blockage from the drain lines for the waste tanks from outside the airplane.

NOTE: This task is for a blockage that is between the waste tank and the service panel for the waste tank.

- (11) A deactivation of the vacuum waste system.

- (12) An activation of the vacuum waste system.

B. There are three different waste systems. Each waste system has one waste tank. The lavatory to waste tank connections can be determined by the placard data on the waste tanks.



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TASK 38-32-00-910-801

2. Standard Practices for Work with the Toilet Waste and Equipment

NOTE: IF YOU OPERATE THE VACUUM WASTE SYSTEM IN HANGER AREAS, ATTACH VENTING EQUIPMENT TO THE VACUUM SYSTEM EXHAUST TO REMOVE THE EXHAUST FROM PERSONNEL AND THE HANGER AREAS.

A. General

- (1) You must obey the procedures of the local areas when you do work with the toilet waste and toilet waste equipment.
- (2) Special procedures are given for work on the equipment that follows:
 - (a) The toilet assembly
 - (b) The vacuum waste lines
 - (c) The waste tanks
 - (d) The waste drain ball valves

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)

C. Tools/Equipment

Reference	Description
STD-419	Gloves - Rubber, Elbow Length
STD-1136	Facepiece (Mask) - Particulate Filtering, Disposable (NIOSH N95 approved)
STD-1137	Glasses - Safety
STD-1138	Tubing - Flexible, 1.5 Inch Outside Diameter

D. Consumable Materials

Reference	Description	Specification
G02315	Clothing - Disposable Gown, Gloves For Sewage Handling	

E. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

F. Procedure

SUBTASK 38-32-00-910-001

- (1) If you do work or do servicing on the waste equipment, make sure you wear the items for your protection.

NOTE: These are items that you can wear to give you protection when it is necessary.

- elbow length rubber gloves, STD-419
- filtering facepiece, STD-1136
- safety glasses, STD-1137
- clothing, G02315.

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SUBTASK 38-32-00-910-002

- (2) You must not put contamination on other areas after you touch the toilet waste equipment that has contamination.

SUBTASK 38-32-00-910-003

- (3) Make sure you remove the items you wear that have contamination before you do a different task.

SUBTASK 38-32-00-910-004

- (4) If you remove an item with toilet waste contamination, use an approved antibacterial material.

SUBTASK 38-32-00-910-005

- (5) Apply the antibacterial material with a spray gun to these parts:
 - (a) the toilet bowl
 - (b) the flush valve
 - (c) all of the other items with the contamination.

SUBTASK 38-32-00-910-006



MAKE SURE YOU FOLLOW THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THE CHEMICAL PRECHARGE. THE CHEMICAL PRECHARGE CONTAINS CORROSIVE AND/OR POISONOUS MATERIALS. THESE MATERIALS CAUSE INJURY TO PERSONS OR DAMAGE TO THE AIRPLANE IF YOU DO NOT FOLLOW THE INSTRUCTIONS.



DO NOT ADD THE CHEMICAL PRECHARGE TO THE TOILET TANK IF THE AIRPLANE WILL BE KEPT WHERE IT IS VERY COLD. THE CHEMICAL PRECHARGE CAN FREEZE AND CAUSE DAMAGE TO THE TOILET WASTE SYSTEM.

- (6) Add approximately 1 quart of chemical precharge to the toilet bowl before you remove the waste material from the bowl.

NOTE: Use a chlorine solution to clean the items you wear as an alternative to chemical precharge.

SUBTASK 38-32-00-160-001

- (7) Do these steps to remove the contents of the toilet bowl, if a waste system is serviceable:
 - (a) Install a length of 1.5 inch outside diameter flexible tubing, STD-1138 from a serviceable toilet to the blocked toilet.
 - (b) Flush the serviceable toilet to drain the toilet bowl of the blocked toilet.
 - (c) Make sure the toilet bowl is empty.
 - (d) If the toilet bowl is not empty, flush the serviceable toilet again.
 - (e) Remove the 1.5 inch flexible tubing.

SUBTASK 38-32-00-160-002

- (8) If no waste system is serviceable, manually remove the contents of the toilet bowl.

SUBTASK 38-32-00-910-007

- (9) Do the steps that follow before you remove these parts:
 - (a) The waste tank
 - (b) The waste tank components
 - (c) The waste drain ball valve

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- (d) The drain lines downstream from the waste tank
- (e) The waste drain valve assembly
 - 1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.
 - 2) After the waste tank is serviced, drain the chemical precharge.

———— **END OF TASK** ————

TASK 38-32-00-160-801

3. Toilet Blockage Removal

(Figure 201)

A. General

- (1) This task is for a blockage that is upstream of the toilet flush valve.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (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-1943	Remover - Blockage, Vacuum Toilet Part #: A38003-30 Supplier: 81205 Opt Part #: A38003-20 Supplier: 81205

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Toilet Blockage Removal

SUBTASK 38-32-00-910-008

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-860-001

- (2) For the toilet that has a blockage, do the necessary step:
 - (a) Open these circuit breakers and install safety tags:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-480-001

- (3) Carefully put the blockage vacuum toilet blockage remover, SPL-1943 into the toilet bowl.

SUBTASK 38-32-00-160-003



DO NOT PUSH THE BLOCKAGE REMOVER TOOL IN THE TOILET BOWL TOO HARD. THE END OF THE BLOCKAGE REMOVER TOOL IS SHARP AND CAN CAUSE DAMAGE TO THE TOILET OR THE FLUSH VALVE.

- (4) Move the blockage remover into the toilet bowl until it touches the blockage or until it engages in the toilet.

SUBTASK 38-32-00-160-004

- (5) When the blockage remover touches the blockage, turn its handle clockwise to engage the blockage.

SUBTASK 38-32-00-160-005

- (6) Pull the blockage remover carefully out of the toilet to pull the blockage out of the toilet.

SUBTASK 38-32-00-860-002

- (7) After you remove the blockage, do the necessary step:
(a) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-860-003

- (8) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-00-710-001

- (9) Put approximately one gallon of water in the toilet bowl.

SUBTASK 38-32-00-710-002

- (10) Push the flush switch for the toilet.

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SUBTASK 38-32-00-710-003

- (11) Make sure the toilet operates correctly.

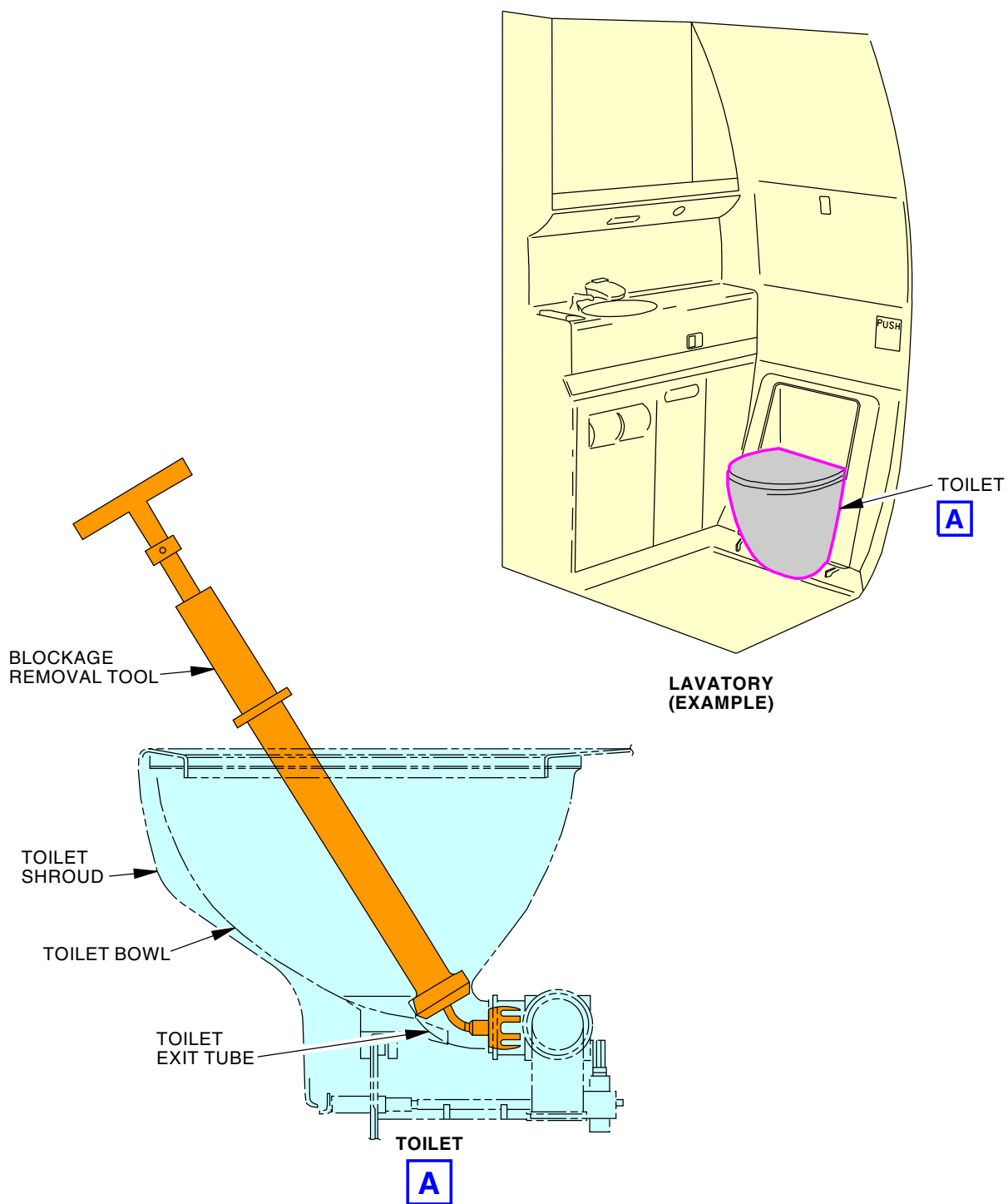
————— **END OF TASK** —————

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**Toilet Blockage Removal
Figure 201/38-32-00-990-817**

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TASK 38-32-00-160-802

4. Vacuum Waste Line Blockage Removal

(Figure 202)

A. General

- (1) This task is for a blockage that is between the toilet flush valve and the waste tank.

NOTE: The removal of the toilet assembly is necessary to do this procedure when you do it from the upper half of the fuselage.

- (2) This procedure is also applicable to material in the lines that are sealed with a cap. This condition can be from the removal of a toilet module or sealed lines for possible toilet module locations. The removal of the line cap and the possible removal of ceiling lining panels for access is necessary to do this procedure.

B. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
38-32-01-000-801-001	Vacuum Toilet Assembly Removal (P/B 401)
38-32-01-400-801-001	Vacuum Toilet Assembly 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-1947	Equipment - Removal, Vacuum Lavatory System Blockage Part #: G38004-13 Supplier: 81205 Opt Part #: G38004-10 Supplier: 81205

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

E. Procedure

SUBTASK 38-32-00-910-009

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-860-005

- (2) For the toilet system that has a blockage, do the necessary step:
(a) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-860-006

- (3) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-00-710-004

- (4) Do these steps to find the location of the blockage:
- (a) Flush the first toilet away from the waste tank to make sure the toilet is serviceable.
 - (b) If the toilet bowl is not clear, the blockage is between this toilet and the waste tank.
 - (c) Flush each toilet on the line away from the waste tank until you find the blockage.

SUBTASK 38-32-00-160-006

- (5) If it is necessary to remove the contents of the toilet bowl with the toilet flush valve open, do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-010-001

- (6) To get access to the vacuum waste line for the lavatory upstream of the blockage, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

SUBTASK 38-32-00-420-001

- (7) Install the kinetic water ram vacuum lavatory system blockage removal equipment, SPL-1947 on the vacuum waste line.

NOTE: You can use a plumbers snake if the kinetic water ram equipment is not available.

SUBTASK 38-32-00-610-001

- (8) Fill the waste line with water from a toilet upstream of the blockage or through the kinetic water ram equipment.

SUBTASK 38-32-00-610-002

- (9) Do these steps while you fill the waste line.
- (a) Monitor the air bleed line (Figure 204) while you fill the system.
 - (b) Stop the water flow when you see water at the bleed line exit.
 - (c) Disconnect the air bleed line.
 - (d) Put a cap on the air bleed connection.
 - (e) Do these steps for all toilets upstream of the blockage.

SUBTASK 38-32-00-860-007

- (10) Make sure the pressure of the kinetic water ram equipment is 70 to 80 PSIG.

NOTE: You can use a shop air source to get this pressure.

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SUBTASK 38-32-00-040-001



MAKE SURE YOU ATTACH A DO-NOT-OPERATE TAG TO THE TOILET FLUSH HANDLES FOR ALL TOILETS IN THE SYSTEM. IF YOU FLUSH THE TOILETS UPSTREAM OF THE BLOCKAGE, THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (11) Attach a DO-NOT-OPERATE tag to the toilet flush handles for all toilets upstream of the blockage.

SUBTASK 38-32-00-860-008

- (12) For the toilet that has a blockage, do the necessary step:
- (a) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-710-005

- (13) Flush a toilet in the same waste system with the blockage and then pull the handle of the kinetic water ram equipment.

NOTE: Flush the toilet and pull the handle of the kinetic water ram equipment at the same time to have the most effect on the blockage.

SUBTASK 38-32-00-710-006

- (14) Make sure the blockage is clear.

SUBTASK 38-32-00-160-007

- (15) If the blockage is not clear, pressurize the kinetic water ram equipment and do the blockage removal procedure again until the line is clear.

SUBTASK 38-32-00-860-009

- (16) For the toilet that has a blockage, do the necessary step:
- (a) Open these circuit breakers and install safety tags:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-020-001

- (17) Remove the kinetic water ram equipment on the vacuum waste line.

SUBTASK 38-32-00-080-001

- (18) To put the system back in its usual condition, do these steps:
- (a) Remove the cap on the air bleed connection for all toilets upstream of the blockage.
 - (b) Connect the air bleed line for all toilets upstream of the blockage.

SUBTASK 38-32-00-420-002

- (19) If you removed a toilet, do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.

SUBTASK 38-32-00-440-001

- (20) Remove the DO-NOT-OPERATE tag to the toilet flush handles for all toilets upstream of the blockage.

SUBTASK 38-32-00-710-007

- (21) Flush the toilet to make sure the toilet operates correctly.

————— **END OF TASK** —————

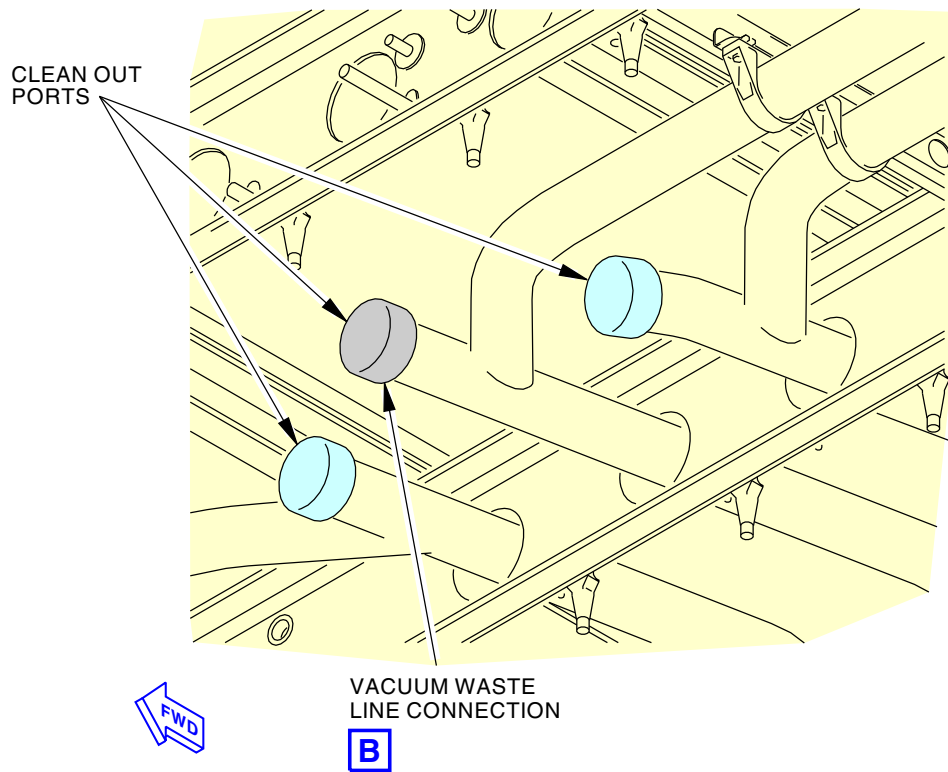
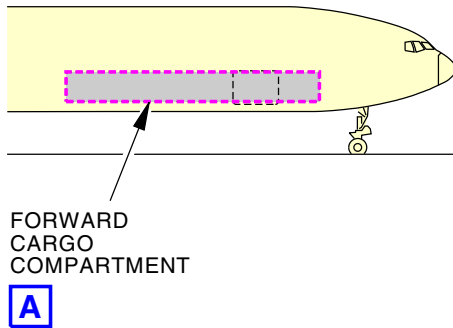
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FORWARD CARGO COMPARTMENT

A

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Vacuum Line Blockage Removal
Figure 202/38-32-00-990-821 (Sheet 1 of 2)

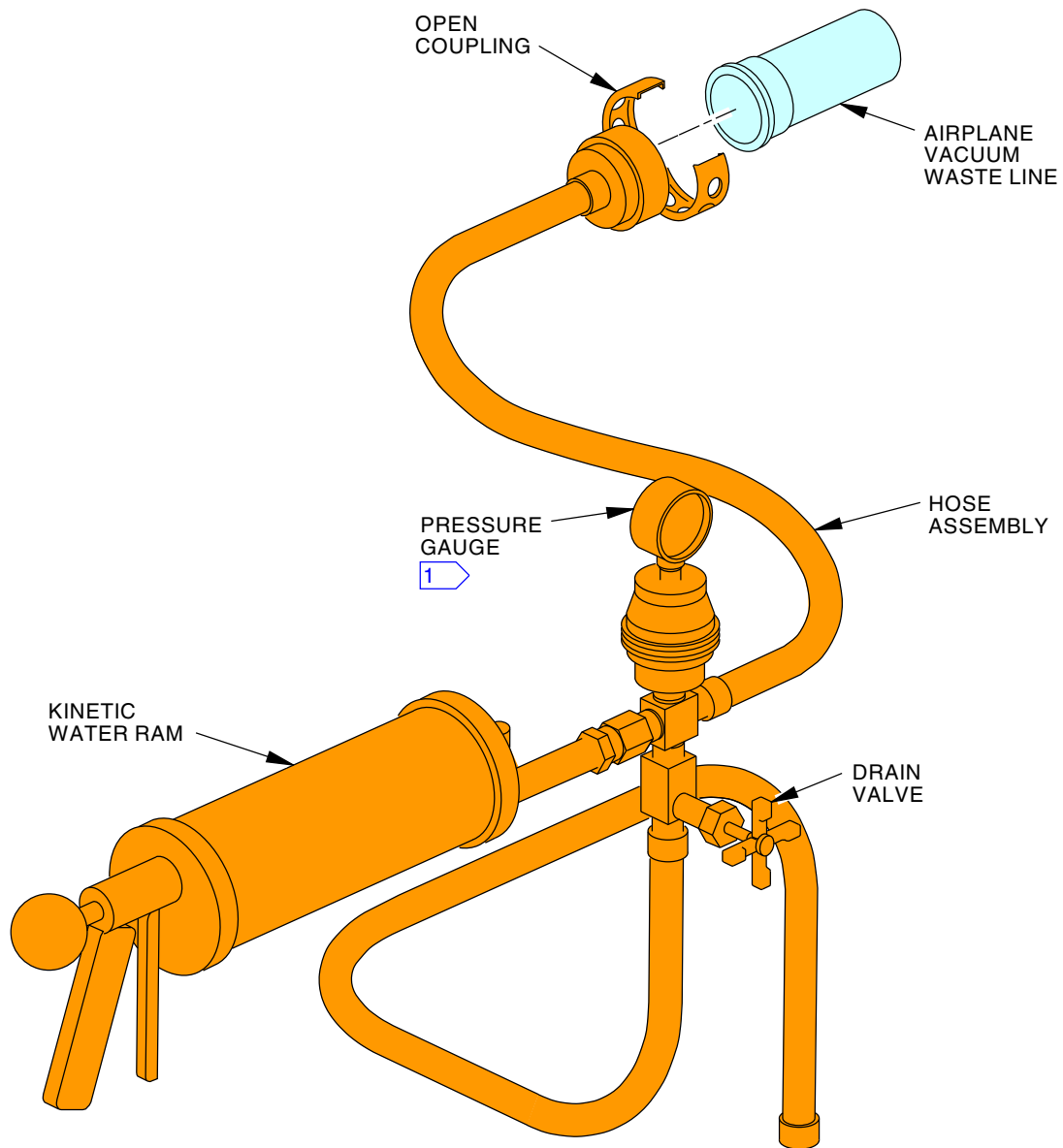
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**VACUUM WASTE LINE CONNECTION
(EXAMPLE)**

B

1 GAUGE INDICATES RESIDUAL PRESSURE
IN VACUUM LAVATORY SYSTEM

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**Vacuum Line Blockage Removal
Figure 202/38-32-00-990-821 (Sheet 2 of 2)**

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TASK 38-32-00-160-803

5. Waste Tank Drain Line Blockage (Inside Airplane) Removal

(Figure 203)

A. General

- (1) This task is for a blockage that is between the waste tank and the waste drain valve assembly from inside the airplane.

B. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
38-33-00-740-801	LCM BITE Operational Test (P/B 501)

C. Tools/Equipment

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

Reference	Description
SPL-1948	Equipment - Pressurization, Waste Drain System Part #: J38001-20 Supplier: 81205 Opt Part #: J38001-16 Supplier: 81205

D. Location Zones

Zone	Area
163	Area Below Bulk Cargo Compartment, Left
825	Bulk Cargo Door

E. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door

F. Procedure

SUBTASK 38-32-00-910-010

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-010-002

- (2) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-32-00-010-003

- (3) To remove the access panel for the waste tank service panel, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.

SUBTASK 38-32-00-010-004

- (4) Open this access panel:

Number	Name/Location
163AL	Waste Tank Service Door

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SUBTASK 38-32-00-860-010



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (5) Make sure the waste drain ball valves and the waste drain valve assembly are in the closed position.

SUBTASK 38-32-00-010-005

- (6) Remove the cap on the waste drain elbow.

SUBTASK 38-32-00-480-002

- (7) Connect the pressurization waste drain system pressurization equipment, SPL-1948 to the waste drain elbow.

SUBTASK 38-32-00-160-008

- (8) Pressurize the waste drain elbow to 15 PSIG.

SUBTASK 38-32-00-860-015

- (9) Open the waste drain ball valve for the waste tank that has the blockage.

SUBTASK 38-32-00-610-003

- (10) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to service the waste tanks. Do not disconnect the servicing equipment.

SUBTASK 38-32-00-860-011

- (11) Make sure the waste tank is empty.

SUBTASK 38-32-00-610-004

- (12) If the waste tank is empty, add the chemical precharge.
- (a) If the waste tank is not empty, do these steps:
 - 1) Close the waste drain ball valve.
 - 2) Do the steps again to pressurize the waste drain elbow and to open the waste drain ball valve.
 - (b) If the waste tank is not empty, then continue.
 - 1) Close the waste drain ball valve.



DO NOT INCREASE THE PRESSURE TO MORE THAN 20 PSIG (135 KPA). A PRESSURE OF MORE THAN 20 PSIG CAN CAUSE DAMAGE TO THE WASTE DRAIN SYSTEM.

- 2) Increase the pressure to a maximum of 20 PSIG.
 - 3) Do the steps again to pressurize the waste drain elbow and to open the waste drain ball valve.
- (c) If the waste tank is not empty, remove the contents of the waste system manually.

SUBTASK 38-32-00-610-005

- (13) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-32-00-610-010

- (14) To make sure the system is operational, do this task: LCM BITE Operational Test, TASK 38-33-00-740-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-080-002

- (1) Disconnect the pressurization waste drain system pressurization equipment, SPL-1948 from the waste drain elbow.

SUBTASK 38-32-00-420-007

- (2) Install the cap on the waste drain elbow.

SUBTASK 38-32-00-010-012

- (3) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

SUBTASK 38-32-00-010-013

- (4) Close the access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-32-00-010-014

- (5) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

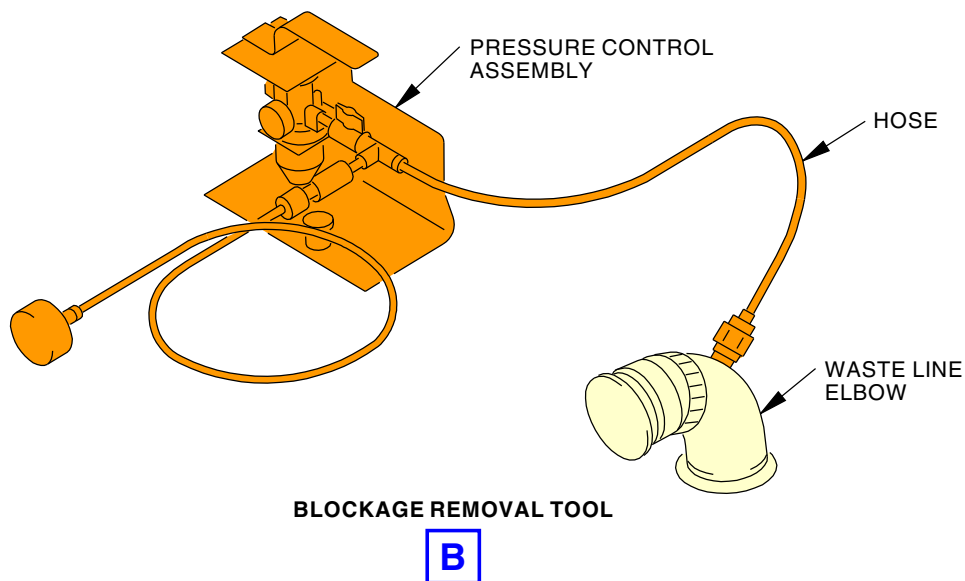
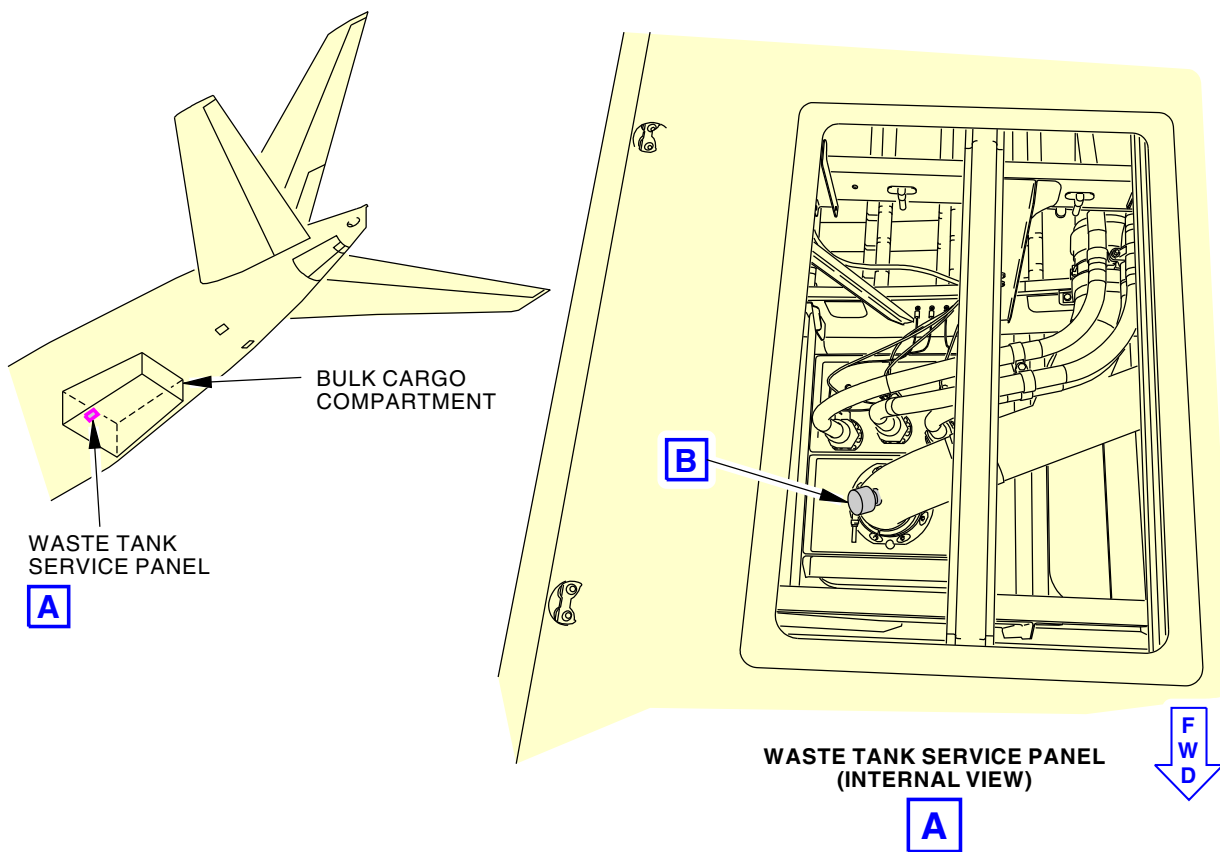
————— END OF TASK —————

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**Waste Line Blockage Removal
Figure 203/38-32-00-990-822**

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TASK 38-32-00-040-801

6. Toilet Deactivation

(Figure 204)

A. General

- (1) This task is for the deactivation of a toilet while the remaining toilets in the system are serviceable.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Procedure

SUBTASK 38-32-00-010-006

- (1) Get access to the lavatory (TASK 06-41-00-800-801).

SUBTASK 38-32-00-010-007

- (2) Main Deck Lavatories:
 - (a) Open the cabinet door below the sink to get access to the shutoff valve for the lavatory water supply.

NOTE: The shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-32-00-040-002

- (3) Close the shutoff valve for the lavatory water supply.

SUBTASK 38-32-00-410-001

- (4) Close the cabinet door.

SUBTASK 38-32-00-040-003

- (5) Open the lavatory faucet to release the pressure.

SUBTASK 38-32-00-010-008

- (6) If necessary to remove the toilet shroud to access the manual shut off valve, do these steps:
 - (a) Turn the toilet shroud latches at the bottom of the toilet shroud to open them.
 - (b) Carefully pull out the bottom edge of the toilet shroud.
 - (c) Move the toilet shroud down until the top edge is disengaged from the trim strip on the lavatory wall.

SUBTASK 38-32-00-040-004

- (7) Pull the handle for the manual shutoff valve.

NOTE: The handle is below the toilet shroud and above the kickstrip.

SUBTASK 38-32-00-410-002

- (8) If shroud is removed, install the toilet shroud:
 - (a) Carefully engage the top edge of the toilet shroud with the trim strip on the lavatory wall.
 - (b) Push on the bottom edge of the toilet shroud.
 - (c) Turn the toilet shroud latches to close the toilet shroud.

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SUBTASK 38-32-00-040-005

- (9) Identify the applicable lavatory that is not serviceable.

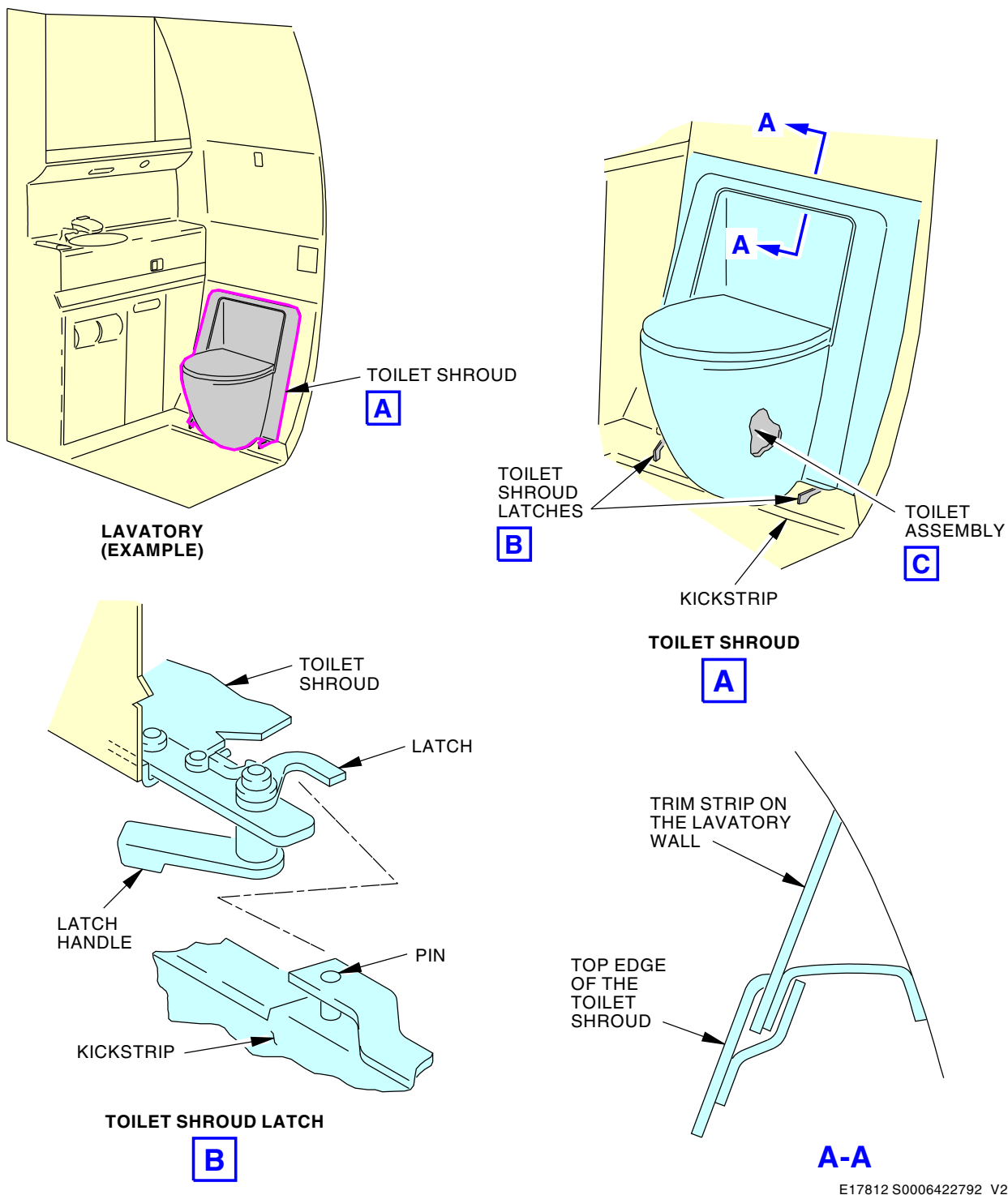
———— **END OF TASK** ————

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**Toilet Deactivation
Figure 204/38-32-00-990-820 (Sheet 1 of 2)**

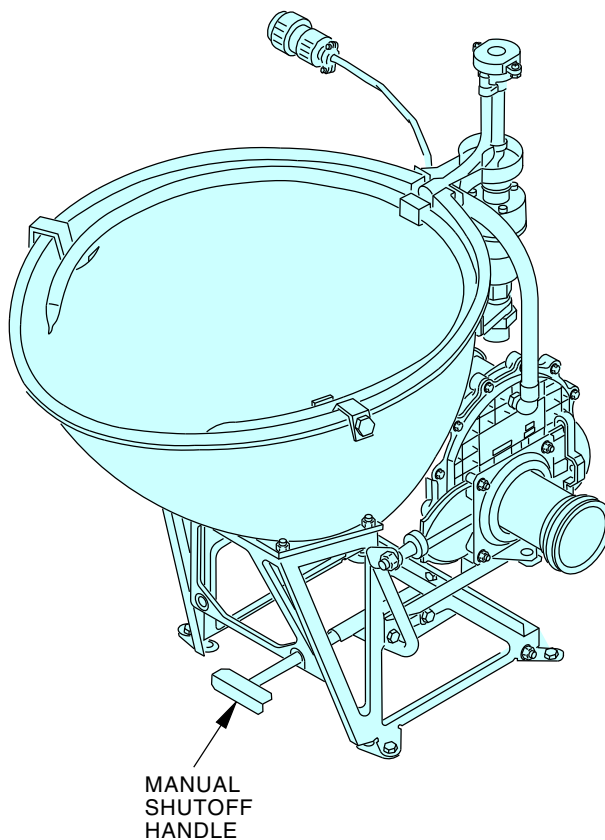
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TOILET ASSEMBLY



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Toilet Deactivation
Figure 204/38-32-00-990-820 (Sheet 2 of 2)

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TASK 38-32-00-420-801

7. Toilet Activation

(Figure 204)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

SUBTASK 38-32-00-010-009

- (1) Get access to the lavatory (TASK 06-41-00-800-801).

SUBTASK 38-32-00-010-010

- (2) If necessary to remove the toilet shroud to access the manual shut off valve, do these steps:
- (a) Turn the toilet shroud latches at the bottom of the toilet shroud to open them.
 - (b) Carefully pull out the bottom edge of the toilet shroud.
 - (c) Move the toilet shroud down until the top edge is disengaged from the trim strip on the lavatory wall.

SUBTASK 38-32-00-040-006

- (3) Push on the handle for the manual shutoff valve.

NOTE: The handle is below the toilet shroud and above the kickstrip.

SUBTASK 38-32-00-410-003

- (4) If shroud is removed, install the toilet shroud:
- (a) Carefully engage the top edge of the toilet shroud with the trim strip on the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud.
 - (c) Turn the toilet shroud latches to close the toilet shroud.

SUBTASK 38-32-00-860-012

- (5) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-00-860-013

- (6) For the applicable lavatory, do these steps:
- (a) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-010-011

(7) Main Deck Lavatories:

- (a) Open the cabinet door below the sink to get access to the shutoff valve for the lavatory water supply.

NOTE: The shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-32-00-040-007

(8) Open the shutoff valve for the lavatory water supply.

SUBTASK 38-32-00-410-004

(9) Close the cabinet door.

SUBTASK 38-32-00-710-008

(10) Do these steps to make sure the toilet operates correctly:

- (a) Put approximately 1 gallon of water into the toilet bowl.
(b) Operate the flush switch.
(c) Make sure the toilet flushes correctly.

SUBTASK 38-32-00-440-002

(11) Remove the identifier for the lavatory that was not serviceable.

————— **END OF TASK** —————

TASK 38-32-00-280-801

8. Vacuum Line Blockage Inspection

A. General

- (1) This task uses the "coin tap" test to isolate blockages in the vacuum waste lines. Use a small metal object (a coin) when you do this test.

B. References

<u>Reference</u>	<u>Title</u>
SOPM 20-30-03	General Cleaning Procedures

C. Location Zones

<u>Zone</u>	<u>Area</u>
100	Lower Half of Fuselage

D. Procedure

SUBTASK 38-32-00-750-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Do the "coin tap" test as follows:
(a) Hit the vacuum waste line lightly with the metal object for each inch of the tube.

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- 1) A sharp metal ring shows that the section has no waste layer or blockages.
- 2) A dull muffled sound shows that the section has a waste layer or a blockage.

SUBTASK 38-32-00-020-002

- (2) Remove from the airplane all sections of the vacuum waste line that show a waste layer or a blockage.

SUBTASK 38-32-00-110-001

- (3) Soak the vacuum waste lines that show a waste layer or a blockage (SOPM 20-30-03)

SUBTASK 38-32-00-420-003

- (4) Install the vacuum waste lines.

————— **END OF TASK** —————

TASK 38-32-00-780-801

9. **Waste System - Vacuum Pressure Test**

(Figure 205)

A. **General**

- (1) This task uses the vacuum toilet tester to examine the vacuum during the operation of the toilet flush system.
- (2) The Vacuum Toilet Tester is referred to as the Tester in this procedure.

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-1945	Tester - Toilet Vacuum Part #: A38006-1 Supplier: 81205

C. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

D. **Procedure**

SUBTASK 38-32-00-910-011

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-860-019

- (2) Put the vacuum toilet tester, SPL-1945 in its position as follows:
 - (a) Make sure the valve on the tester is in the closed position.
 - (b) Put the end of the tester with the flexible seal into the toilet bowl on the exit hole.
 - (c) Push and then hold the tester tightly against the exit hole.

SUBTASK 38-32-00-780-001

- (3) Do these steps to do a test of the vacuum at the toilet.
 - (a) Push the flush switch for the toilet.
 - (b) Make sure the water stays in the toilet bowl during the toilet flush operation.

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- (c) Write down the highest indication (inches of mercury) you see on the vacuum gage during the toilet flush operation.
- (d) Do the steps above two more times.

SUBTASK 38-32-00-860-020

- (4) Move the valve to the open position and then remove the tester from the toilet.

SUBTASK 38-32-00-220-001

- (5) Make sure the average of the indications on the vacuum gage is from 5 to 10 inches of mercury.

NOTE: An average of less than 5 inches of mercury shows a blockage or leakage of the vacuum waste system. The blockage or leakage is between the toilet, and the toilet before it, or the waste tank.

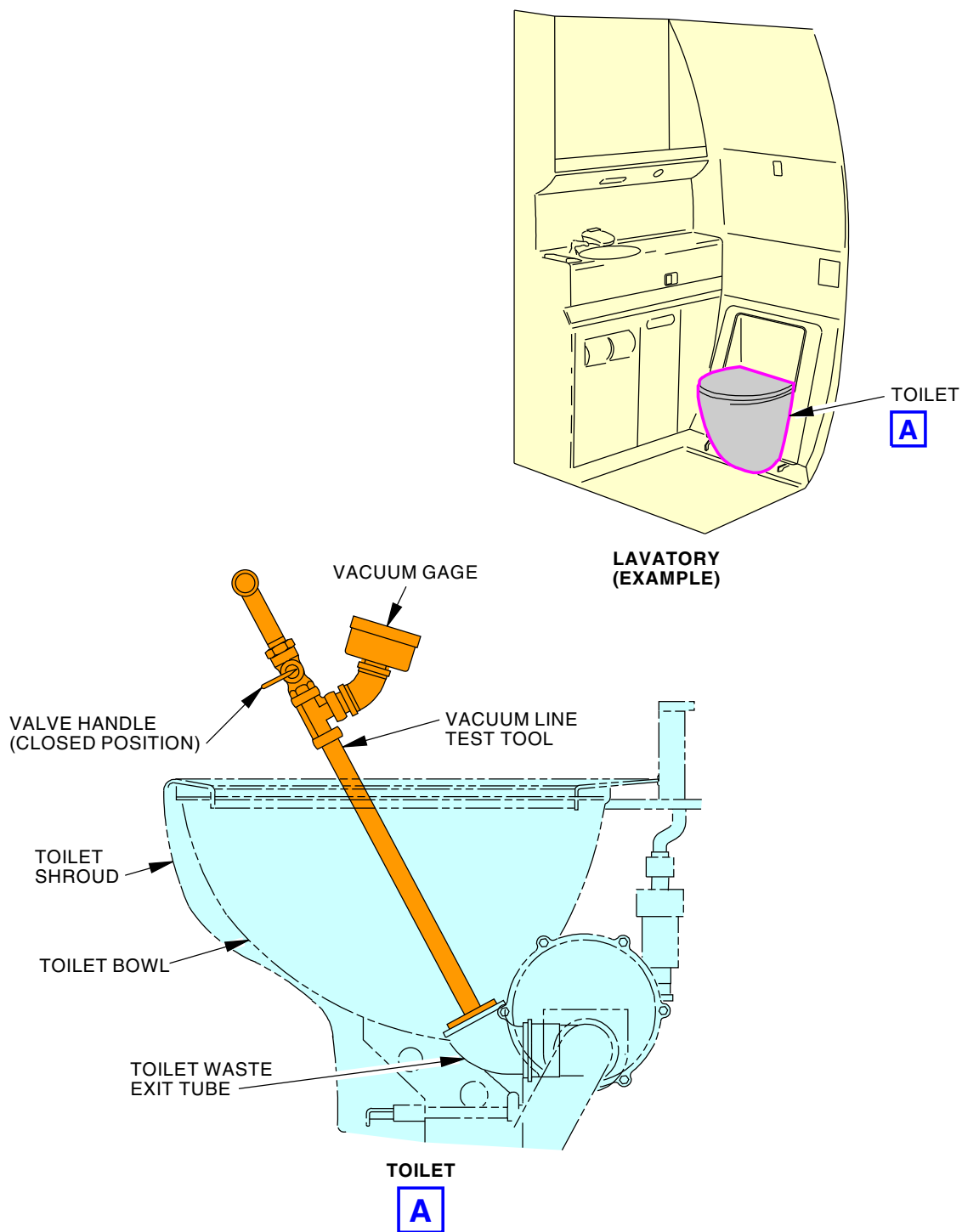
———— **END OF TASK** ————

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**LAVATORY
(EXAMPLE)**

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**Vacuum Line Test
Figure 205/38-32-00-990-819**

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TASK 38-32-00-160-804

10. Waste Drain Line Blockage Removal

(Figure 206)

A. General

- (1) This task is for a blockage that is between the waste tank and the waste drain valve assembly from outside the airplane.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
38-33-00-740-801	LCM BITE Operational Test (P/B 501)

C. Tools/Equipment

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

Reference	Description
SPL-1950	Equipment - Removal, Vacuum Waste System Blockage Part #: G38006-1 Supplier: 81205
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG
STD-1142	Equipment - Waste System Servicing

D. Location Zones

Zone	Area
163	Area Below Bulk Cargo Compartment, Left

E. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door

F. Procedure

SUBTASK 38-32-00-910-012

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-010-025

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

SUBTASK 38-32-00-010-026

- (3) Open the cap on the waste drain valve assembly.

SUBTASK 38-32-00-480-008

- (4) Connect the blockage removal vacuum waste system blockage removal equipment, SPL-1950 to the waste drain valve assembly.

SUBTASK 38-32-00-480-009

- (5) Attach the waste drain hose from the waste system servicing equipment, STD-1142 to the vacuum waste system blockage removal equipment, SPL-1950.

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SUBTASK 38-32-00-860-036

- (6) Make sure the hose clamp is in its position on the hose between the waste drain valve assembly and the waste drain hose.

SUBTASK 38-32-00-860-037

- (7) Push the PRESS TO OPEN lever on the waste drain valve assembly.

SUBTASK 38-32-00-860-038

- (8) Pull the handle at the waste service panel to open the waste drain ball valve for the waste tank that has the blockage.

SUBTASK 38-32-00-860-039

- (9) Make sure the air shutoff valve on the blockage removal vacuum waste system blockage removal equipment, SPL-1950 is in the closed position.

SUBTASK 38-32-00-860-040

- (10) Attach an 0-50 psig dry filtered regulated air source, STD-1082 to the vacuum waste system blockage removal equipment, SPL-1950.

SUBTASK 38-32-00-860-041



MAKE SURE THE PRESSURE TO THE WASTE BLOCKAGE REMOVAL EQUIPMENT IS NOT MORE THAN 25 PSIG. IF THE PRESSURE IS MORE THAN 25 PSIG, INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

- (11) Make sure the pressure to the blockage removal vacuum waste system blockage removal equipment, SPL-1950 is 0 to 25 PSIG.

SUBTASK 38-32-00-160-009

- (12) Open the air pressure valve of the vacuum waste system blockage removal equipment, SPL-1950 until the air flow is constant and the pressure does not increase or until the pressure drops, then close the air pressure valve.

SUBTASK 38-32-00-860-042

- (13) Remove the hose clamp between the waste drain valve assembly and the waste drain hose.

SUBTASK 38-32-00-710-015

- (14) Make sure the blockage is clear.

SUBTASK 38-32-00-610-011

- (15) If the blockage is clear, then continue.
 - (a) If the blockage is not clear, do the blockage removal procedure again until the line is clear.

SUBTASK 38-32-00-080-008

- (16) Disconnect the waste drain hose from the vacuum waste system blockage removal equipment, SPL-1950.

SUBTASK 38-32-00-080-009

- (17) Disconnect the blockage removal vacuum waste system blockage removal equipment, SPL-1950 from the waste drain valve assembly.

SUBTASK 38-32-00-610-012

- (18) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-610-013

- (19) To make sure the waste indication system is operational, do this task: LCM BITE Operational Test, TASK 38-33-00-740-801.

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-010-027

(1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

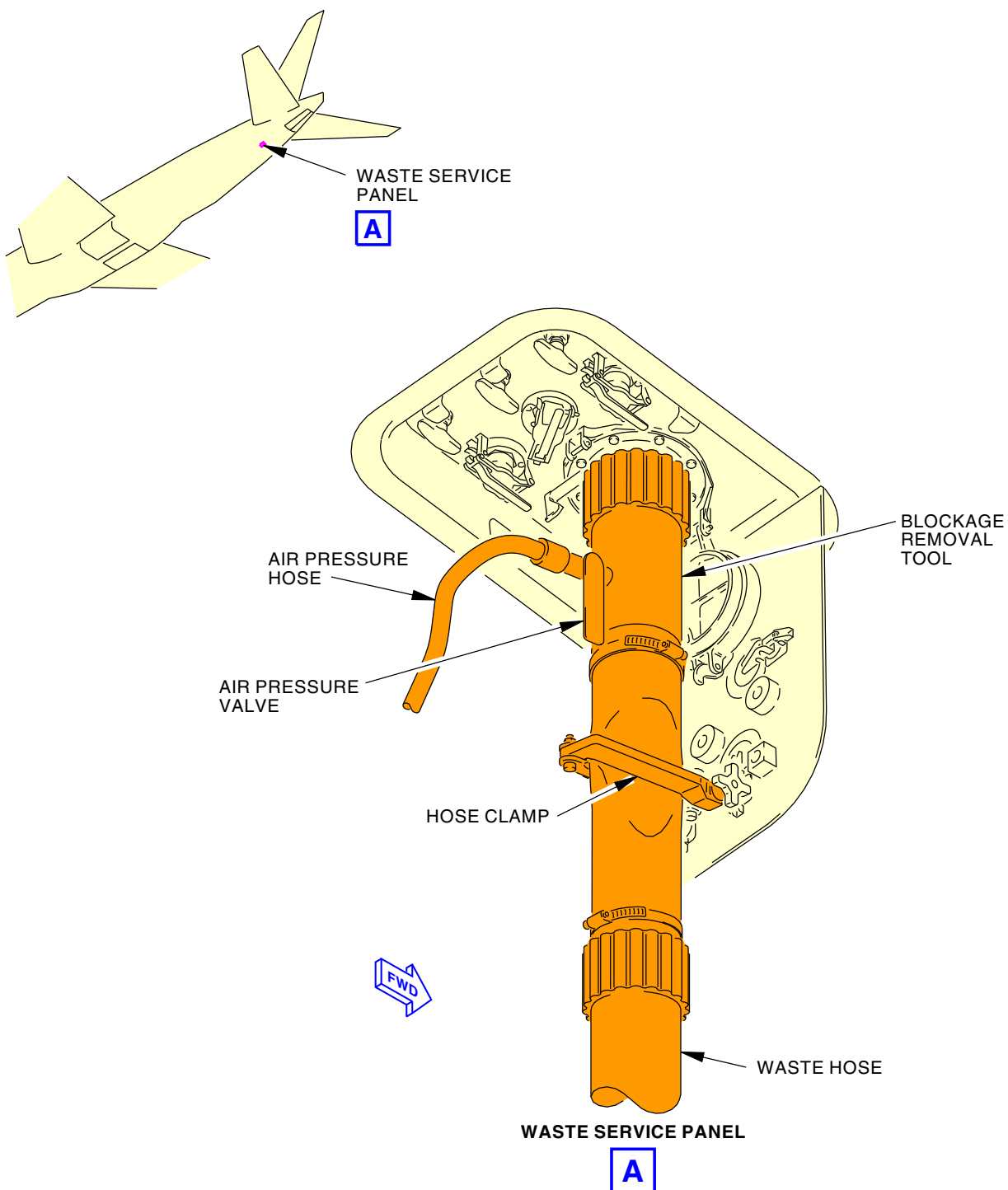
————— **END OF TASK** —————

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**Waste Blockage Removal Tool
Figure 206/38-32-00-990-818**

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TASK 38-32-00-980-802

11. Toilet Flush Valve - Open for Maintenance

(Figure 207)

A. General

- (1) This task uses the maintenance switch on top on the flush control assembly to operate the toilet flush system.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Procedure

SUBTASK 38-32-00-020-005

- (1) Do these steps to remove the toilet shroud:
 - (a) Turn the toilet shroud latches at the bottom of the toilet shroud to open them.
 - (b) Carefully pull out the bottom edge of the toilet shroud.
 - (c) Move the toilet shroud down until the top edge is disengaged from the trim strip on the lavatory wall.

SUBTASK 38-32-00-860-050

- (2) Push the maintenance switch on the flush control assembly to open the toilet flush valve.

SUBTASK 38-32-00-860-051

- (3) Push the maintenance switch on the flush control assembly again and then hold for approximately 2 seconds to operate the vacuum blower.

NOTE: Vacuum blower will stop after ten seconds.

SUBTASK 38-32-00-860-052

- (4) Push the flush switch to close the toilet flush valve.

SUBTASK 38-32-00-420-006

- (5) Do these steps to install the toilet shroud:
 - (a) Carefully engage the top edge of the toilet shroud with the trim strip on the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud.
 - (c) Turn the toilet shroud latches to close the toilet shroud.

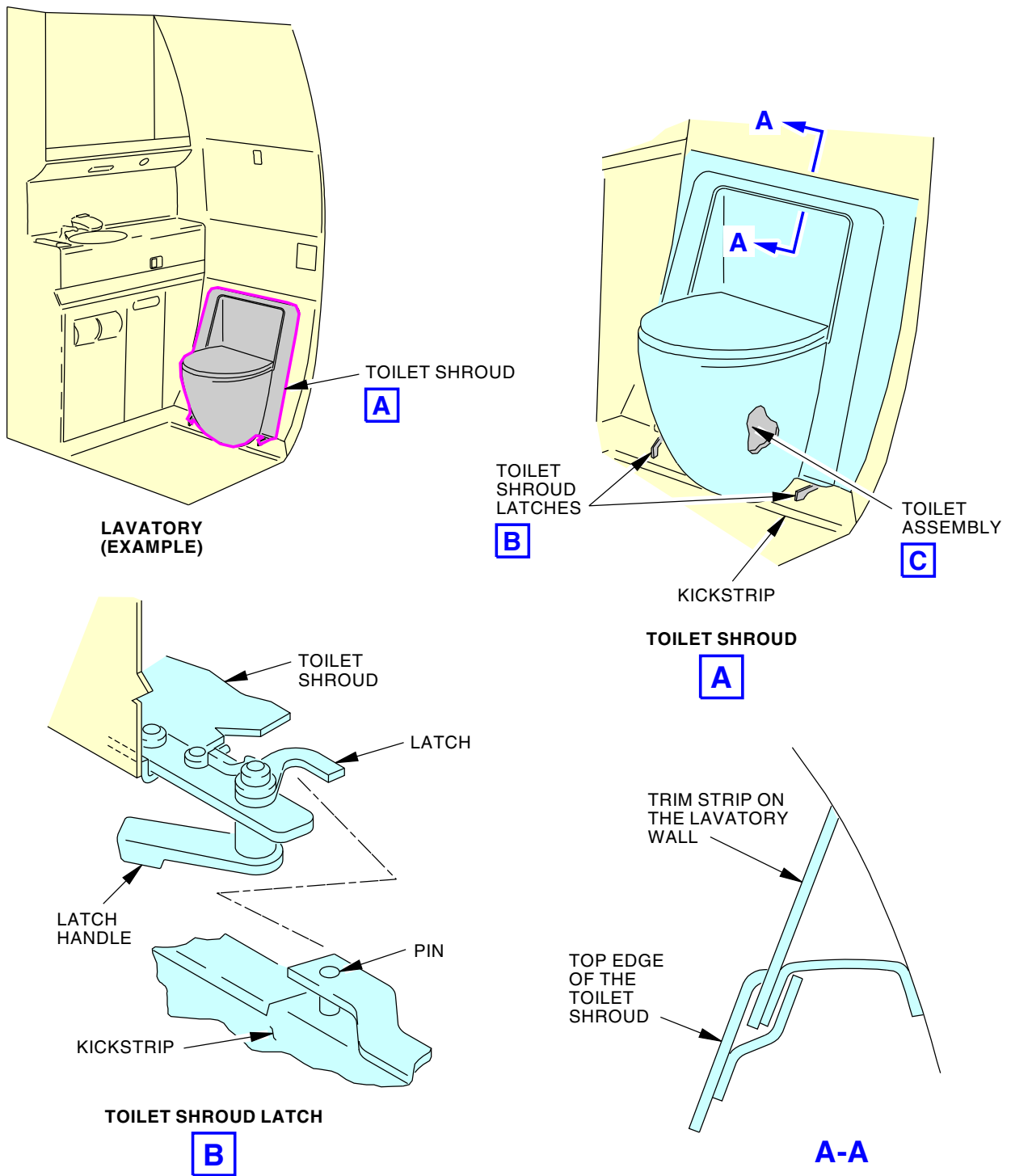
———— **END OF TASK** ————

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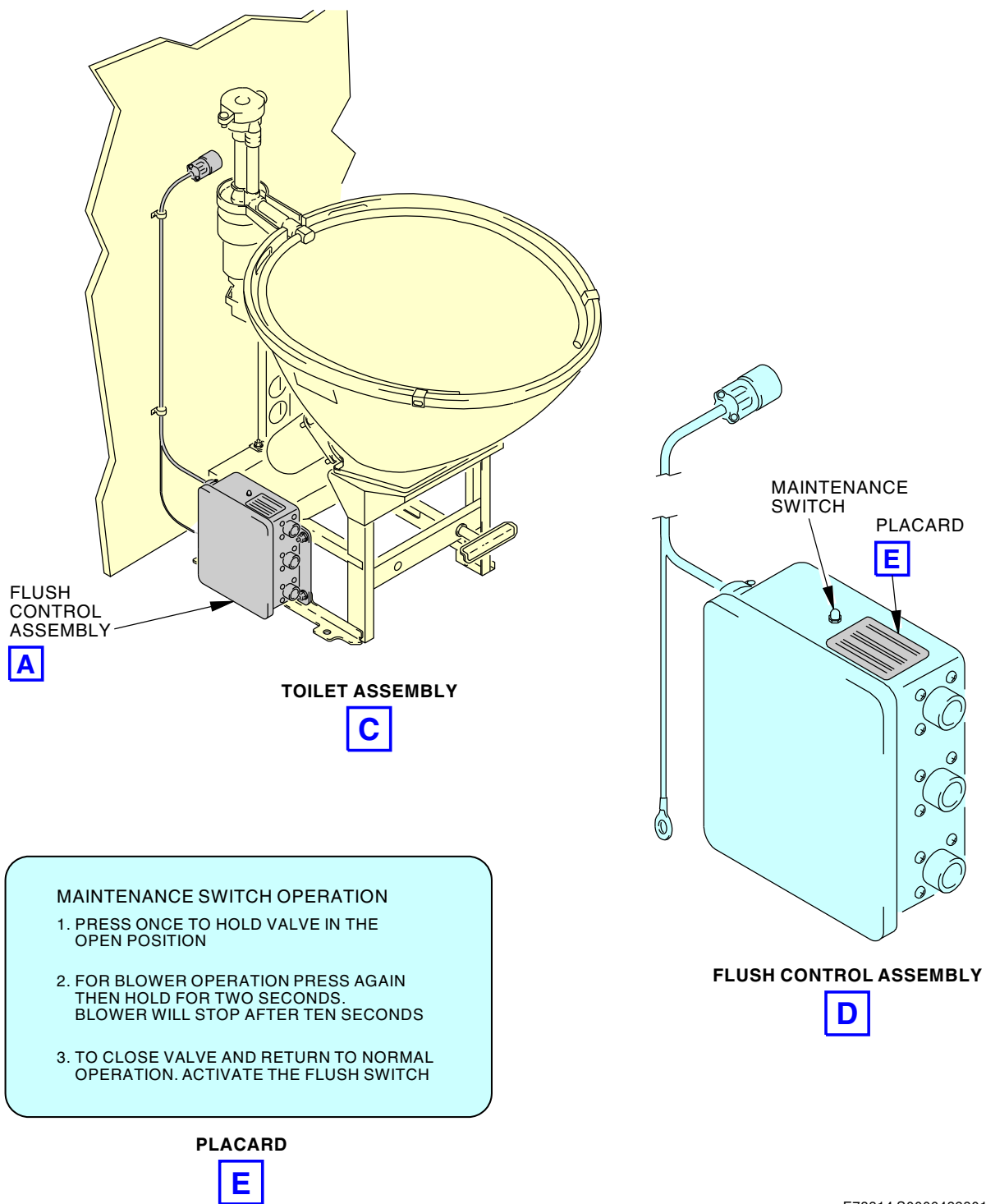
**Maintenance Switch Operation
Figure 207/38-32-00-990-809 (Sheet 1 of 2)**

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**Maintenance Switch Operation
Figure 207/38-32-00-990-809 (Sheet 2 of 2)**

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TASK 38-32-00-040-802

12. Vacuum Waste System - Deactivation

A. General

- (1) This task will deactivate the Vacuum Waste System.

B. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

C. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

D. Procedure

SUBTASK 38-32-00-010-056

- (1) Open this access panel:

Number	Name/Location
117AL	Main Equipment Center Access Door

SUBTASK 38-32-00-860-069



BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

E. Vacuum Waste System - Tryout

SUBTASK 38-32-00-700-002

- (1) At one lavatory from each of the three systems, flush the toilet:

NOTE: The toilets connected to each system can be determined from the placard on each waste tank.

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- (a) Make sure no rinse water enters the toilet bowl.
- (b) Make sure the toilet flush valve does not open.
- (c) Make sure the vacuum blower in the bulk cargo compartment does not come on.

NOTE: A second person should be in the bulk cargo compartment to listen and make sure the blower does not come on.

————— **END OF TASK** —————

TASK 38-32-00-440-801

13. Vacuum Waste System - Activation

A. General

- (1) This task will activate the Vacuum Waste System.

B. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

C. Access Panels

Number	Name/Location
117AL	Main Equipment Center Access Door

D. Procedure

SUBTASK 38-32-00-860-070



WARNING

BE CAREFUL WHEN YOU DO WORK AROUND ENERGIZED PANELS. HIGH VOLTAGES CAN KILL YOU.

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

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SUBTASK 38-32-00-410-046

(2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
117AL	Main Equipment Center Access Door

———— **END OF TASK** ————

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VACUUM WASTE SYSTEM - REMOVAL/INSTALLATION

TASK 38-32-00-000-801

1. Vacuum Waste Tube Removal

A. General

- (1) This procedure has the steps to remove a vacuum waste tube section for replacement or maintenance.
- (2) Do this task if you can not remove a blockage in a tube by an in-situ procedure.
- (3) Do this task if it is necessary to remove a tube for access or for a replacement.

B. References

Reference	Title
05-51-57-000-802	Corrosion Removal After Acid Spills (P/B 201)
38-30-00-910-802	Waste System - Cap Installation (Reconfiguration) (P/B 201)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

C. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

D. Prepare to Remove the Vacuum Waste Tube

SUBTASK 38-32-00-910-019

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-865-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

NOTE: You must deactivate the waste system from which you remove the tube.

SUBTASK 38-32-00-010-042

- (3) Get access to the waste tube to remove.

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SUBTASK 38-32-00-030-001

- (4) If necessary, remove the shroud over the coupling as required.

NOTE: The shroud (shrink wrap) is used to provide additional leakage protection.

E. Vacuum Waste Tube Removal

SUBTASK 38-32-00-030-002

- (1) To remove the clamshell coupling [3] from a male-male connection, do these steps:

NOTE: Be prepared to catch unwanted fluid from the waste line.

- (a) Pull the latches up.
- (b) Remove the clamshell coupling [3] from the flanges of the two ferrules and the sleeve [2].
- (c) Move the sleeve [2] from the ferrules.
- (d) Pull the tubes apart.

NOTE: If necessary, loosen the support clamps on the adjacent waste lines.

- (e) Remove and discard the packing [1] from each ferrule.

SUBTASK 38-32-00-030-003

- (2) To remove the clamshell coupling [3] from a male-female connection, do these steps:

NOTE: Be prepared to catch unwanted fluid from the waste line.

- (a) Pull the latches up.
- (b) Remove the clamshell coupling [3] from the flanges of the male tube ferrule and the female ferrule.
- (c) Move the female ferrule sleeve from the male ferrule.

NOTE: If necessary, loosen the support clamps on the adjacent waste lines.

- (d) Pull the tubes apart.
- (e) Remove and discard the packing [1] from the male ferrule.

SUBTASK 38-32-00-020-006

- (3) Remove the tube.

NOTE: Be prepared to catch unwanted fluid from the waste line.

- (a) If necessary, do this task: Corrosion Removal After Acid Spills, TASK 05-51-57-000-802.

SUBTASK 38-32-00-620-001

- (4) Put a bag or cap on the ends of the tube that you remove to contain unwanted material.

SUBTASK 38-32-00-620-002

- (5) Put a bag or cap on the ends of the remaining tubing to contain unwanted material.

- (a) If necessary, to install a cap on the open end of the waste line(s), do this task: Waste System - Cap Installation (Reconfiguration), TASK 38-30-00-910-802.

————— **END OF TASK** —————

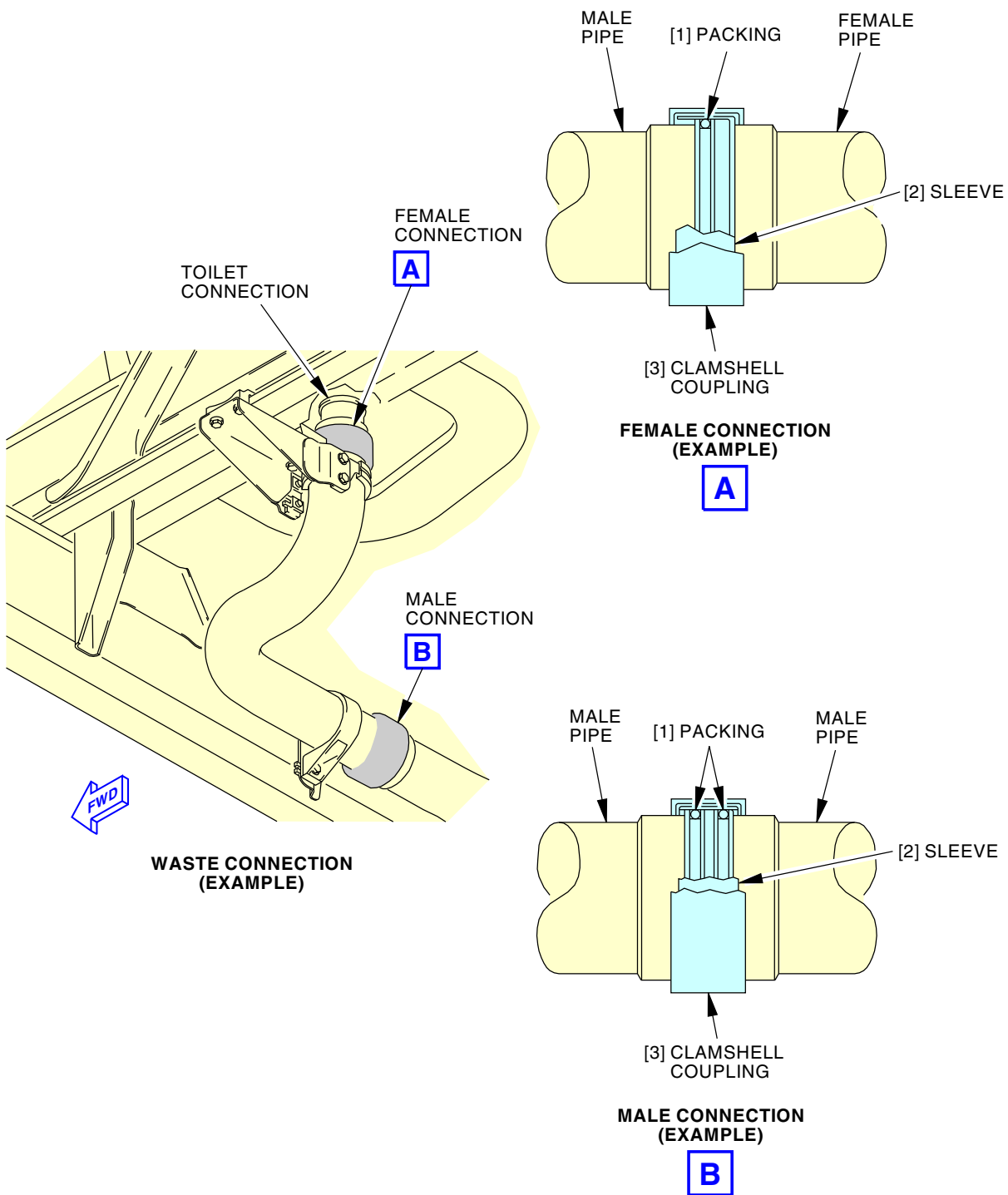
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**Vacuum Waste Tube Installation
Figure 401/38-32-00-990-825**

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TASK 38-32-00-400-801

2. Vacuum Waste Tube Installation

A. General

- (1) This procedure is used to install a vacuum waste tube section for replacement or after maintenance.
- (2) You can do this procedure if you must remove and install a waste tube because of these conditions:
 - If you can not remove a clog in a tube by an in-situ procedure (VACUUM WASTE SYSTEM - CLEANING/PAINTING, PAGEBLOCK 38-32-00/701).
 - If it is necessary to remove a tube for access or for replacement.

B. References

Reference	Title
38-32-00 P/B 701	VACUUM WASTE SYSTEM - CLEANING/PAINTING

C. Consumable Materials

Reference	Description	Specification
B00316	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I, ASTM D-3735 Type I
D00062	Lubricant - Pneumatic System	SAE AMS-G-4343 (NATO G-392)
D00504	Grease - Petrolatum	VV-P-236
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

E. Prepare for the Installation of the Vacuum Waste Tube

SUBTASK 38-32-00-210-001

- (1) Make sure that all the parts of the clamshell coupling [3] are clean.

SUBTASK 38-32-00-210-002

- (2) Find the type of tubing connection you have:
 - (a) Male-male (two new packings [1]).
 - (b) Male-female (one new packing [1]).

F. Vacuum Waste Tube Installation

SUBTASK 38-32-00-430-001

- (1) For a male-male connection, do these steps to attach the components:
 - (a) Make sure that the packing grooves and adjacent flat surfaces are free of:
 - Cuts
 - Scratches
 - Dents
 - Distortions
 - Particles of unwanted material

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- (b) Clean the areas that seal with a lint-free gauze cotton wiper, G00034, moist with solvent, B00316.
- (c) Use a new, dry cotton wiper, G00034, to dry the sealing surfaces.
- (d) Clean the new packing [1] with a clean, dry, lint-free gauze cotton wiper, G00034.
- (e) Lubricate the packing [1] with grease, D00504, or lubricant, D00062.
- (f) Install the packing [1] on the male ferrules.
- (g) Lubricate the inner diameter of the sleeve [2] with grease, D00504, or lubricant, D00062.
- (h) Install the sleeve [2] for the waste system component or waste line on the ferrules to include the two packings.

NOTE: Make sure that the new packings stay in their related positions on the male ferrules when you install the sleeve.

- (i) Examine the retainer clamp (clamshell coupling [3]) to make sure that the hinge pin is correctly attached and rivets are tight.
- (j) Install the clamshell coupling [3] to include the end flanges of the male ferrules.

NOTE: Turn the coupling (before you latch it) to put it in a position that will give the easiest access to the latch.

- (k) Push each latch down on the coupling.
- (l) Make sure that the three latches are at the same level.

NOTE: The correct installation can have these tolerances:

A 4 degree maximum angular misalignment between centerlines.

A 0.06 in. (1.52 mm) maximum axial misalignment.

A distance between tubes of 0.01 in. (0.25 mm) to 0.28 in. (7.11 mm).

A nominal distance of 0.14 in. (3.56 mm) between the flanges.

SUBTASK 38-32-00-430-002

- (2) For a male-female connection, do these steps to attach the components:

- (a) Make sure that the packing groove and adjacent flat surfaces are free of:
 - Cuts
 - Scratches
 - Dents
 - Distortions
 - Particles of unwanted material
- (b) Clean the areas that seal with a lint-free gauze cotton wiper, G00034, moist with solvent, B00316.
- (c) Use a new, dry cotton wiper, G00034, to dry the sealing surfaces.
- (d) Clean the new packing [1] with a clean, dry, lint-free gauze cotton wiper, G00034.
- (e) Lubricate the packing [1] with grease, D00504, or lubricant, D00062.
- (f) Install the packing [1] on the male ferrule.
- (g) Lubricate the inner diameter of the female ferrule with grease, D00504, or lubricant, D00062.

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- (h) Install the female ferrule for the water system component or waterline on the male ferrule to include the new packing.

NOTE: Make sure that the new packing stays in its related position on the male ferrule when you install the sleeve.

- (i) Examine the retainer clamp (clamshell coupling [3]) to make sure that the hinge pin is correctly attached and rivets are tight.
- (j) Install the clamshell coupling [3] to include the end flanges of the male ferrules.

NOTE: Turn the coupling (before you latch it) to put it in a position that will give the easiest access to the latch.

- (k) Push each latch down on the coupling.
- (l) Make sure that the three latches are at the same level.

NOTE: The correct installation can have these tolerances:

A 2 degree maximum angular misalignment between centerlines.

A 0.06 in. (1.52 mm) maximum axial misalignment.

A distance between tubes of 0.01 in. (0.25 mm) to 0.28 in. (7.11 mm).

A nominal distance of 0.21 in. (5.33 mm) between the flanges.

G. Installation Test

SUBTASK 38-32-00-865-002

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-790-008

- (2) Flush a toilet on the waste system, upstream of where you installed the tube.
- (a) Make sure that there are no leaks.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-410-029

- (1) Close the access to the tubing that you installed.

————— **END OF TASK** —————

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VACUUM WASTE SYSTEM - ADJUSTMENT/TEST

1. **General**

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) A leak test for the vacuum waste system.
 - (2) A operational test of the toilet.
 - (3) A functional test of the waste drain system.
- C. There are three different waste systems. Each waste system has one waste tank. The lavatory to waste tank connections can be determined by the placard data on the waste tanks.

TASK 38-32-00-700-801

2. **Vacuum Waste System - Leak Test**

(Figure 501)

A. General

- (1) This procedure gives you the instructions you need to make sure the vacuum waste system does not have a leak.

B. References

Reference	Title
25-52-06-000-801	Sidewall Liner Removal (P/B 401)
25-52-06-400-801	Sidewall Liner Installation (P/B 401)

C. Tools/Equipment

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

Reference	Description
SPL-1942	Plugs - Vent, Vacuum Waste System Part #: A38001-22 Supplier: 81205 Opt Part #: A38001-16 Supplier: 81205
SPL-9132	Vacuum Pump Part #: A38001-68 Supplier: 81205
STD-1134	Vacuum - Source, 24 Inch Hg Minimum

D. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
200	Upper Half of Fuselage

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

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F. Prepare for the test:

SUBTASK 38-32-00-860-021

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-010-023

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-00-010-015

- (3) To remove the sidewall panels to get access to the vacuum blowers, do this task: Sidewall Liner Removal, TASK 25-52-06-000-801.

SUBTASK 38-32-00-020-004



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (4) Disconnect the inlet and the outlet connections of the vacuum blower.

SUBTASK 38-32-00-480-003

- (5) Install the vent vacuum waste vent plug, SPL-1942 in the inlet and the outlet lines for the vacuum blower.

SUBTASK 38-32-00-480-004

- (6) Install the vent plug assembly in the overboard vent outlet for the vacuum blower.

SUBTASK 38-32-00-480-005

- (7) Connect the vacuum (24 Inch Hg Minimum), STD-1134 source or vacuum pump, SPL-9132 to the vent plug assembly.

SUBTASK 38-32-00-010-016

- (8) Get access to the lavatory for the toilet shroud removal.

SUBTASK 38-32-00-010-017

- (9) Remove the toilet shroud as follows:
(a) Turn the latch handle away from the toilet to open the toilet shroud.

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- (b) Pull the bottom edge of the toilet shroud out.
- (c) Move the toilet shroud down until the top edge disengages from the trim strip on the lavatory wall.

SUBTASK 38-32-00-860-022

- (10) Close the manual shutoff valve for each of the toilets on the system for which you do the test.

G. Vacuum Waste System - Leak Test

SUBTASK 38-32-00-790-001

- (1) Supply a vacuum of 18 ±1 inches of Mercury to the vacuum waste system.

SUBTASK 38-32-00-790-002

- (2) Close the control valve at the vacuum source.

SUBTASK 38-32-00-790-003

- (3) Write down the initial pressure after you close the control valve.

SUBTASK 38-32-00-790-004

- (4) Write down the final pressure after 5 minutes.

SUBTASK 38-32-00-790-005

- (5) Make sure the vacuum is between 9 and 19 inches of Mercury after 5 minutes.

SUBTASK 38-32-00-790-006

- (6) Open the control valve at the vacuum source to bleed the vacuum.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-080-003

- (1) Disconnect the vacuum source from the vent plug assembly.

SUBTASK 38-32-00-080-004

- (2) Remove the vent plug assembly from the overboard vent outlet for the vacuum blower.

SUBTASK 38-32-00-080-005

- (3) Remove the vent plugs from the inlet and the outlet lines for the vacuum blower.

SUBTASK 38-32-00-420-005

- (4) Connect the inlet and the outlet connections of the vacuum blower.

SUBTASK 38-32-00-410-005



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (5) Do this task: Sidewall Liner Installation, TASK 25-52-06-400-801.

SUBTASK 38-32-00-410-013

- (6) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-00-860-023

- (7) Open the manual shutoff valve for each of the toilets on the system.

SUBTASK 38-32-00-410-006

- (8) Install the toilet shroud as follows:

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- (a) Move the toilet shroud up until the top edge engages in the trim strip on the lavatory wall.
- (b) Push in on the bottom edge of the toilet shroud.
- (c) Turn the latch handle toward the toilet to engage the toilet shroud.

SUBTASK 38-32-00-410-007

- (9) Close the access to the lavatory.

SUBTASK 38-32-00-860-024

- (10) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

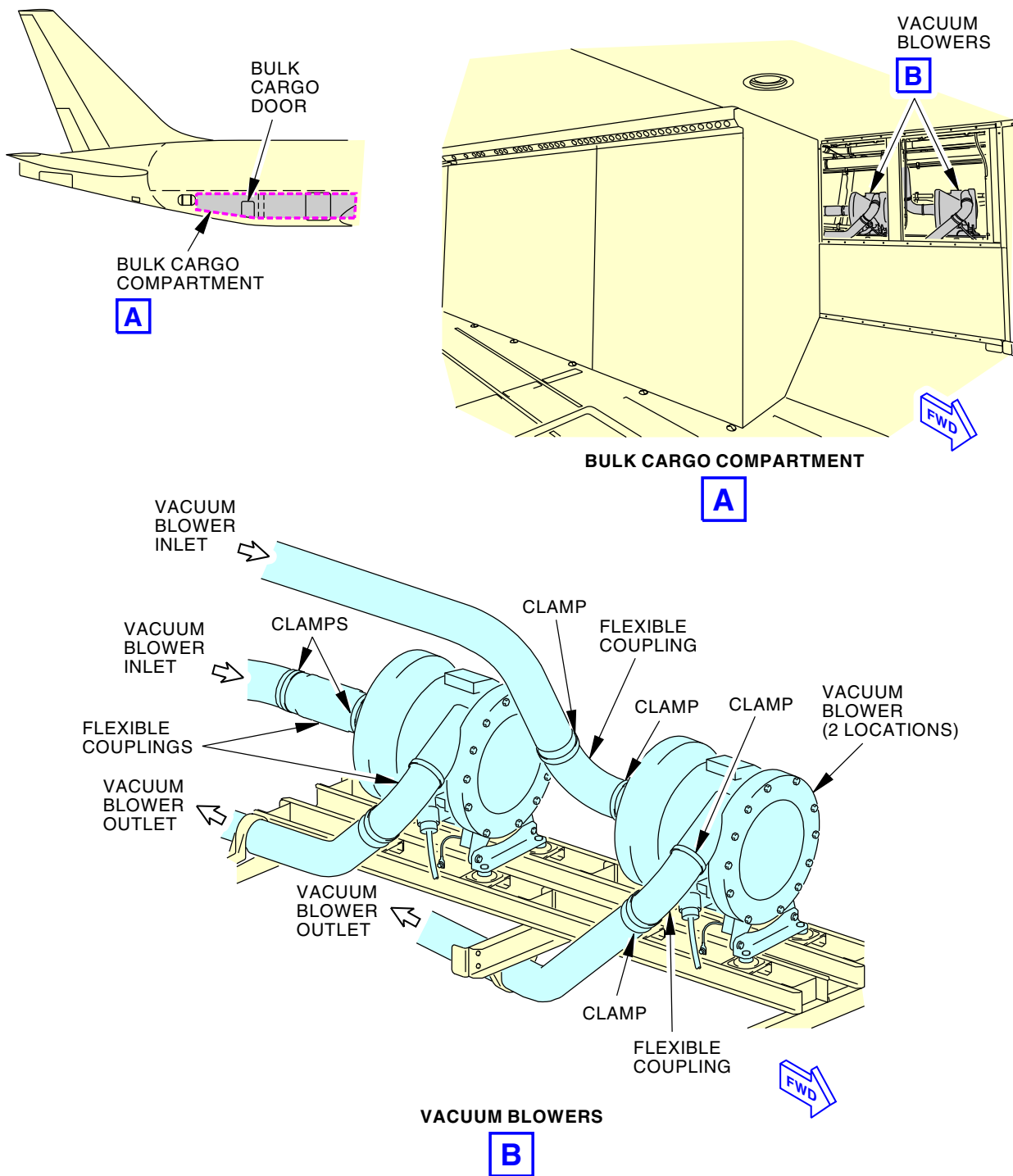
————— **END OF TASK** —————

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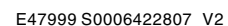
Vacuum System - Leak Test
Figure 501/38-32-00-990-823 (Sheet 1 of 4)

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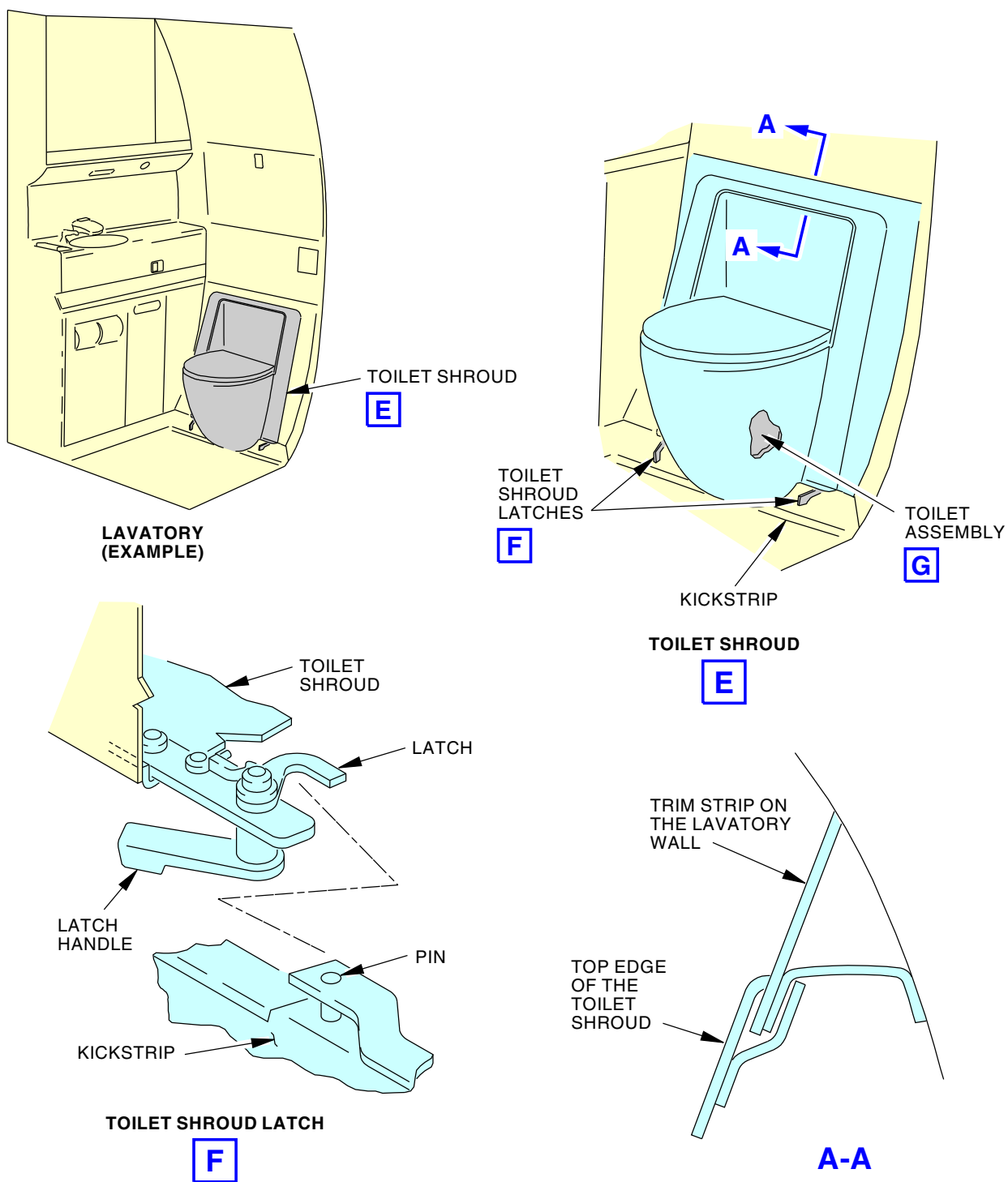
Vacuum System - Leak Test
Figure 501/38-32-00-990-823 (Sheet 2 of 4)

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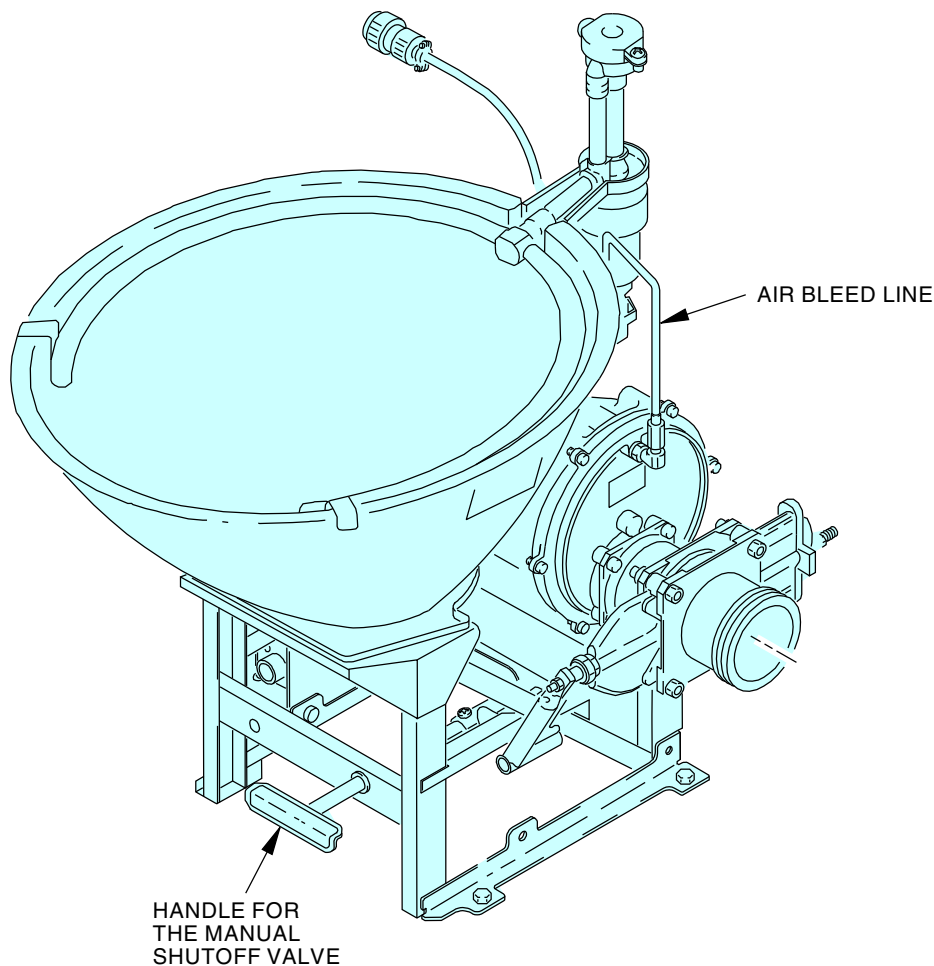
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**Vacuum System - Leak Test
Figure 501/38-32-00-990-823 (Sheet 3 of 4)**

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TOILET ASSEMBLY

G

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**Vacuum System - Leak Test
Figure 501/38-32-00-990-823 (Sheet 4 of 4)**

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TASK 38-32-00-700-802

3. Toilet - Operational Test

A. General

- (1) This procedure gives the instructions to test the vacuum waste system from the toilet.

B. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Prepare for the Test

SUBTASK 38-32-00-860-025

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-860-026

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-00-010-018

- (3) Get access to the lavatory for the toilet test.

E. Toilet - Operational Test

SUBTASK 38-32-00-860-032

- (1) Make sure the potable water system is not empty.
- (a) If the potable water system is empty, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.
- (b) If the potable water system is not empty, then continue.

SUBTASK 38-32-00-710-009

- (2) Operate the toilet flush switch.

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SUBTASK 38-32-00-790-007

- (3) Make sure the vacuum blower operates immediately.

SUBTASK 38-32-00-710-010

- (4) Make sure that water flows from all of the nozzles in the rinse ring of the toilet.

NOTE: The water must not come out of the toilet bowl as a mist.

SUBTASK 38-32-00-710-011

- (5) Make sure the toilet flush valve opens to remove all of the water from the toilet bowl.

SUBTASK 38-32-00-710-012

- (6) Make sure the toilet flush valve closes after all of the water is removed.

NOTE: A partially open valve will cause air noise at the toilet when any toilet on the system is activated.

SUBTASK 38-32-00-710-013

- (7) Make sure the vacuum blower stops after approximately 15 seconds.

SUBTASK 38-32-00-710-014

- (8) Do the Toilet - Operational Test again for the other toilets in the vacuum waste system.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-410-009

- (1) Close the access to the lavatory.

————— END OF TASK —————

TASK 38-32-00-700-803

4. Waste Drain System - Functional Test

(Figure 502)

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This procedure gives the instructions to do a functional test of the waste drain system.
- (2) This functional test can be done by one of the two procedures as follows.
 - (a) It is necessary to use a special tool for the first procedure.
 - (b) It is not necessary to use a special tool for the second procedure.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
38-32-03-000-801	Waste Drain Ball Valve Removal (P/B 401)
38-32-03-400-801	Waste Drain Ball Valve 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.

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Reference	Description
SPL-1948	Equipment - Pressurization, Waste Drain System Part #: J38001-20 Supplier: 81205 Opt Part #: J38001-16 Supplier: 81205
STD-1114	Air Source - Regulated, Dry, Filtered 0-150 PSIG with Pressure Gauge range 100 PSIG, 1 PSIG increment and +/-1 psi minimum accuracy

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

F. Prepare for the Test

SUBTASK 38-32-00-860-028

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-610-006

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-00-010-019

- (3) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-32-00-010-020

- (4) To remove the access panel for the waste tank service panel, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.

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SUBTASK 38-32-00-010-021

- (5) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

G. Waste Drain System - Functional Test With Pressurization Tool

SUBTASK 38-32-00-860-029

- (1) Make sure the waste drain ball valves are closed.

SUBTASK 38-32-00-860-030

- (2) Make sure the waste drain valve assembly is closed.

SUBTASK 38-32-00-010-022

- (3) Remove the cap on the waste drain elbow above the waste tank service panel.

SUBTASK 38-32-00-480-006

- (4) Connect the pressurization waste drain system pressurization equipment, SPL-1948 to the waste drain elbow.

SUBTASK 38-32-00-480-007

- (5) Connect the Regulated Dry Filtered Air Source, STD-1114 to the pressurization equipment.

SUBTASK 38-32-00-780-002

- (6) Supply pressure of 3.0 ± 0.5 psig to the waste drain system.

SUBTASK 38-32-00-780-003

- (7) Close the control valve at the pressure source.

SUBTASK 38-32-00-780-004

- (8) Write down the initial pressure after you close the control valve.

SUBTASK 38-32-00-780-005

- (9) Write down the final pressure after 5 minutes.

SUBTASK 38-32-00-780-006

- (10) Make sure that the pressure drop is not more than 1 psig after 5 minutes.

SUBTASK 38-32-00-780-007

- (11) Open the control valve at the pressure source to bleed the pressure.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-080-006

- (1) Disconnect the air source from the pressurization equipment.

SUBTASK 38-32-00-080-007

- (2) Remove the pressurization equipment from the waste drain elbow.

SUBTASK 38-32-00-410-010

- (3) Install the cap on the waste drain elbow above the waste tank service panel.

SUBTASK 38-32-00-410-011



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (4) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

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SUBTASK 38-32-00-410-012

- (5) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-00-610-007

- (6) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-410-015

- (7) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

SUBTASK 38-32-00-860-031

- (8) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

I. Waste Drain System - Functional Test Without Pressurization Tool

SUBTASK 38-32-00-860-046

- (1) Make sure the waste drain ball valves are closed.

SUBTASK 38-32-00-860-047

- (2) Make sure the waste drain valve assembly is closed.

SUBTASK 38-32-00-780-008



DO NOT FILL THE WASTE TANK WITH MORE THAN 60 GALLONS. IF YOU FILL THE WASTE TANK ABOVE ITS CAPACITY, WATER CAN CAUSE DAMAGE TO THE VACUUM BLOWER.

- (3) Fill the waste tank with approximately 50 gallons of water.

SUBTASK 38-32-00-780-009

- (4) Wait for 30 minutes.

SUBTASK 38-32-00-860-048

- (5) Open the waste drain valve assembly at the service panel.

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SUBTASK 38-32-00-780-010

- (6) Make sure there is no water at the waste drain valve assembly.
- (a) The test is satisfactory if there is no water at the waste drain valve assembly.
 - (b) If there is water at the waste drain valve assembly,
These are the tasks:
Waste Drain Ball Valve Removal, TASK 38-32-03-000-801,
Waste Drain Ball Valve Installation, TASK 38-32-03-400-801.

SUBTASK 38-32-00-410-037

- (7) Close the waste drain valve assembly.

SUBTASK 38-32-00-010-049

- (8) Pull the handle to open the waste drain ball valve for the filled waste tank.

SUBTASK 38-32-00-200-001

- (9) Let the water sit on the waste drain valve assembly for 5 minutes.

SUBTASK 38-32-00-200-002

- (10) Examine the waste drain valve assembly and the connections for leakage.
- (a) The test is satisfactory if there is no water leaking from the waste drain valve assembly or its connections.
 - (b) If there is water leaking from the waste drain valve assembly or its connections,
These are the tasks:
Waste Drain Valve Removal, Task 38-32-12-000-801
Waste Drain Valve Installation, Task 38-32-12-400-801

J. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-410-018



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

SUBTASK 38-32-00-410-019

- (2) Close this access panel:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 825 | Bulk Cargo Door |

SUBTASK 38-32-00-610-017

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-410-020

- (4) Close this access panel:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|-------------------------|
| 163AL | Waste Tank Service Door |

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SUBTASK 38-32-00-860-049

- (5) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

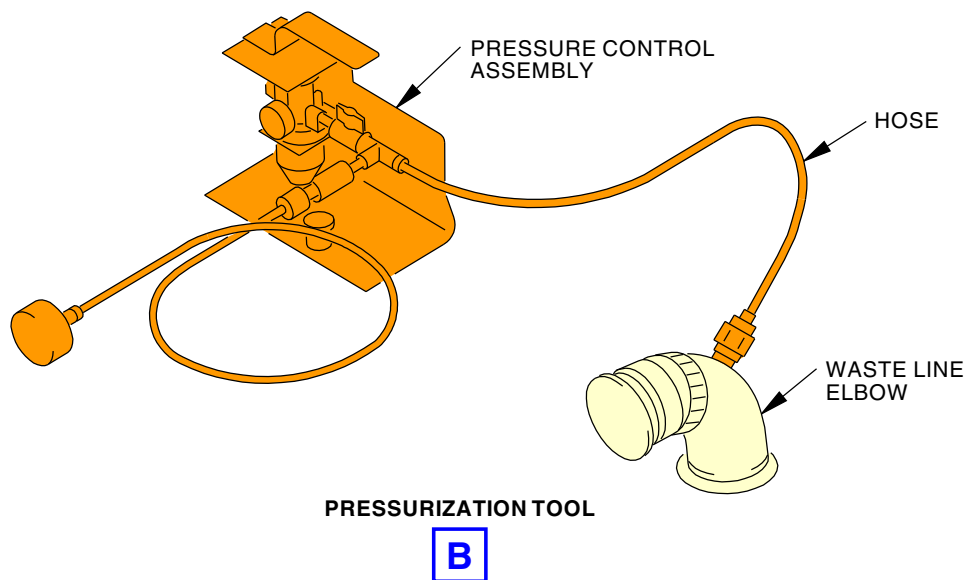
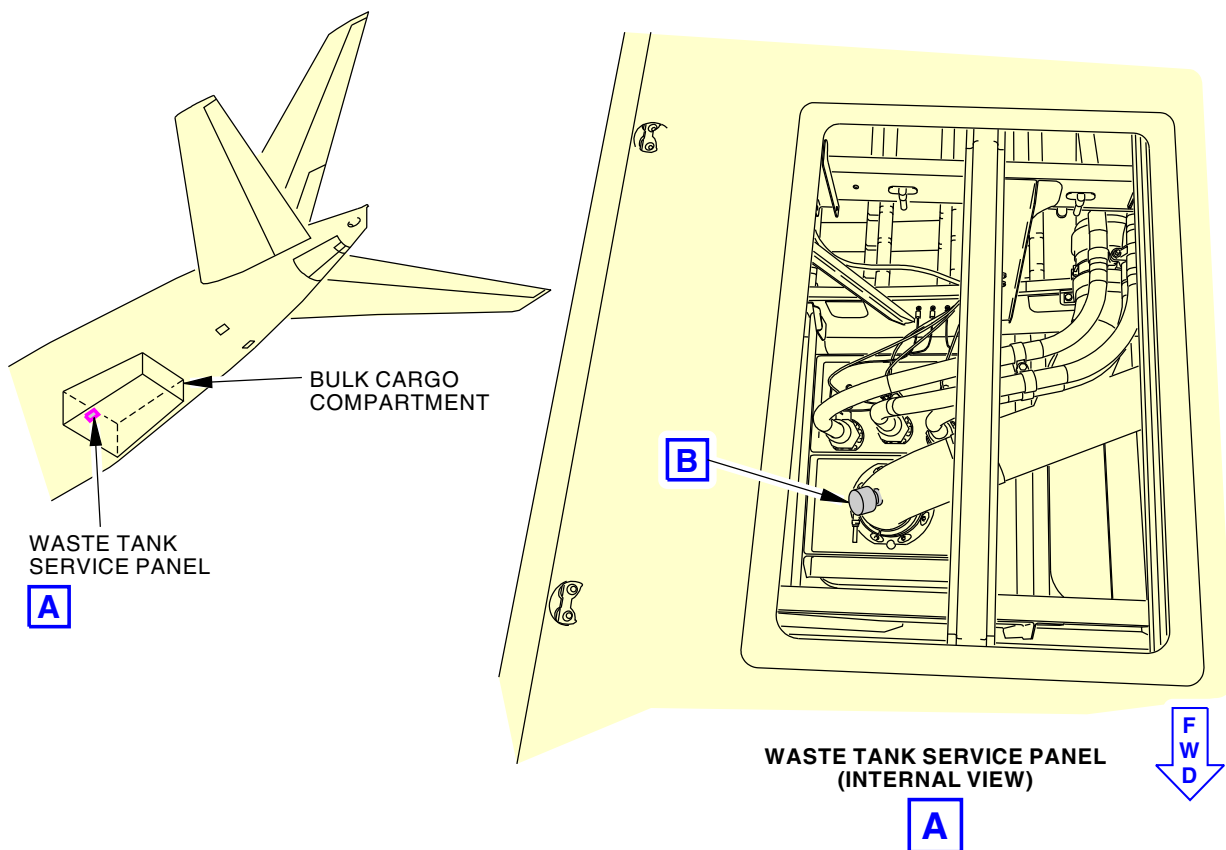
————— END OF TASK —————

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**Waste Drain System - Functional Test
Figure 502/38-32-00-990-808**

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VACUUM WASTE SYSTEM - CLEANING/PAINTING

1. General

- A. This procedure gives the instructions to clean the vacuum waste tubes. Use this procedure to decrease the scale that collects in the vacuum waste tubes. Use operational experience to find which task or mixture of tasks are necessary and the necessary time period between tasks.
- B. If there is too much scale buildup or it quickly reoccurs, make sure that the toilet flush valves fully close. A valve that is not fully closed can cause a drying effect in the tubes. This drying effect can increase the quantity of the scale. If a valve is not fully closed, it will cause air noise at the toilet when a different toilet operates.
- C. If there is too much scale buildup or it quickly reoccurs, the following conditions should be noted:
- (1) Low vacuum conditions can increase the scale in the waste line. It is important to make sure that the vacuum blowers and water separator filters work correctly for correct airflow.
 - (2) Flush valves at the toilets can possibly not fully close because of the mineral scale. This will let a small continuous stream of air to flow through the vacuum line. If a flush valve is not fully closed, it will cause air noise at the toilet when a different toilet operates. This constant airflow can cause the moist scale particles to dry and become very hard. The hard scale is much more resistant to removal.
 - (3) Do the usual, proactive maintenance to keep the waste system clean and free from the scale. Do not let the scale collect and then try to clean the system.
 - (4) The frequency to clean must be adjusted to conditions. It can depend on the usage, water type and length of flight. If noticeable scale collects between each Periodic Maintenance task, increase the frequency of maintenance.
- D. This procedure has these tasks:
- (1) A cleaning by a periodic flush of chemical through the vacuum waste system.
NOTE: You use this procedure to keep the vacuum waste lines clean of the waste build-up. To get the maximum effect, you must frequently do this task. Frequency and amount is operator determined.
 - (2) A pressure washer cleaning of the vacuum waste lines.
NOTE: You use this procedure to clean the vacuum waste lines of the waste build-up. To get the maximum effect, you must use this procedure before you have frequent problems with the vacuum waste lines.
 - (3) A pressure test procedure.
NOTE: This procedure is used before the Soak or Recirculate procedure to make sure that the waste lines will not leak.
 - (4) A soak method of cleaning the vacuum waste lines.
NOTE: You use this procedure to clean the vacuum waste lines of the heavy waste build-up. To get the maximum effect, you must use this procedure before the waste lines are fully blocked.
 - (5) A recirculating method of cleaning the vacuum waste lines.
NOTE: You use this procedure to clean the vacuum waste lines of the heavy waste build-up. To get the maximum effect, you must use this procedure before the waste lines are fully blocked.
- E. There are three different waste systems. Each waste system has one waste tank. The lavatory to waste tank connections can be determined by the placard data on the waste tanks.

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TASK 38-32-00-100-801

2. Periodic Flush - Vacuum Waste System Cleaning

A. General

- (1) This task contains the procedures necessary to clean by a periodic flush of a chemical through the vacuum waste system.

NOTE: You use these procedures to clean a waste build-up in the vacuum waste lines. To get the maximum effect, you must frequently do this task. You find the frequency and quantity of the cleaner by operator experience.

- (2) The chemicals used in this task are qualified to the waste tank test in D6-17487. Alternate chemicals must be qualified to D6-17487 to prevent possible damage to the tank.

NOTE: Honey Bee 60 has higher viscosity than Honey Bee 60 T (thin) and 60 TNP (thin no perfume) and is the preferred Honey Bee 60 variant in applications where the surfaces to be cleaned will not be fully immersed in or continuously exposed to cleaning fluid, such as periodic flush cleaning procedures. The higher viscosity helps the cleaning fluid adhere to and clean these surfaces.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)

C. Consumable Materials

Reference	Description	Specification
B00636	Acid, Acetic (Vinegar) (5%-10% Acetic Acid)	Commercially available product
B00638	Cleaner - Acidic Liquid - Honey Bee 60 (McGean-Rohco)	
B50091	Cleaner - Gly-Vak Toilet Line Scale Remover	AMS 1550B
B50116	Toilet Soak Cleaner - Sani-Tank SP-8000N (Neutral pH and no phosphates)	AMS 1550B
B50329	Cleaner - Acidic Liquid - Honey Bee 60 T	
B50330	Cleaner - Acidic Liquid - Honey Bee 60 TNP	
G50461	Ice - Crushed, 0.50-inch (12.70 mm) to 0.75-inch (19.05 mm) maximum	

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Prepare for Cleaning

SUBTASK 38-32-00-010-024

- (1) Get access to the passenger compartment.

SUBTASK 38-32-00-610-008

- (2) If the waste tanks are more than half full, do this task: Waste Tank Servicing, TASK 12-17-01-610-801 but do not do the steps add precharge.

SUBTASK 38-32-00-610-022

- (3) For waste line cleaning with Procedure I or Procedure III do this step.

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- (a) Add approximately 20 gal (76 l) of water to each waste tank.

NOTE: The water will reduce the chance of damage to the tank from ice.

SUBTASK 38-32-00-860-033

- (4) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-860-034

- (5) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

F. Waste Line Cleaning

NOTE: Use one of the following Procedures to periodically clean the waste lines.

SUBTASK 38-32-00-170-001

- (1) Procedure I (Crushed Ice and Acid).

Do these steps, if you use the sulfamic acid Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, Honey Bee 60 TNP cleaner, B50330, or the alternative acetic acid, B00636, and crushed ice, G50461:



CAUTION

DO NOT USE LARGE ICE CUBES AS AN ALTERNATIVE TO THE CRUSHED ICE. LARGE ICE CUBES CAN CAUSE DAMAGE TO THE POINT LEVEL SENSORS IN THE WASTE TANK.

- (a) Starting with the forward most toilet, add about 0.5 gal (2 l) of crushed ice, G50461, to the toilet bowl.

NOTE: Keep the temperature of the ice at the coldest possible temperature. The ice should be about 0.5 in. (1 cm) to 0.75 in. (2 cm) in maximum dimension.



WARNING

DO NOT GET THE TOILET SYSTEM CLEANER IN YOUR EYES OR ON YOUR SKIN. IF YOU DO, FLUSH YOUR EYES OR SKIN WITH WATER AND GET MEDICAL AID. IF YOU DRINK THE TOILET SYSTEM CLEANER, GET MEDICAL AID. THE TOILET SYSTEM CLEANER IS AN ACID AND CAN BURN YOU.



CAUTION

DO NOT GET THE TOILET SYSTEM CLEANER ON THE AIRPLANE STRUCTURE. THE TOILET SYSTEM CLEANER IS AN ACID AND CAN CAUSE DAMAGE TO THE AIRPLANE.

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(CAUTION PRECEDES)



USE A CLEANING SOLUTION FROM THE WASTE-TANK TEST SPECIFICATION. OTHER CLEANING SOLUTIONS CAN CAUSE DAMAGE TO THE TANK.

- (b) Add about 2 qt (2 l) of the Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, Honey Bee 60 TNP cleaner, B50330 (recommended), or the 5 to 10% acetic acid, B00636 cleaner (optional) to the toilet bowl.
- (c) Flush the toilet to put the toilet system cleaner into the waste line.
- (d) Flush the toilet to remove the toilet system cleaner from the toilet bowl.
- (e) Repeat steps (a), through (d) for each toilet, moving from forward to aft.
- (f) Let the toilet system cleaner stay in the waste lines as long as possible.

NOTE: The results are better if you let the cleaner stay in the waste line longer. No additional flushing of each toilet is required until the next passenger's normal usage of the lavatory. These cleaners are safe for long term exposure to the waste lines.

SUBTASK 38-32-00-170-011

- (2) Procedure II (Chemical Without Crushed Ice).

Do these steps, if you use the glycolic acid Gly-Vak toilet line scale remover, B50091 (Gly-Vak®), to prevent the formation of new scale:



DO NOT GET THE TOILET SYSTEM CLEANER IN YOUR EYES, OR ON YOUR SKIN. FLUSH THE CLEANER FROM YOUR EYES AND SKIN WITH WATER. IF YOU DRINK THE TOILET SYSTEM CLEANER, GET MEDICAL AID. THE TOILET SYSTEM CLEANER IS AN ACID. IT CAN BURN YOU.



DO NOT GET THE TOILET SYSTEM CLEANER ON THE STRUCTURE OF THE AIRPLANE. THE TOILET SYSTEM CLEANER IS AN ACID. IT CAN CAUSE DAMAGE TO THE AIRPLANE.



USE A CLEANING SOLUTION FROM THE WASTE-TANK TEST SPECIFICATION. OTHER CLEANING SOLUTIONS CAN CAUSE DAMAGE TO THE TANK.

- (a) Starting with the forward most toilet, add about 8 fl-oz (0.24 l) of the Gly-Vak toilet line scale remover, B50091, to the toilet bowl.

NOTE: The quantity of the cleaner necessary to clean a vacuum toilet line changes with the length and condition of the line. The material manufacturer recommends up to 1 qt (1 l). Operator experience shows that 8 fl-oz (0.24 l) is sufficient for short vacuum toilet lines. For longer vacuum toilet lines, use more of the cleaner. The frequency you clean and the quantity of the Gly-Vak toilet line scale remover, B50091, is established by the operator experience.

- (b) Flush the toilet to put the toilet system cleaner into the waste line.
- (c) Repeat steps (a) and (b) for each toilet, moving from forward to aft.

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- (d) Let the toilet system cleaner stay in the waste lines as long as possible.

NOTE: The results are better if you let the cleaner stay in the waste line longer. No additional flushing of each toilet is required until the next passenger's normal usage of the lavatory. These cleaners are safe for long term exposure to the waste lines.

SUBTASK 38-32-00-110-009

- (3) Procedure III (Alternate Chemical With Crushed Ice)

Do these steps, if you use the glycolic acid Sani-Tank SP-8000N toilet soak cleaner, B50116 (Sani-Tank® Neutral), and crushed ice, G50461, to clean up to 0.125 in. (3 mm) of scale:



CAUTION

DO NOT USE LARGE ICE CUBES AS AN ALTERNATIVE TO THE CRUSHED ICE. LARGE ICE CUBES CAN CAUSE DAMAGE TO THE POINT LEVEL SENSORS IN THE WASTE TANK.

- (a) Starting with the forward most toilet, add about 1 qt (1 l) of crushed ice, G50461, to the toilet bowl.

NOTE: Keep the temperature of the ice at the coldest possible temperature. The ice should be about 0.5 in. (1 cm) to 0.75 in. (2 cm) in maximum dimension.



WARNING

DO NOT GET THE TOILET SYSTEM CLEANER IN YOUR EYES, OR ON YOUR SKIN. FLUSH THE CLEANER FROM YOUR EYES AND SKIN WITH WATER. IF YOU DRINK THE TOILET SYSTEM CLEANER, GET MEDICAL AID. THE TOILET SYSTEM CLEANER IS AN ACID. IT CAN BURN YOU.



CAUTION

DO NOT GET THE TOILET SYSTEM CLEANER ON THE STRUCTURE OF THE AIRPLANE. THE TOILET SYSTEM CLEANER IS AN ACID. IT CAN CAUSE DAMAGE TO THE AIRPLANE.



CAUTION

USE A CLEANING SOLUTION FROM THE WASTE-TANK TEST SPECIFICATION. OTHER CLEANING SOLUTIONS CAN CAUSE DAMAGE TO THE TANK.

- (b) Add about 1 qt (1 l) of the Sani-Tank SP-8000N toilet soak cleaner, B50116, to the toilet bowl.

NOTE: The quantity of the cleaner necessary to clean a vacuum toilet line changes with the length and condition of the line. The material manufacturer recommends 1 qt (1 l). Operator experience shows that 1 qt (1 l) is sufficient for short vacuum toilet lines. For longer vacuum toilet lines, use more of the cleaner. The frequency you clean and the quantity of the Sani-Tank SP-8000N toilet soak cleaner, B50116, is established by the operator experience.

- (c) Flush the toilet to put the toilet system cleaner and crushed ice into the waste line.
(d) Repeat steps (a), (b) and (c) for each toilet, moving from forward to aft.
(e) Let the toilet system cleaner stay in the waste lines as long as possible.

NOTE: The results are better if you let the cleaner stay in the waste line longer. No additional flushing of each toilet is required until the next passenger's normal usage of the lavatory. These cleaners are safe for long term exposure to the waste lines.

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- (f) After you complete the full treatment with the Sani-Tank SP-8000N toilet soak cleaner, B50116, and crushed ice, do this step:
- 1) Do the preventative maintenance using Gly-Vak toilet line scale remover, B50091, as shown in Procedure II.

G. Return the Airplane to its Usual condition

SUBTASK 38-32-00-610-009

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-410-014

- (2) Close the access to the passenger compartment.

————— END OF TASK —————

TASK 38-32-00-100-802

3. Pressure Washer Cleaning of the Vacuum Waste Lines

(Figure 701)

A. General

- (1) To clean the vacuum waste lines with the pressure washer, you must get access at one of these locations:
 - (a) In the lavatory with the toilet assembly removed when you do not open the toilet flush valve.
 - (b) At one of the cleanout ports in the forward cargo compartment with which the removal of the bulkhead lining panel is necessary.
 - (c) In the lavatory, with the toilet flush valve open. When you use this procedure, the bends of the pressure washer hose will be more than the other procedures.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-17-000-801	Forward Cargo Compartment Aft End Wall Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft End Wall Installation (P/B 401)
38-30-00-910-803	Waste System - Toilet Connection Removal (Reconfiguration) (P/B 201)
38-32-00-700-801	Vacuum Waste System - Leak Test (P/B 501)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-32-00-980-802	Toilet Flush Valve - Open for Maintenance (P/B 201)
38-32-01-000-801-001	Vacuum Toilet Assembly Removal (P/B 401)
38-32-01-400-801-001	Vacuum Toilet Assembly Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-419	Gloves - Rubber, Elbow Length
STD-1136	Facepiece (Mask) - Particulate Filtering, Disposable (NIOSH N95 approved)
STD-1137	Glasses - Safety
STD-1138	Tubing - Flexible, 1.5 Inch Outside Diameter

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Reference	Description
STD-1286	Equipment - Pressure Washer, Electric or Diesel Driven, 1500 PSIG to 2500 PSIG with Adjustable Output Pressure
STD-1287	Hose - Pressure Washer, 3/8 Inch I.D. 50 to 150 Foot Length
STD-1288	Nozzle - Rotating, for 3/8 Inch I.D. Hose (Self-Feeding Rotating Nozzle is Recommended)
STD-1289	Guide Spring - Nozzle, for 3/8 Inch I.D. Nozzle

D. Consumable Materials

Reference	Description	Specification
B00637	Acid, Citric	A-A-59147
G00022	Compound - Chlorine Dioxide For Water Purification - Purogene or Oxine	
G02315	Clothing - Disposable Gown, Gloves For Sewage Handling	

E. Location Zones

Zone	Area
200	Upper Half of Fuselage

F. Prepare for Cleaning

SUBTASK 38-32-00-010-028

- (1) Get access to the passenger compartment.

SUBTASK 38-32-00-010-029

- (2) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-910-013

- (3) For the work on the waste equipment, make sure you wear these items for your protection.

NOTE: These are items that you can wear to give you protection when it is necessary.

- (a) Elbow length elbow length rubber gloves, STD-419
- (b) Face filtering facepiece, STD-1136
- (c) Safety safety glasses, STD-1137
- (d) Disposable clothing, G02315

SUBTASK 38-32-00-610-014

- (4) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: After 5 minutes, drain the precharge from the waste tank.

SUBTASK 38-32-00-860-043

- (5) Start this procedure at a toilet which is upstream of the vacuum waste line to be cleaned.

NOTE: Areas upstream of the bends have the most waste material build-up on the waste tube walls. For the primary layout of the vacuum waste lines see this reference, (TASK 38-30-00-910-803).

SUBTASK 38-32-00-160-010

- (6) If the toilet is full of waste, do these steps to remove the waste in the toilet bowl, if a waste system is serviceable:
 - (a) Install a length of 1.5 inch flexible 1.5 inch outside diameter flexible tubing, STD-1138 from a serviceable toilet to the blocked toilet.

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- (b) Flush the serviceable toilet to drain the toilet bowl of the blocked toilet.
- (c) Make sure the toilet bowl is empty.
- (d) If the toilet bowl is not empty, flush the serviceable toilet again.
- (e) When the toilet bowl is empty, remove the flexible tubing.

SUBTASK 38-32-00-160-011

- (7) Use one to three gallons of the disinfectant that follows:

NOTE: The disinfectant mixture is a solution of chlorine dioxide, citric acid and water.

- (a) Flush the waste line with a chlorine mixture made of Chlorine dioxide (stabilized 2%) Purogene or Oxine compound, G00022 and citric acid, B00637 (crystals or powder) as follows:



DO NOT BREATHE THE CHLORINE DIOXIDE GAS. WHEN THE TWO CHEMICALS ARE MIXED, CHLORINE DIOXIDE GAS IS PRODUCED WHICH CAN CAUSE INJURY TO PERSONS IF THEY BREATHE THE GAS.

- 1) Mix 20 fl-oz (1 l) of Purogene or Oxine compound, G00022 with 2 oz (57 g) of citric acid, B00637 (per gallon of solution needed) in a clean plastic container.
- 2) Stop for 5 minutes (activation period).
- 3) Use a clean instrument to mix the solution fully.
- 4) Add 1 gallon of water to the solution.
- 5) Flush 1-3 gallons (4-11 Liters) of the disinfectant solution into the waste line.

SUBTASK 38-32-00-010-030

- (8) To get access to the waste lines, do one of these steps:

- (a) To remove the toilet from the lavatory, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

NOTE: The toilet assembly removal is necessary to do this procedure from the passenger compartment when you do not open the toilet flush valve.

- (b) To get access and then remove the cap for the cleanout port, do the steps that follow:

NOTE: The removal of the bulkhead liner panel for the forward cargo compartment is necessary to do this procedure.

- 1) Do this task: Forward Cargo Compartment Aft End Wall Removal, TASK 25-52-17-000-801.
- 2) Remove the cap on the cleanout port.

- (c) to open the flush valve of the toilet, do this task: Toilet Flush Valve - Open for Maintenance, TASK 38-32-00-980-802.

NOTE: If you open the flush valve, it is not necessary to do the toilet assembly removal. When you use this procedure, the bends of the pressure washer pressure washer hose, STD-1287 will be more than the other procedures.

SUBTASK 38-32-00-860-044

- (9) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-00-860-045

- (10) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-00-930-001

- (11) Make a mark on the pressure washer pressure washer hose, STD-1287 at approximately 4 feet from the rotating pressure washer nozzle, STD-1288 and nozzle guide spring nozzle, STD-1289.

NOTE: This location is for the removal of the pressure washer pressure washer hose, STD-1287 from the waste tube to keep the pressurized water out of the work area.

G. Waste Line Cleaning

SUBTASK 38-32-00-170-002

- (1) Put the pressure washer pressure washer hose, STD-1287, rotating pressure washer nozzle, STD-1288 and nozzle guide spring nozzle, STD-1289 of the pressure washer pressure washer (1500 PSIG to 2500 PSIG), STD-1286 approximately 4 feet into the waste line.

NOTE: The distance necessary for the nozzle to be put into the waste tube can be different for different manufacturers nozzles. The distance given is to make sure that no pressurized water goes into the work area during this operation.

SUBTASK 38-32-00-170-004



DO NOT USE A PRESSURE OF MORE THAN 2500 PSIG WHEN YOU OPERATE THE PRESSURE WASHER EQUIPMENT. MORE THAN 2500 PSIG CAN CAUSE DAMAGE TO THE WASTE SYSTEM EQUIPMENT.

- (2) Do the steps to operate the pressure washer pressure washer (1500 PSIG to 2500 PSIG), STD-1286 as follows:
- (a) One person must operate the pressure washer pressure washer (1500 PSIG to 2500 PSIG), STD-1286 at the area you use to get access.
 - (b) A second person is necessary at a different toilet in the same waste system to flush that toilet one time between 45 to 75 seconds.

NOTE: It is necessary to flush a toilet to operate the vacuum blower to move the fluids to the waste tank. When the waste tank is full, the waste system automatically stops. You must stop the pressure washer to prevent a more than full condition.

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- (c) If the movement of the pressure washer pressure washer hose, STD-1287 is not easy, put a small quantity of non-foaming dish soap on the hose.

NOTE: This is to lubricate the pressure washer pressure washer hose, STD-1287 in the waste line.

- (d) Turn on the water.

NOTE: If it is available, use hot water.

- (e) Turn on the pressure washer pressure washer (1500 PSIG to 2500 PSIG), STD-1286.
- (f) Slowly put the pressure washer pressure washer hose, STD-1287 of the pressure washer pressure washer (1500 PSIG to 2500 PSIG), STD-1286 into the waste line in approximately 2 feet increments.
- (g) Move the hose forward and then back, 3 or 4 times for the maximum effect in each of the 2 feet sections.
- (h) When you put all the pressure washer hose, STD-1287 into the waste line or the pressure washer nozzle, STD-1288 is at the waste tank, remove the pressure washer hose, STD-1287.

NOTE: Clean the hose while you remove it to prevent contamination of the work area in the airplane.

- (i) When the mark on the pressure washer pressure washer hose, STD-1287 is in the work area, turn the water off.
- (j) Remove the pressure washer pressure washer hose, STD-1287, pressure washer nozzle, STD-1288 and nozzle guide spring nozzle, STD-1289.

SUBTASK 38-32-00-170-005

- (3) Stop the operation of the vacuum blower.

SUBTASK 38-32-00-170-006

- (4) Do this cleaning procedure again if it is necessary.

SUBTASK 38-32-00-170-007

- (5) Clean the work area.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-410-016

- (1) Do one of these steps to close the access:
 - (a) If you removed the toilet from the lavatory, do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.
 - (b) If you removed the cap on the cleanout port, do the steps that follow:
 - 1) Install the cleanout plug.
 - 2) Do this task: Forward Cargo Compartment Aft End Wall Installation, TASK 25-52-17-400-801.
 - (c) if you opened the flush valve of the toilet, push the flush switch in the lavatory to close the flush valve.

SUBTASK 38-32-00-610-015

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-610-016

- (3) Do this task: Vacuum Waste System - Leak Test, TASK 38-32-00-700-801.

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SUBTASK 38-32-00-410-017

- (4) Close the access to the passenger compartment.

———— **END OF TASK** ————

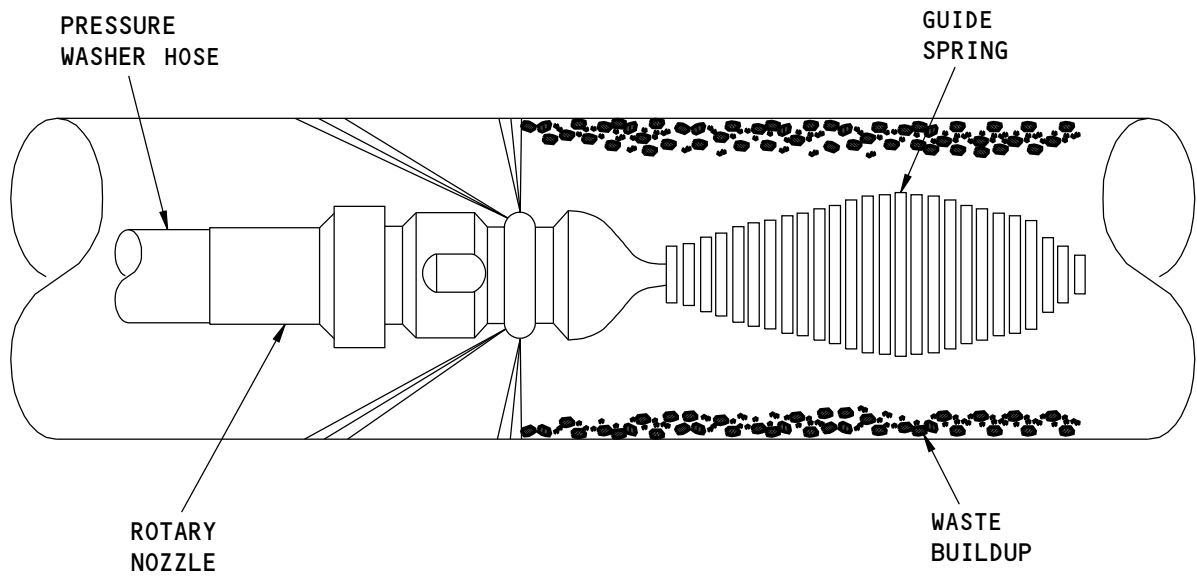
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Pressure Washer Cleaning
Figure 701/38-32-00-990-810

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TASK 38-32-00-780-802

4. Pressure Test Procedure

(Figure 702)

A. General

- (1) This procedure is used before the Soak or Recirculate procedures to make sure that the waste lines will not leak.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (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-1953	Equipment - Pump, Static Soak, Vacuum Lav. System Part #: A38012-39 Supplier: 81205 Opt Part #: A38012-1 Supplier: 81205 Opt Part #: A38012-31 Supplier: 81205
SPL-4780	Equipment - Pump, Recirculating, Vacuum Lav. System Part #: A38012-40 Supplier: 81205 Opt Part #: A38012-18 Supplier: 81205 Opt Part #: A38012-32 Supplier: 81205
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Prepare for Pressurization

SUBTASK 38-32-00-010-038

- (1) Get access to the passenger compartment.

SUBTASK 38-32-00-910-016

- (2) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-610-023

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: After 5 minutes, drain the precharge from the waste tank.

SUBTASK 38-32-00-780-012

- (4) Do a pressure decay check for each waste line to be cleaned as follows:
 - (a) In the farthest upstream lavatory of the waste line, install a Flush Plug and an Air Pressure Assembly from the pump static soak pump equipment, SPL-1953.

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- (b) If you want to test more than one line at the same time, install a Flush Plug in the furthest upstream lavatory of another waste line and connect the lavatories with the Jumper Hose from the recirculating pump equipment, SPL-4780. Additional Jumper hoses must be added for distances over ten feet.

NOTE: Make sure the valves on the Flush Plugs and Jumper Hose are open.

- (c) In the end of the waste line in each lavatory between the most upstream toilet and the waste tank, install a Plug.
- (d) Install a Drain Valve at the end of the waste tube inlet where the section of tubing has been removed.

NOTE: Make sure the valve is in the closed position.

- (e) Connect the pressurization equipment (Figure 702) to the Air Pressure Assembly in the lavatory.
- (f) Pressurize the waste line system to 5 psi (34 kPa) to 10 psi (69 kPa) and then turn off the 0-50 psig dry filtered regulated air source, STD-1082.
- (g) Stop for 5 minutes.
- (h) If the pressure has degraded more than 0.5 psi (3.4 kPa) over the 5 minutes, the system can not safely be cleaned.

NOTE: You must repair all leaks. When you repair the leak, then do this pressure test.

- (i) If the pressure has not degraded by more than 0.5 psi (3.4 kPa), the system is fluid tight.
- (j) Release the pressure from the waste system.
- (k) Disconnect the pressurization equipment, but keep the Air Pressure Assembly, the Plugs and the Flush Plugs in their positions.

———— **END OF TASK** ————

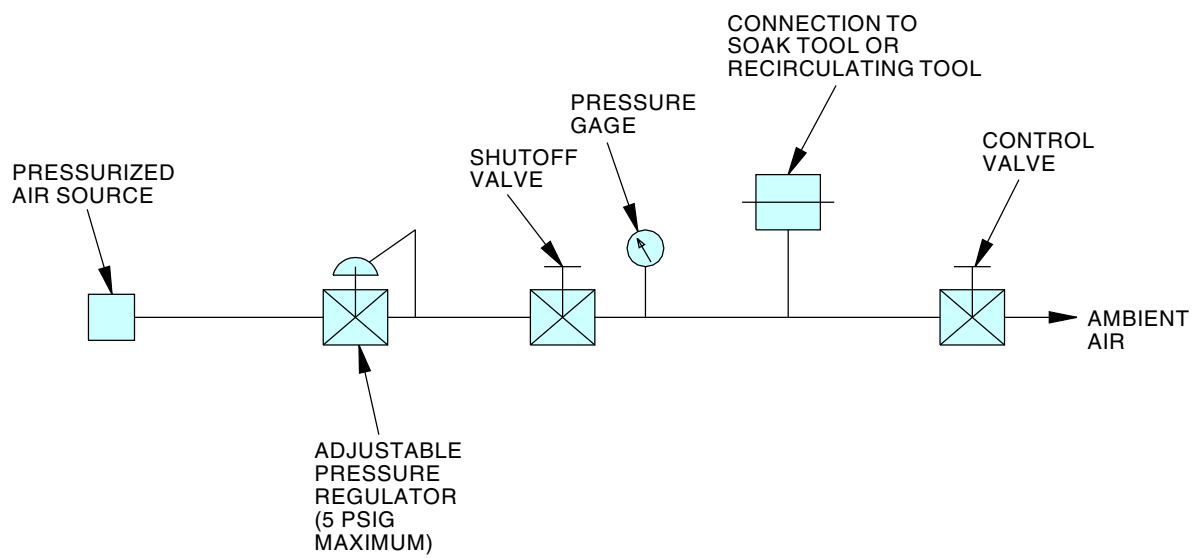
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Pressure Test
Figure 702/38-32-00-990-811

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TASK 38-32-00-100-803

5. Soak Method for Cleaning of the Vacuum Waste Lines

(Figure 703)

A. General

- (1) This procedure gives the instructions to clean the vacuum waste lines. Use this procedure to decrease the scale that collects in the vacuum waste lines.
- (2) To clean the vacuum waste lines using the soak method, you access at one of these locations:
 - (a) In the most forward lavatory for each vacuum waste line with the toilet assembly removed.
 - (b) In each in line lavatory, with the toilet flush valve open.
 - (c) At the last tube prior to the entry of the waste tank for each vacuum waste line to be cleaned with the appropriate sidewall or ceiling lining panel removed.

B. References

Reference	Title
05-51-57-000-802	Corrosion Removal After Acid Spills (P/B 201)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-30-00-910-807	Waste Tube - Maintenance Practice (P/B 201)
38-32-00-700-801	Vacuum Waste System - Leak Test (P/B 501)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-32-01-000-801-001	Vacuum Toilet Assembly Removal (P/B 401)
38-32-01-400-801-001	Vacuum Toilet Assembly 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-1953	Equipment - Pump, Static Soak, Vacuum Lav. System Part #: A38012-39 Supplier: 81205 Opt Part #: A38012-1 Supplier: 81205 Opt Part #: A38012-31 Supplier: 81205
STD-419	Gloves - Rubber, Elbow Length
STD-1056	Container - Solvent Resistant, 5 Gallon (19 Liter)
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1136	Facepiece (Mask) - Particulate Filtering, Disposable (NIOSH N95 approved)
STD-1137	Glasses - Safety
STD-1439	Container - Drum, 55 Gallon (208 Liter)
STD-6928	Coupler Sleeve - AS1654T32
STD-6930	Coupling - AS1655A32

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D. Consumable Materials

Reference	Description	Specification
B00046	Acid - Corrosion Removing, Metal Conditioning, Phosphoric	MIL-C-10578
B00636	Acid, Acetic (Vinegar) (5%-10% Acetic Acid)	Commercially available product
B00637	Acid, Citric	A-A-59147
B00638	Cleaner - Acidic Liquid - Honey Bee 60 (McGean-Rohco)	
B01021	Cleaner - Drain (Enzyme) - Dispoz-All	
B01022	Cleaner - enzyme septic	
B50110	Cleaner - Acidic Liquid - Cedarinse (Seiwa-Pro Co., Ltd.)	
B50273	Cleaner - Acidic Liquid, Vacuum Toilet Line Cleaner - Sani-Vak G3	AMS 1640B
B50329	Cleaner - Acidic Liquid - Honey Bee 60 T	
B50330	Cleaner - Acidic Liquid - Honey Bee 60 TNP	
G00022	Compound - Chlorine Dioxide For Water Purification - Purogene or Oxine	
G02315	Clothing - Disposable Gown, Gloves For Sewage Handling	

E. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
200	Upper Half of Fuselage

F. Prepare for Cleaning

SUBTASK 38-32-00-010-035

- (1) Get access to the passenger compartment.

SUBTASK 38-32-00-010-036

- (2) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-910-014

- (3) For the work on the waste equipment, make sure you wear these items for your protection.

NOTE: These are items that you can wear to give you protection when it is necessary.

- (a) Elbow length elbow length rubber gloves, STD-419
- (b) Face filtering facepiece, STD-1136
- (c) Safety safety glasses, STD-1137
- (d) Disposable clothing, G02315

SUBTASK 38-32-00-610-018

- (4) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: After 5 minutes, drain the precharge from the waste tank.

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SUBTASK 38-32-00-860-053

- (5) Start this procedure at the most forward toilet of the vacuum waste line to be cleaned.

NOTE: Areas upstream of the bends have the most waste material build-up on the waste tube walls. For the primary layout of the vacuum waste lines see this reference, (TASK 38-30-00-910-807).

SUBTASK 38-32-00-160-012

- (6) Disinfect the waste lines. Flush the waste line with 1-3 gallons (4-11 Liters) of the disinfectant solution.

NOTE: The disinfectant is a solution of chlorine dioxide, citric acid, and water.

- (a) Prepare the disinfectant solution as follows:



DO NOT BREATHE CHLORINE DIOXIDE GAS. PUT ON A RESPIRATOR, AND GOGGLES. WHEN THE TWO CHEMICALS MIX, THEY MAKE CHLORINE DIOXIDE GAS. CHLORINE DIOXIDE GAS CAN CAUSE INJURIES TO PERSONNEL IF THEY BREATHE IT.

- 1) For each 1 gal (4 l) of disinfectant solution desired, mix 20 fl-oz (0.6 l) of chlorine dioxide Purogene or Oxine compound, G00022 with 2 oz (57 g) of citric acid, B00637 in a plastic container.
 - 2) Stop for 5 minutes (activation period).
 - 3) Use a clean instrument to mix the solution fully.
 - 4) Add water to make the desired quantity of solution.
- (b) Disinfect the waste line(s) you are cleaning. Pour and flush 1-3 gallons (4-11 Liters) of the disinfectant solution through the toilet bowl, at the most forward toilet, of the vacuum waste line you are cleaning.

NOTE: The quantity of solution necessary to disinfect the vacuum toilet line changes with the length and condition of the line. Operator experience shows that 1 gal (4 l) is sufficient for short vacuum lines, but more than 1 gal (4 l) is necessary for longer vacuum lines. The quantity of disinfectant necessary for a specific vacuum toilet line is established by the operator's experience.

SUBTASK 38-32-00-160-013

- (7) Do this task: Periodic Flush - Vacuum Waste System Cleaning, TASK 38-32-00-100-801.
- (a) Rinse the lines from the most forward toilet with approximately ½ gal (2 l) of water.
 - (b) Turn the water off to the toilet.
 - (c) Flush the toilet without water at least three times.
 - (d) Open these circuit breakers and install safety tags:

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-010-037



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (8) To get access to the waste lines, do one of these steps:
- (a) To remove the waste tank enclosure, do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.
 - (b) Disconnect the last waste tube [1] section before the waste tank inlet.
NOTE: This is the waste line section that will be temporarily replaced by the pump static soak pump equipment, SPL-1953 during the procedure. Ensure that the tool will fit in its place. If not, a section of waste line upstream will need to be chosen.
 - (c) Remove the waste tube from its installed position.
NOTE: Remaining liquid can stay in the waste lines. Be prepared to collect and then discard all of the liquid.
 - (d) For all lavatories on the waste line to be cleaned, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.
NOTE: The toilet assembly removal is necessary to attach the tools for the pressure test and the drain/flush equipment.

SUBTASK 38-32-00-780-011

- (9) Do this task: Pressure Test Procedure, TASK 38-32-00-780-802.
- NOTE: This test is necessary to make sure the waste lines are water tight. If the waste line is not water tight, a leak of the cleaner solution on the airplane structure can occur.

G. Waste Line Cleaning

SUBTASK 38-32-00-110-002

- (1) Prepare the chemical solution to soak the waste line with one of the chemical cleaners that follow:
- NOTE: The quantity of the cleaner necessary for a waste line is 0.16 gallons for each linear foot (2.0 liters for each linear meter). Calculate the maximum quantity of the cleaner necessary for each line to prevent a spill when you fill the waste line.
- (a) Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, or Honey Bee 60 TNP cleaner, B50330
 - (b) Sani-Vak G3, B50273

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- (c) Cedarinse, B50110
- (d) 5 to 10% Acetic acid, B00636
- (e) 7% Phosphoric acid, B00046
- (f) Dispoz-All cleaner, B01021
- (g) enzyme septic cleaner, B01022

SUBTASK 38-32-00-170-008

- (2) Do these steps to fill the waste line with the cleaner solution:

- (a) Assemble the static soak pump equipment, SPL-1953

NOTE: This procedure is used to clean only one waste line at a time. Refer to Figure 703 (Sheet 5) for tool installation schematic.

- 1) At the forward most toilet waste connection [10], connect the flush plug assembly [18] and the air pressure assembly [8] (Figure 703 (Sheet 4)).
- 2) Connect the overflow hose [13] and shutoff valve [14] at the quick-disconnect [15]
- 3) Put the end of the overflow hose [13] in a solvent resistant container (5 gal)(19 Liter), STD-1056 [12] to contain all possible flow of the cleaner solution into the work area in the airplane.
- 4) Connect an air hose [11] to the brass nipple on the air pressure assembly [8].
- 5) In each lavatory between the most forward toilet and the waste tank, install the plug assembly [17].
- 6) In the bulk cargo compartment, on the waste line to be cleaned, make sure that the first segment of the waste tube [1], is disconnected at the elbow on the top of the waste tank (Figure 703).

NOTE: The waste tank is excluded from this cleaning procedure.

- 7) Connect the flexible hose [16] and drain valve [3] to the waste line, at the clamp where the segment was removed, (Figure 703 (Sheet 2)). Use the sleeve, STD-6928 and coupling, STD-6930, as necessary, to connect the flexible hose to the waste line.
- 8) Connect one end of the supply hose [4] to the drain valve [3] at the quick-disconnect [2].
- 9) Connect the other end of the supply hose [4] with the shutoff valves [5] and the quick-disconnects and connect to the drum pump [6] (Figure 703 (Sheet 3)).
- 10) Connect an air hose [7] to the air motor on the drum pump [6].
- 11) Place the drum pump [6] in a 55 gallon (208 liter) drum container, STD-1439 full of the cleaner solution.



DO NOT LET THE CLEANING SOLUTION LEAK FROM THE WASTE SYSTEM INTO THE AIRPLANE. MAKE SURE THAT A PERSON WITH SPILLAGE-PREVENTION EQUIPMENT HAS ACCESS TO EACH LAVATORY THAT IS CONNECTED TO THE WASTE LINE. THE CLEANING SOLUTION CAN CAUSE DAMAGE TO THE AIRPLANE STRUCTURE.

- (b) Turn on the drum pump [6] to fill the waste lines with the cleaner solution slowly, to prevent leakage in the lavatories.

NOTE: When you smell some of the chemical solutions, they can cause persons to be offended while in the airplane. It can be necessary to supply temporary air removal equipment.

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- 1) If you spill the cleaning solution, do this task: Corrosion Removal After Acid Spills, TASK 05-51-57-000-802.
- (c) Fill the waste line until you see the chemical solution in the overflow hose [13] at the forward most lavatory.
- (d) Stop the drum pump [6].

NOTE: The level of the solution in the waste system can decrease and then adjust after a short time.
- (e) Continue to fill the waste line until you see the chemical solution in the overflow hose [13] at the most forward lavatory.
- (f) Close the drain valve [3] on the waste line at the cargo compartment.
- (g) Close all of the valves on the adapters but open the shutoff valve [14] at the most forward lavatory.

NOTE: The most forward point of the waste line must stay open to let all gases come out of the line. The open valve will prevent pressurization and leakage of the system.
- (h) Make sure you put the overflow hose [13] in the most forward lavatory in the solvent resistant container (5 gal)(19 Liter), STD-1056 [12] to prevent leakage into the airplane.

NOTE: It is necessary to empty the container before the cleaner solution flows into the work area in the airplane.
- (i) Close the drain valve [3] in the cargo compartment and then disconnect the supply hose [4].
- (j) To soak one of the other waste lines, do these steps:
 - 1) Connect the supply hose [4] to a different 2 inch adapter on the other waste line.
 - 2) Connect the supply hose [4] to the other waste line.

NOTE: If you use more than one set of tools, other waste lines can be soaked at the same time.
- 3) Use these steps to fill the other waste line(s).

SUBTASK 38-32-00-170-009

- (3) Let the cleaner solution stay in the waste line(s) for a minimum of 8 hours.

NOTE: To fully clean the waste line(s), more than 24 hours can be necessary to remove the heavy scale.

Gases are released during the chemical effect of the cleaner solution and the scale. Do a check of the container at regular times to prevent flow of the cleaner solution in the airplane.

H. Drain the Waste Line

SUBTASK 38-32-00-680-001

- (1) Do these steps to drain the chemical solution from the system:
 - (a) Prepare to collect (for disposal) all of the chemical solution and water used to flush the system in the waste lines.
 - (b) Make sure you attach the supply hose [4] to the waste line to be drained.
 - (c) Connect the shutoff valve [19] to the drain end assembly [20] on the 55 gallon (208 liter) drum container, STD-1439 to hold the used chemical solution.
 - (d) Open the drain valve [3] used to fill the waste line.
 - (e) Open the shutoff valve [19] in the hose at the container to drain the waste line.

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- (f) Open the pressure regulator [9] valve installed on the most forward toilet to let the air into the waste line.
- (g) To flush the waste line, do the steps that follow:
 - 1) Connect a water source (0-60 PSIG), STD-1088 to the pressure regulator [9].
 - 2) Flush the waste line with a minimum of 5 gal (19 l) of water for each toilet on the waste line.
 - 3) Connect a 0-50 psig dry filtered regulated air source, STD-1082 to the pressure regulator [9].
 - 4) Dry the waste line with air flow (under 15 psi (103 kPa)) for approximately 5 minutes.
- (h) Stop until the cleaner solution/water is fully drained from the waste line.
- (i) If it is necessary to drain other waste lines, do these steps again to drain waste lines.

SUBTASK 38-32-00-860-054

- (2) Do these steps to remove the tools:

- (a) In the most forward lavatory, remove the air pressure assembly [8] and the flush plug assembly [18].
- (b) In each lavatory between the most forward toilet and the waste tank, remove the plug assemblies [17].
- (c) Do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.
- (d) Disconnect the drum pump [6] from the supply hose [4].

NOTE: Remaining liquid can stay in the waste lines. Be prepared to collect and then discard all of the liquid.

- (e) In the bulk cargo compartment, disconnect the flexible hose [16] and drain valve [3] from the waste line, at the clamp where the segment was removed, (Figure 703 (Sheet 2)).
- (f) Make sure all solid material is out of the waste line before you connect the waste line to the waste tank.

NOTE: Remaining solid material in the waste lines can cause blocked waste lines after you complete this procedure.

- (g) Put the waste tube in its installed position.
- (h) At the waste connection on the top of the waste tank, connect the first segment of the waste tube [1] to the waste tank inlet of the line that was cleaned (Figure 703).

NOTE: Repeat this procedure for each line to be cleaned.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-410-025

- (1) Do these steps complete this task:
 - (a) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.
 - (b) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-610-019

- (2) To push other solid material out of the waste system, do one of these procedures:
- (a) Do this task: Periodic Flush - Vacuum Waste System Cleaning, TASK 38-32-00-100-801.
 - (b) Do this task: Pressure Washer Cleaning of the Vacuum Waste Lines, TASK 38-32-00-100-802.

SUBTASK 38-32-00-610-020

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-610-021

- (4) Do this task: Vacuum Waste System - Leak Test, TASK 38-32-00-700-801.

SUBTASK 38-32-00-410-026

- (5) Close the access to the passenger compartment.

SUBTASK 38-32-00-910-015

- (6) Obey the local authorities to discard the chemical solution.

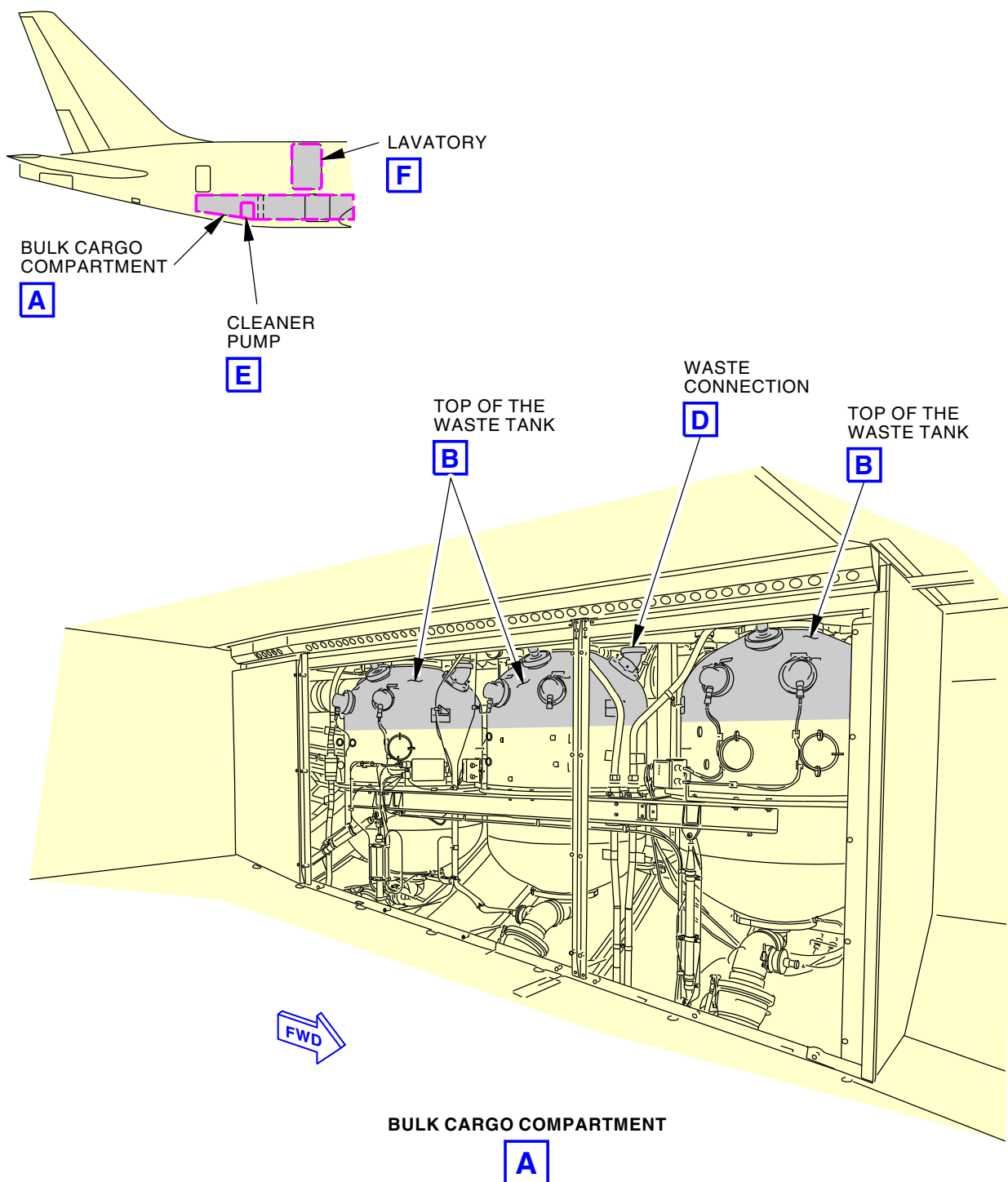
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Soak Waste Line Cleaning
Figure 703/38-32-00-990-812 (Sheet 1 of 5)

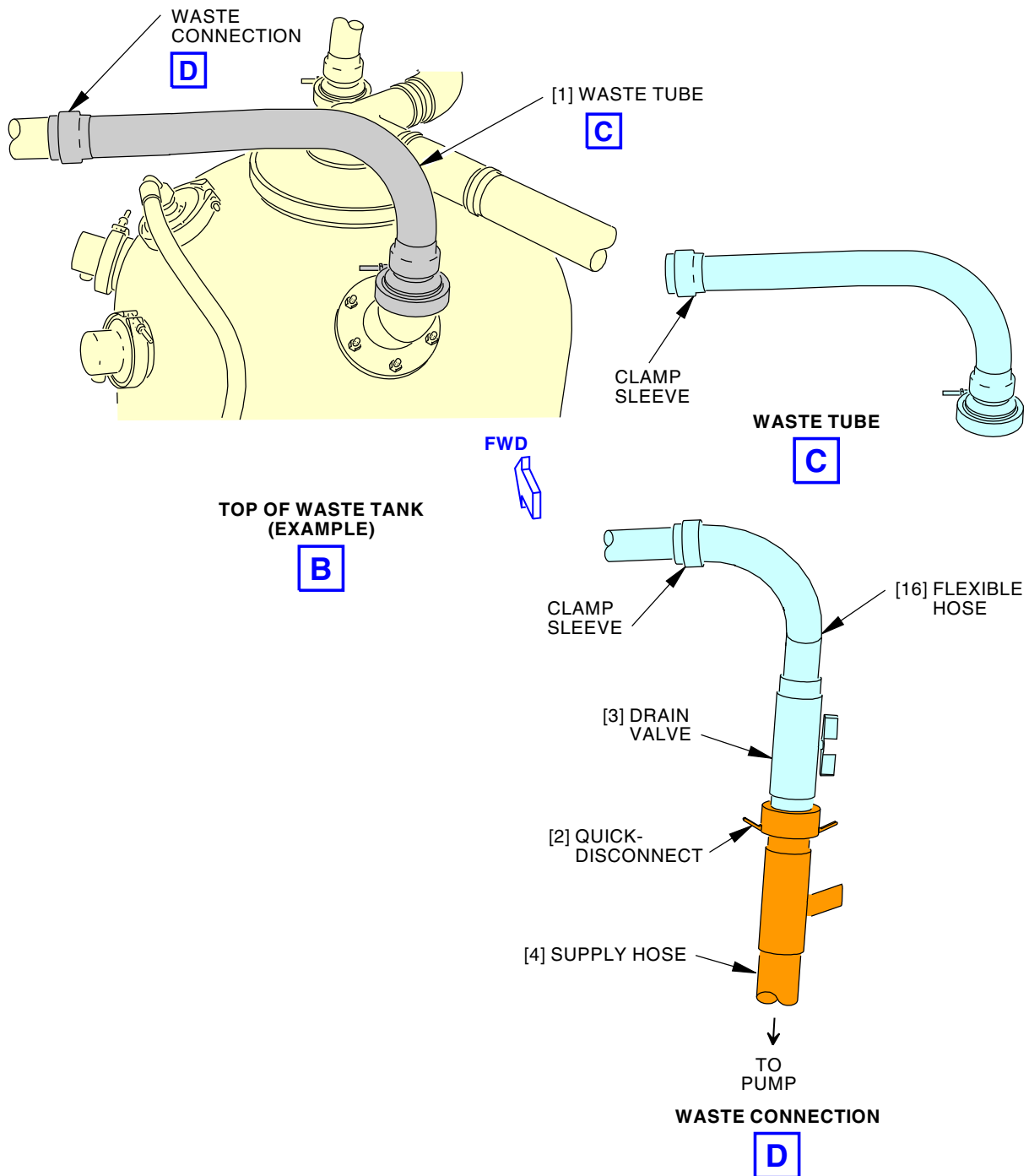
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777-200/300
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Soak Waste Line Cleaning
Figure 703/38-32-00-990-812 (Sheet 2 of 5)

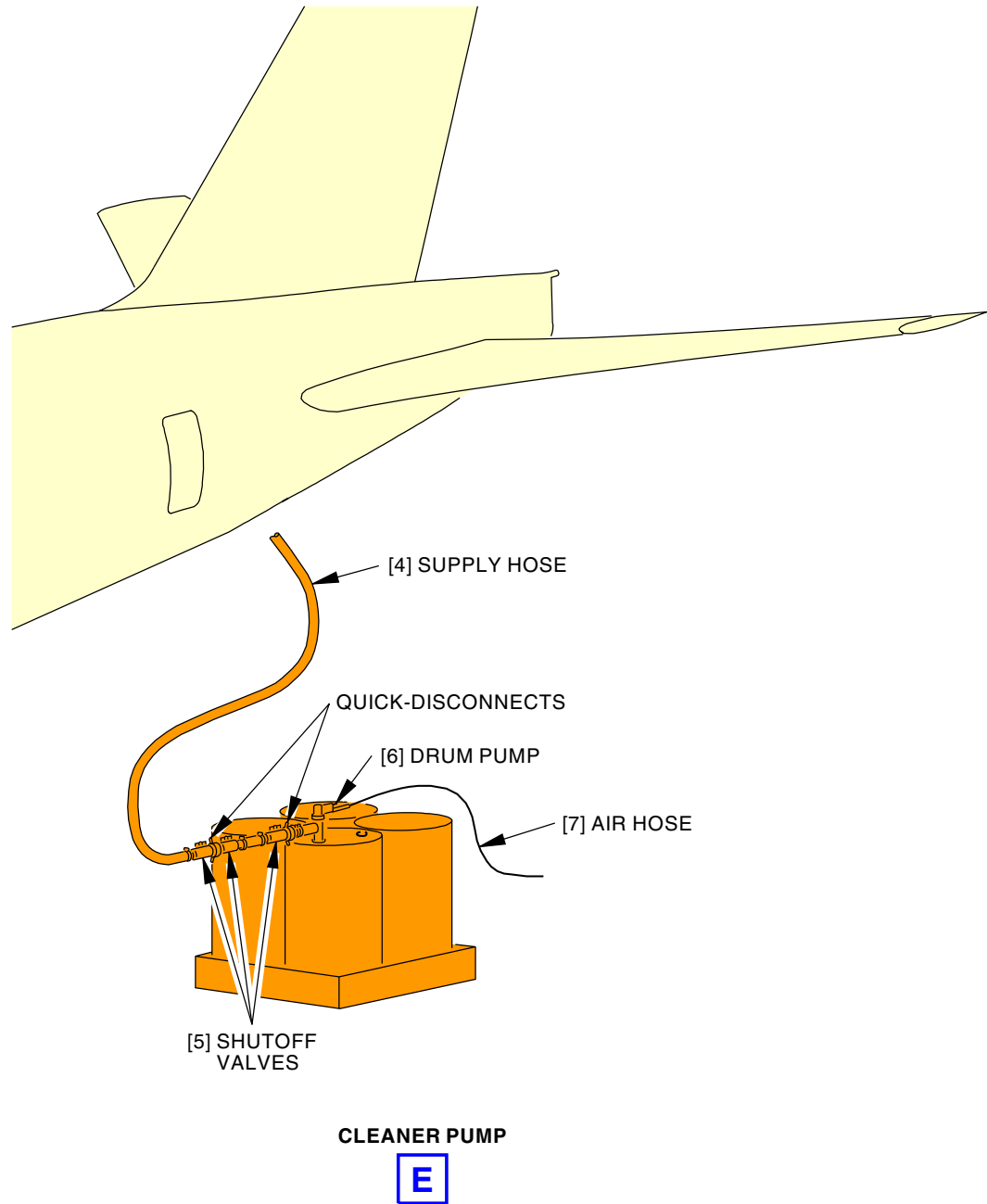
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Soak Waste Line Cleaning
Figure 703/38-32-00-990-812 (Sheet 3 of 5)

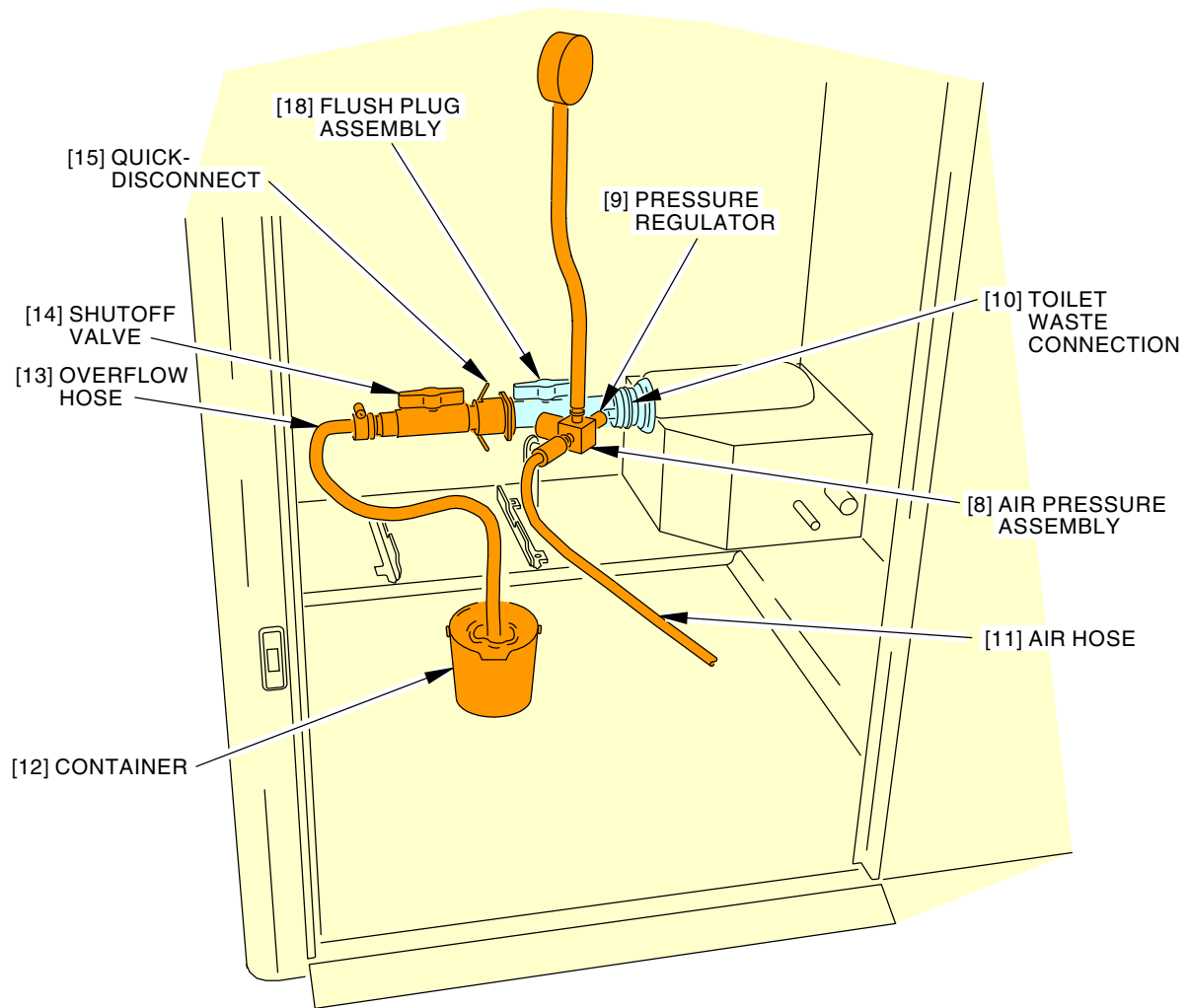
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LAVATORY
(EXAMPLE)

F

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Soak Waste Line Cleaning
Figure 703/38-32-00-990-812 (Sheet 4 of 5)

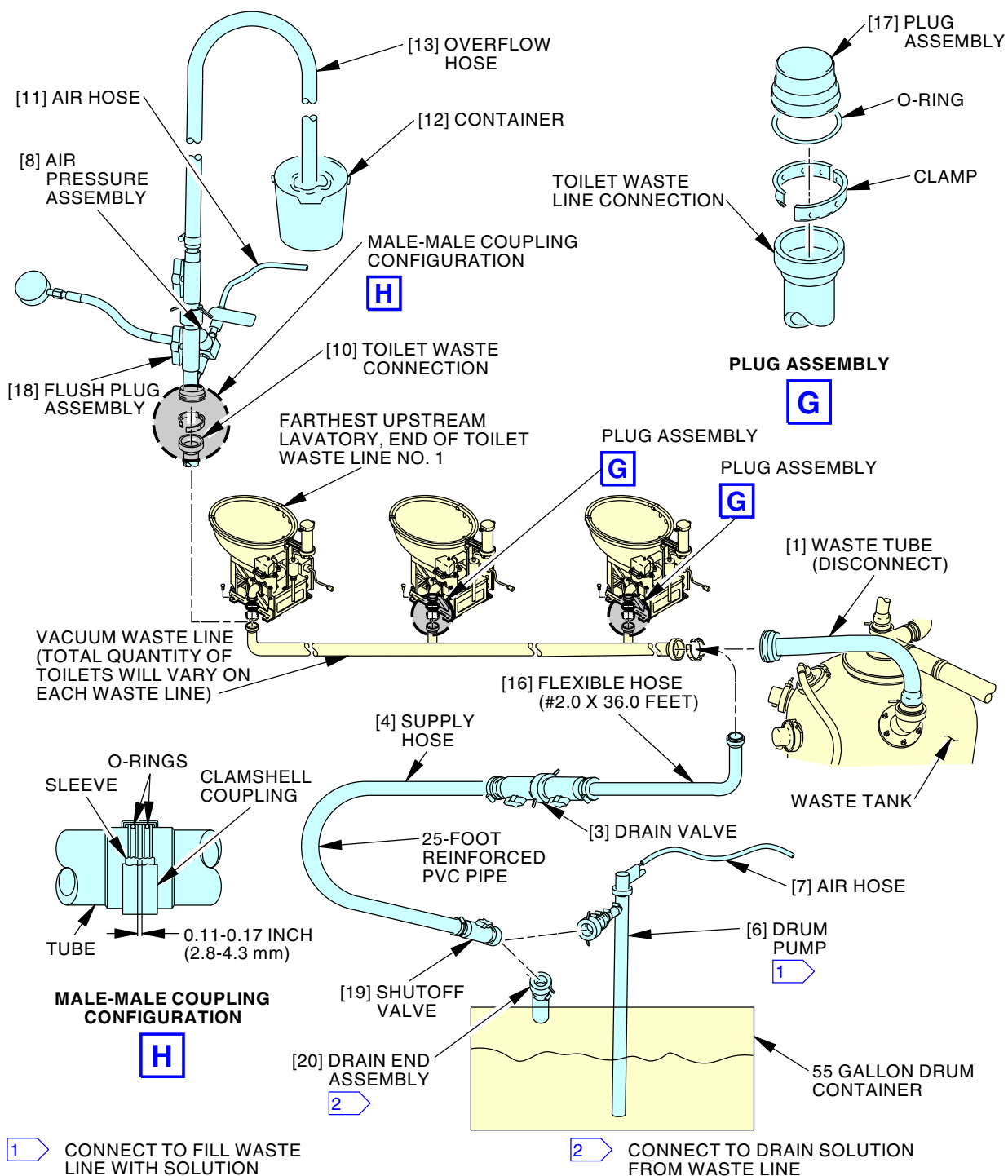
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J70173 S0000175476 V3

Soak Waste Line Cleaning
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TASK 38-32-00-110-801

6. Recirculate Method of Cleaning the Vacuum Waste Lines

(Figure 704)

A. General

- (1) This procedure gives the instructions to clean the vacuum waste tubes. Use this procedure to decrease the scale that collects in the vacuum waste tubes.
- (2) One set of tools can connect two waste lines and will allow separate cleaning of the forward, mid, or aft toilet systems. Additional tool sets will allow the different toilet systems to be cleaned at the same time.
- (3) To clean the vacuum waste lines using the recirculate method, you must get access at these locations:
 - (a) In the lavatory with the toilet assembly removed.
 - (b) At the waste tube inlets to the waste tanks of the waste lines to be cleaned, where removal of the waste tank enclosure panel is necessary.

B. References

Reference	Title
05-51-57-000-802	Corrosion Removal After Acid Spills (P/B 201)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-30-00-910-807	Waste Tube - Maintenance Practice (P/B 201)
38-32-00-700-801	Vacuum Waste System - Leak Test (P/B 501)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-32-01-000-801-001	Vacuum Toilet Assembly Removal (P/B 401)
38-32-01-400-801-001	Vacuum Toilet Assembly 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-4780	Equipment - Pump, Recirculating, Vacuum Lav. System Part #: A38012-40 Supplier: 81205 Opt Part #: A38012-18 Supplier: 81205 Opt Part #: A38012-32 Supplier: 81205
STD-197	Container - Plastic, Polyethylene or Polypropylene
STD-419	Gloves - Rubber, Elbow Length
STD-1082	Source - Air, Regulated, Dry Filtered, 0-50 PSIG
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1136	Facepiece (Mask) - Particulate Filtering, Disposable (NIOSH N95 approved)
STD-1137	Glasses - Safety
STD-1301	Container - Hydraulic Fluid Resistant, 50 Gallon (190 Liter)
STD-6928	Coupler Sleeve - AS1654T32
STD-6930	Coupling - AS1655A32

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D. Consumable Materials

Reference	Description	Specification
B00046	Acid - Corrosion Removing, Metal Conditioning, Phosphoric	MIL-C-10578
B00636	Acid, Acetic (Vinegar) (5%-10% Acetic Acid)	Commercially available product
B00637	Acid, Citric	A-A-59147
B00638	Cleaner - Acidic Liquid - Honey Bee 60 (McGean-Rohco)	
B01021	Cleaner - Drain (Enzyme) - Dispoz-All	
B01022	Cleaner - enzyme septic	
B50110	Cleaner - Acidic Liquid - Cedarinse (Seiwa-Pro Co., Ltd.)	
B50273	Cleaner - Acidic Liquid, Vacuum Toilet Line Cleaner - Sani-Vak G3	AMS 1640B
B50329	Cleaner - Acidic Liquid - Honey Bee 60 T	
B50330	Cleaner - Acidic Liquid - Honey Bee 60 TNP	
G00022	Compound - Chlorine Dioxide For Water Purification - Purogene or Oxine	
G02315	Clothing - Disposable Gown, Gloves For Sewage Handling	

E. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
200	Upper Half of Fuselage

F. Prepare for Cleaning

SUBTASK 38-32-00-010-039

- (1) Get access to the passenger compartment.

SUBTASK 38-32-00-010-040

- (2) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-910-017

- (3) For the work on the waste equipment, make sure you wear these items for your protection.

NOTE: These are items that you can wear to give you protection when it is necessary.

- (a) elbow length rubber gloves, STD-419
- (b) Face filtering facepiece, STD-1136
- (c) safety glasses, STD-1137
- (d) Disposable clothing, G02315

SUBTASK 38-32-00-610-024

- (4) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: After 5 minutes, drain the precharge from the waste tank.

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SUBTASK 38-32-00-860-055

- (5) Start this procedure at the toilet that is farthest upstream of the vacuum waste line to be cleaned.

NOTE: Areas near the bends have the most waste material build-up on the waste tube walls. For the primary layout of the vacuum waste lines, see this reference, (TASK 38-30-00-910-807).

SUBTASK 38-32-00-160-014

- (6) Disinfect the waste lines. Flush the waste line with 1-3 gallons (4-11 Liters) of the disinfectant solution.

NOTE: The disinfectant is a solution of chlorine dioxide, citric acid, and water.

- (a) Prepare the disinfectant solution as follows:



DO NOT BREATHE CHLORINE DIOXIDE GAS. PUT ON A RESPIRATOR, AND GOGGLES. WHEN THE TWO CHEMICALS MIX, THEY MAKE CHLORINE DIOXIDE GAS. CHLORINE DIOXIDE GAS CAN CAUSE INJURIES TO PERSONNEL IF THEY BREATHE IT.

- 1) For each 1 gal (4 l) of final solution desired, mix 20 fl-oz (0.6 l) of chlorine dioxide Purogene or Oxine compound, G00022 with 2 oz (57 g) of citric acid, B00637 in a plastic container, STD-197.
 - 2) Stop for 5 minutes (activation period).
 - 3) Use a clean instrument to mix the solution fully.
 - 4) Add water to make the desired quantity of disinfectant solution.
- (b) Disinfect the waste line(s) you are cleaning. Pour and flush 1-3 gallons (4-11 Liters) of the disinfectant solution through the toilet bowl, at the most forward toilet, of the vacuum waste line you are cleaning.

NOTE: The quantity of solution necessary to disinfect the vacuum toilet line changes with the length and condition of the line. Operator experience shows that 1 gal (4 l) is sufficient for short vacuum lines, but more than 1 gal (4 l) is necessary for longer vacuum lines. The quantity of disinfectant necessary for a specific vacuum toilet line is established by the operator's experience.

SUBTASK 38-32-00-160-015

- (7) Do this task: Periodic Flush - Vacuum Waste System Cleaning, TASK 38-32-00-100-801.
- (a) Rinse the lines from the most forward toilet with approximately ½ gal (2 l) of water.
 - (b) Turn the water off to the toilet.
 - (c) Flush the toilet without water at least three times.
 - (d) Open these circuit breakers and install safety tags:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-010-041



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

(8) To get access to the waste lines, do one of these steps:

(a) To remove the waste tank enclosure, do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

(b) For both lines to be cleaned, disconnect the last sections of the waste tube [21] before the waste tank inlet .

NOTE: This is the waste line section that will be temporarily replaced by the recirculating pump equipment, SPL-4780 during the procedure. Ensure that the tool will fit in its place. If not, a section of waste line upstream will need to be chosen.

(c) Remove the waste tubes from their installed position.

NOTE: Remaining liquid can stay in the waste lines. Be prepared to collect and then discard all of the liquid.

(d) Connect the drain valve [23] to the waste tube [21]. Use the coupling, STD-6930 and sleeve, STD-6928, as necessary, to connect the drain valve to the airplane waste tube.

(e) Close the drain valve [23].

NOTE: The drain valve must remain closed until you complete the pressure test procedure.

(f) For all lavatories on the waste lines to be cleaned, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

NOTE: The toilet assembly removal is necessary to attach the tools for the pressure test and the drain/flush equipment.

SUBTASK 38-32-00-780-013

(9) Do this task: Pressure Test Procedure, TASK 38-32-00-780-802.

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G. Waste Line Cleaning

SUBTASK 38-32-00-840-001

- (1) Prepare the chemical solution to clean the waste line with one of the chemical cleaners that follows:

NOTE: The quantity of the cleaner necessary for a waste line is 0.16 gallons for each linear foot (2.0 liters for each linear meter). Calculate the maximum quantity of the cleaner necessary for each line to prevent a spill when you fill the waste line.

- (a) Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, or Honey Bee 60 TNP cleaner, B50330
- (b) Sani-Vak G3, B50273
- (c) Cedarinse, B50110
- (d) Acetic acid, B00636
- (e) 7% Phosphoric acid, B00046
- (f) Dispoz-All cleaner, B01021
- (g) enzyme septic cleaner, B01022

SUBTASK 38-32-00-110-003

- (2) Do these steps to connect the recirculating pump equipment, SPL-4780 to fill the waste lines with the cleaner solution:

NOTE: This procedure is used to clean two waste lines simultaneously, designate a waste line #1 and a waste line #2 to help clarify tool usage. Refer to Figure 704 (Sheet 5) for a pump equipment installation schematic.

- (a) Connect one end of the supply hose [24] to the quick-disconnect [22] on the drain valve [23] near the waste tank (Figure 704 (Sheet 2)).
- (b) Connect the other end of the supply hose [24] to the air pump [25] at the quick-disconnect [26].
- (c) On the remaining line to be cleaned, connect one end of the drain hose [29] to the quick-disconnect [22] on the drain valve [23] near the waste tank (Figure 704 (Sheet 3)).
- (d) Connect the other end of the drain hose [29] to the drain end assembly [39] and put the hose end into the 50 gallon (190 liter) hydraulic fluid resistant container, STD-1301 of solution.

NOTE: Put a sufficient amount of the drain end assembly [39] into the container so that it will not come out when the air pump [25] is turned on.

- (e) In each lavatory between the farthest upstream toilet and the waste tank install the flush plug assembly [38].
- (f) At the forward most lavatory of waste line #1 install the air pressure assembly [30] and the flush plug valve [32] on the toilet waste connection [31] (Figure 704 (Sheet 4)).
- (g) At the forward most lavatory of waste line #2, install the flush plug valve [32] at the toilet waste connection [36].
- (h) Connect the jumper hose valves [34] and jumper hose [35] at the quick-disconnects [33] to join the two waste lines.
- (i) Connect an air hose [37] to the brass nipple on the air pressure assembly [30].
- (j) Open all the valves on the hoses and on the drain valves [23].

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CHEMICALS WILL BE HARMFUL TO INTERIOR OF AIRPLANE. A PERSON WITH SPILLAGE PREVENTION EQUIPMENT (RAGS, ETC) SHOULD HAVE ACCESS TO EACH LAVATORY CONNECTED TO THE EFFECTED SYSTEM DURING THIS SECTION OF THIS PROCEDURE TO MAKE SURE THAT THE CLEANING SOLUTION DOES NOT EXIT THE WASTE SYSTEM INTO THE AIRPLANE.

- (k) Put the Air Pump intake into the container of solution and turn the pump on to fill the waste lines.

NOTE: It can take 3 to 4 minutes before the solution starts to come down the drain hose [29]. It can take more than an hour for all of the air to exit the lines.

- (l) Slowly open the bleed valve in the waste line plug assembly [38] in each of the lavatories to bleed air from the toilet waste lines
- (m) Close the bleed valve when you hear or see solution start to come through the valve.

SUBTASK 38-32-00-110-004



CHEMICALS WILL BE HARMFUL TO INTERIOR OF AIRCRAFT. A PERSON WITH SPILLAGE PREVENTION EQUIPMENT (RAGS, ETC) SHOULD PERIODICALLY INSPECT ALL LAVATORIES OF THE AFFECTED SYSTEM DURING THE SOAKING PERIOD OF THIS PROCEDURE TO MAKE SURE THAT THE CLEANING SOLUTION DOES NOT EXIT THE WASTE SYSTEM INTO THE AIRPLANE.

- (3) Let the cleaner solution circulate in the waste line(s) for as long as practical (a minimum of 8 hours is suggested).

NOTE: To fully clean the waste line(s), more than 24 hours can be necessary to remove the heavy scale.

- (a) If you spill the cleaning solution, do this task: Corrosion Removal After Acid Spills, TASK 05-51-57-000-802.

SUBTASK 38-32-00-860-056

- (4) To get cleaner lines and to prevent blockage caused by scale material you can reverse the flow of the solution during the procedure.
- (a) Turn off the air pump [25] and close the drain valves [23] on the lines near the tanks.
- (b) Close the valves on the drain hose [29] and the supply hose [24] where they connect to the drain valves [23] near the tanks.
- (c) Disconnect the supply hose [24] and the drain hose [29] from the drain valves [23] and reconnect them to the opposite drain valve [23] on the opposite waste line.
- (d) Restart the air pump [25].

H. Drain the Waste Line

SUBTASK 38-32-00-840-002

- (1) Do these steps to prepare to drain the chemical solution from the system:
- (a) Stop the air pump [25].
- (b) Close the supply hose shutoff valve [40] and disconnect it from the air pump [25] at the quick-disconnect [26].
- (c) Put the end of the supply hose [24] into the container and open the supply hose shutoff valve [40]. The solution will start to drain from the hose.
- (d) To flush the waste line, do the steps that follow:

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- 1) Connect an 0-50 psig dry filtered regulated air source, STD-1082 to the air pressure assembly [30] to force the solution out of the waste lines and into the container.
- 2) Connect a water source (0-60 PSIG), STD-1088 to the air pressure assembly [30] adapter in the farthest upstream lavatory
- 3) Flush the waste line with a minimum of 5 gal (19 l) of water for each toilet on the waste line.
- 4) Connect an 0-50 psig dry filtered regulated air source, STD-1082 to the pressure adapter.
- 5) Dry the waste line with air flow, under 15 psi (103 kPa), for approximately 5 minutes.
- (e) Stop when the cleaning solution and flushing water is fully drained from the waste line.
- (f) If it is necessary to drain other waste lines, do these steps again to drain waste lines.

SUBTASK 38-32-00-410-027

- (2) Do these steps to remove the recirculating pump equipment, SPL-4780:
 - (a) In the farthest upstream lavatory, remove the air pressure assembly [30] and jumper hose [35].
 - (b) In each lavatory between the farthest upstream toilet and the waste tank, remove the waste line plug assembly [38].
 - (c) Do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.
 - (d) Remove the drain valves [23] at the connection near the waste tanks for both lines that were cleaned.

NOTE: Remaining liquid can stay in the waste lines. Be prepared to collect and then discard all of the liquid.
 - (e) Make sure all solid material is out of the waste line before you connect the waste line to the waste tank.

NOTE: Remaining solid material in the waste line can cause blocked waste lines after you complete this procedure.
 - (f) Put the waste tubes in their installed position.
 - (g) Connect the last section of the waste tubes [21] to the waste tank inlet.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-860-057

- (1) Do these steps complete this task:
 - (a) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.
 - (b) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-170-010

- (2) To push other solid material out of the waste system, do one of these procedures:
- (a) Do this task: Periodic Flush - Vacuum Waste System Cleaning, TASK 38-32-00-100-801.
 - (b) Do this task: Pressure Washer Cleaning of the Vacuum Waste Lines, TASK 38-32-00-100-802.

SUBTASK 38-32-00-610-025

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-610-026

- (4) Do this task: Vacuum Waste System - Leak Test, TASK 38-32-00-700-801.

SUBTASK 38-32-00-410-028

- (5) Close the access to the passenger compartment.

SUBTASK 38-32-00-910-018

- (6) Obey the local authorities to discard the chemical solution.

———— **END OF TASK** ————

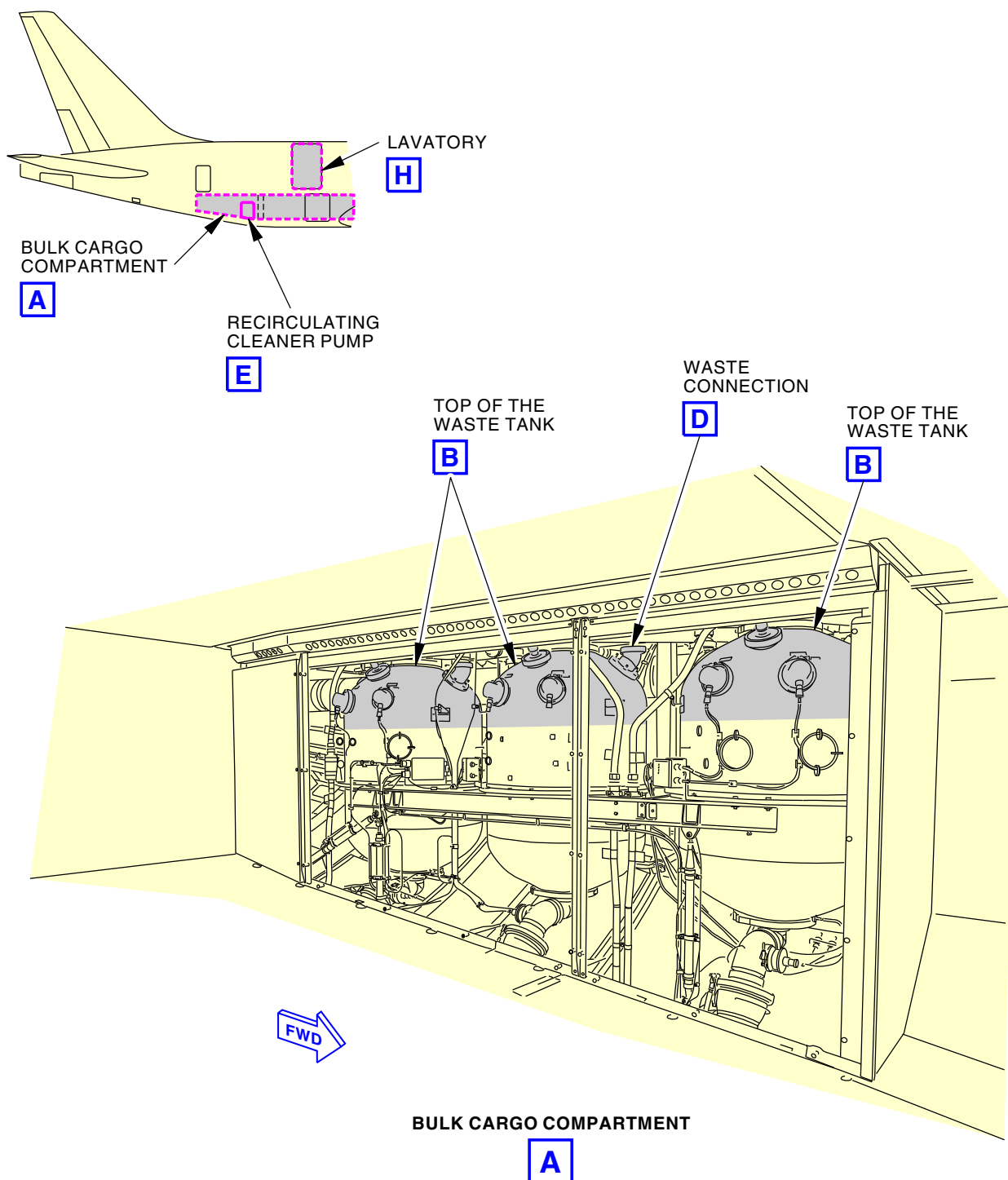
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**Recirculating Waste Line Cleaning
Figure 704/38-32-00-990-813 (Sheet 1 of 5)**

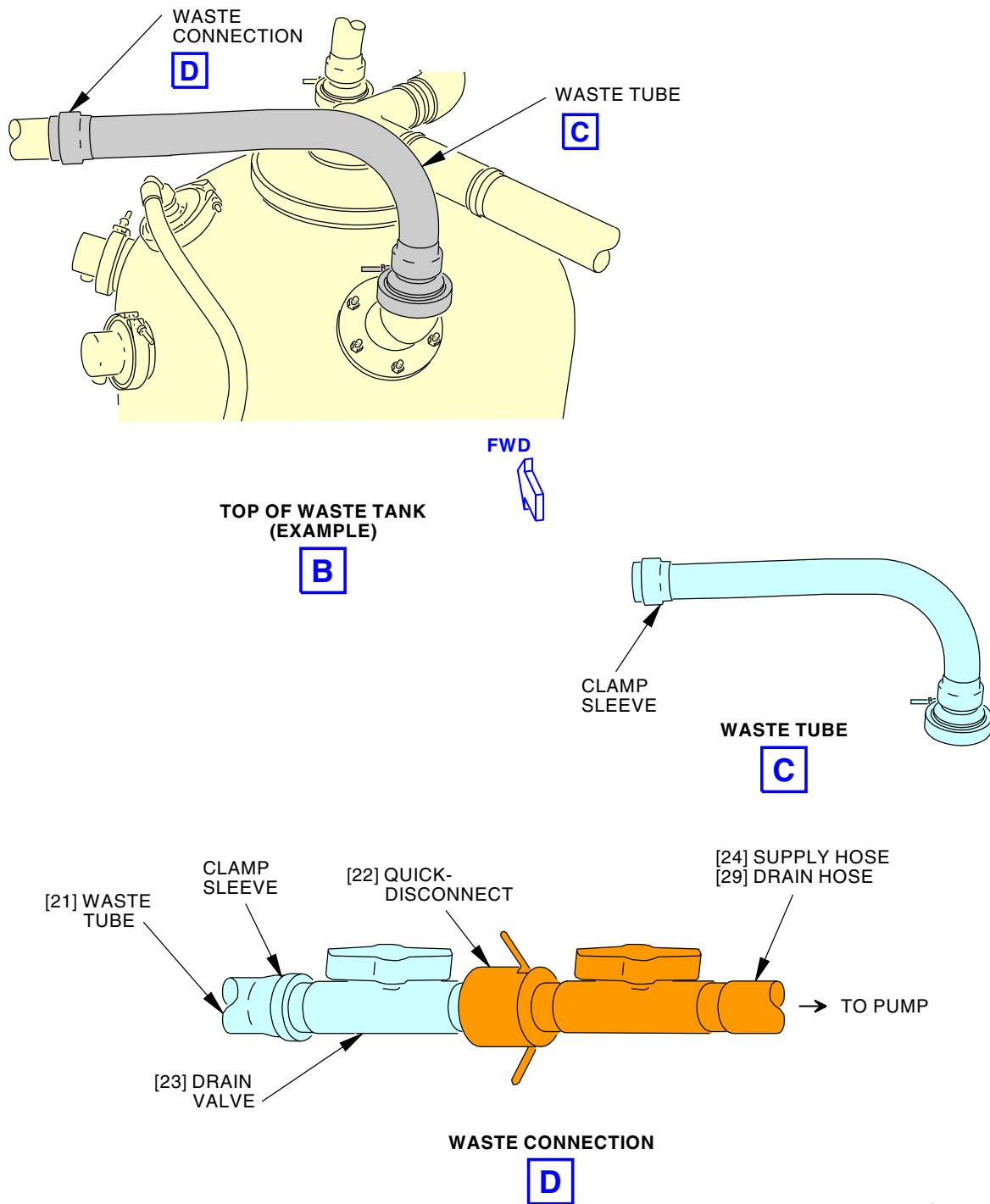
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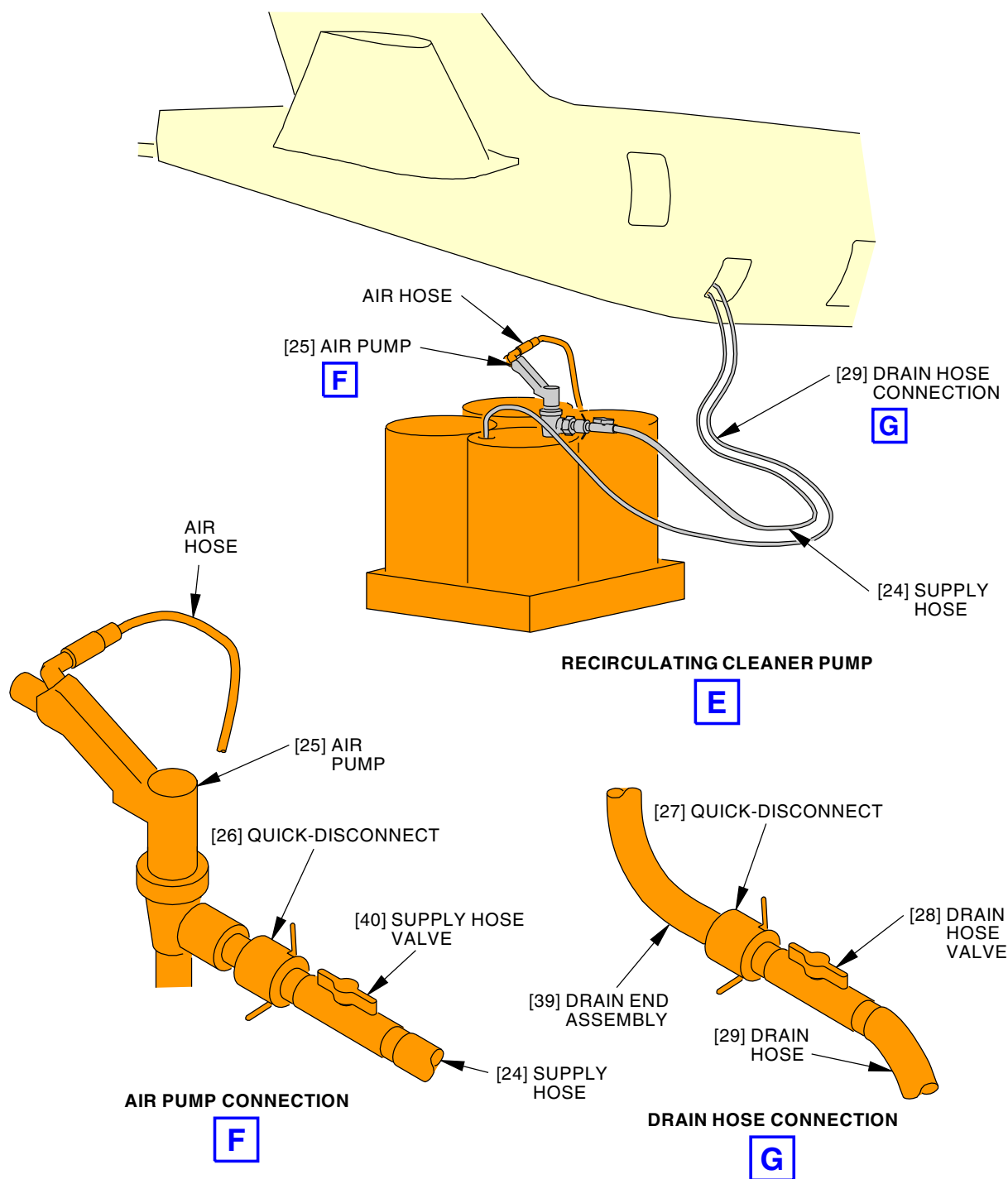
Recirculating Waste Line Cleaning
Figure 704/38-32-00-990-813 (Sheet 2 of 5)

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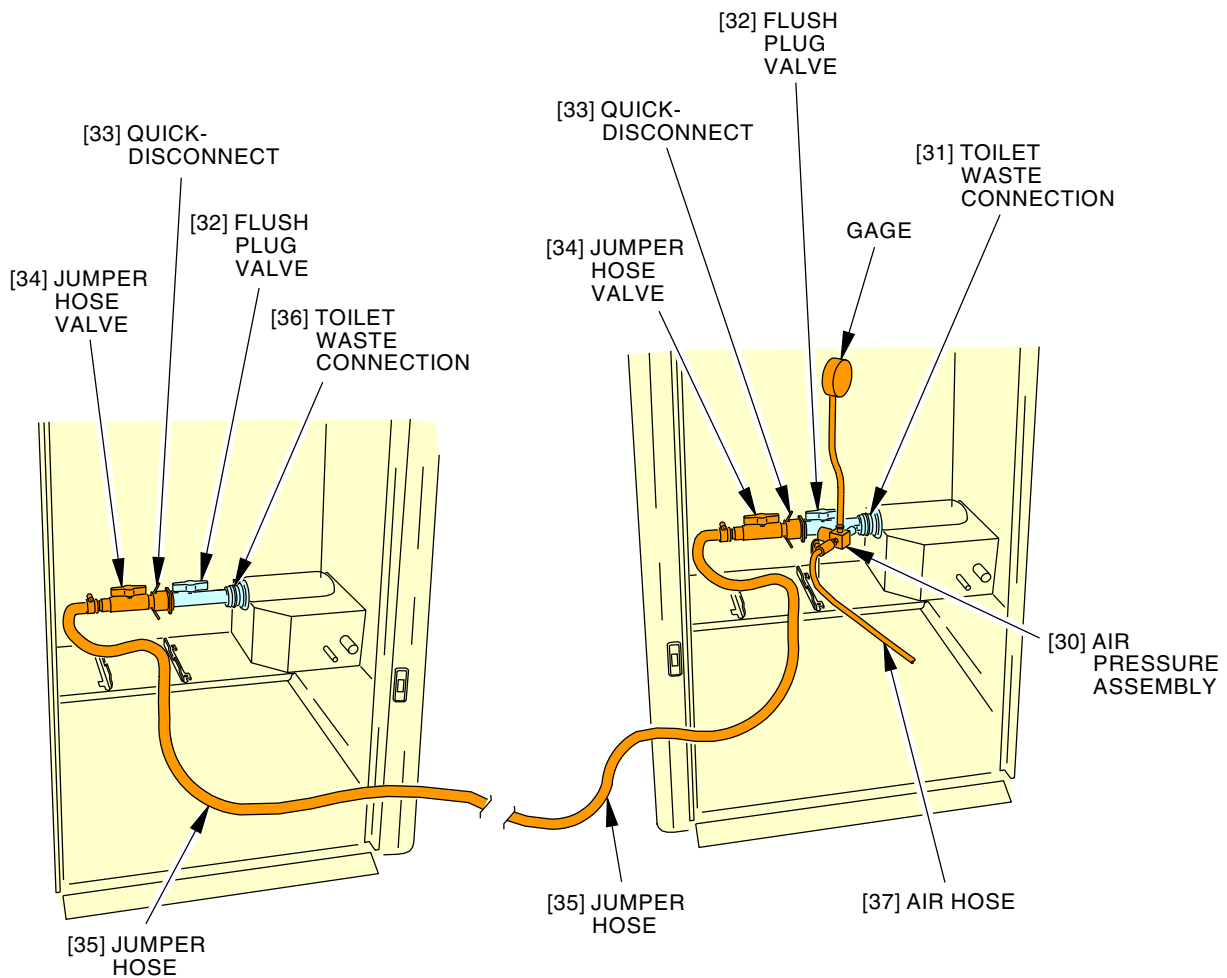
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**Recirculating Waste Line Cleaning
Figure 704/38-32-00-990-813 (Sheet 3 of 5)**

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**LAVATORY
(EXAMPLE)**



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**Recirculating Waste Line Cleaning
Figure 704/38-32-00-990-813 (Sheet 4 of 5)**

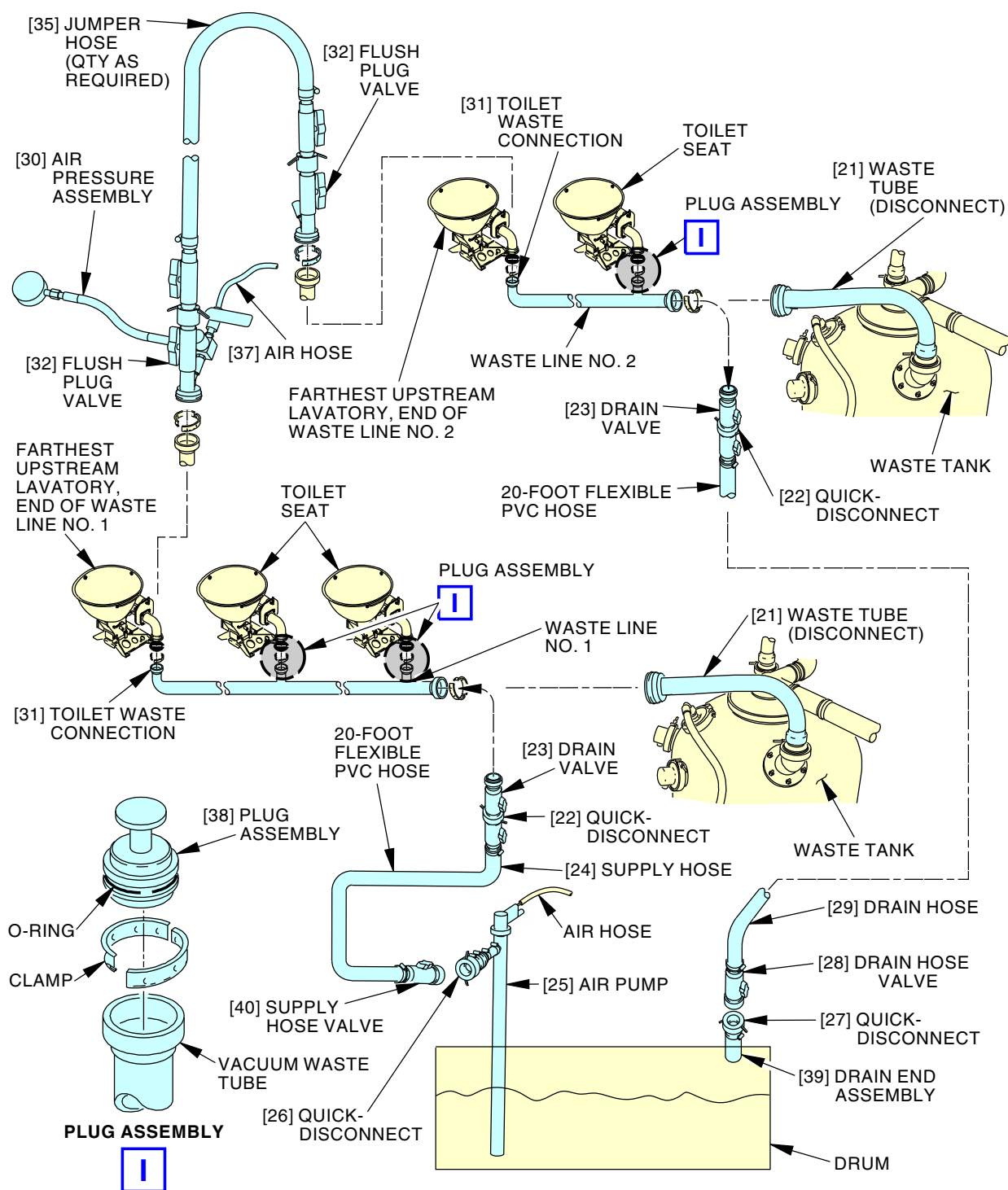
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Recirculating Waste Line Cleaning
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TASK 38-32-00-100-806

7. Recirculating Waste System Cleaning

Figure 705

A. General

- (1) This procedure gives the instructions to clean the vacuum waste tubes and tank. Use this procedure to decrease the scale that collects in the vacuum waste tubes.
- (2) This procedure removes the toilets and fills the vacuum waste line with chemical cleaner at the toilet connection. The cleaner drains from the waste service panel and recirculates through the pump equipment, into the airplane. The time to clean the vacuum waste system is 6-10 hours. The condition of the vacuum waste system changes the time necessary.
- (3) This procedure uses negative (vacuum) pressure to recirculate the cleaner. A pressure check is not necessary.
- (4) This procedure gives the instructions to clean one system waste line at a time. It is necessary to repeat the task for each waste line on the system that you are cleaning.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-32-01-000-801-001	Vacuum Toilet Assembly Removal (P/B 401)
38-32-01-400-801-001	Vacuum Toilet Assembly Installation (P/B 401)
38-32-02-000-801	Liquid Separator Removal (P/B 201)
38-32-02-400-801	Liquid Separator Installation (P/B 201)

C. Tools/Equipment

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

Reference	Description
SPL-13842	Equipment - Pump, Recirculating Heated Fluid, Vacuum Lav. System Part #: J38004-247 Supplier: 81205 Opt Part #: J38004-232 Supplier: 81205
STD-6842	Air Supply - Pneumatic, Hangar

D. Consumable Materials

Reference	Description	Specification
B00046	Acid - Corrosion Removing, Metal Conditioning, Phosphoric	MIL-C-10578
B00636	Acid, Acetic (Vinegar) (5%-10% Acetic Acid)	Commercially available product
B00638	Cleaner - Acidic Liquid - Honey Bee 60 (McGean-Rohco)	
B50329	Cleaner - Acidic Liquid - Honey Bee 60 T	
B50330	Cleaner - Acidic Liquid - Honey Bee 60 TNP	

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E. Location Zones

Zone	Area
151	Aft Cargo Compartment, Left
200	Upper Half of Fuselage

F. Prepare for the Cleaning

SUBTASK 38-32-00-610-035

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-00-110-010

- (2) Do this task: Periodic Flush - Vacuum Waste System Cleaning, TASK 38-32-00-100-801.

SUBTASK 38-32-00-610-036

- (3) Do this task, but do not do the steps to add precharge: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-00-480-010

- (4) Do these steps to isolate the overboard vent system.

NOTE: The plugs in the vent overboard tubes will prevent the chemical cleaner from spilling if the waste tank is filled above the liquid separator.

- (a) Do this task to remove the waste tank enclosure: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.
- (b) Loosen the clamps and disconnect the flexible couplings from the intake and outflow of the vacuum blower.
- (c) Install the intake plug [50] on the flexible coupling at the vacuum blower intake with the clamp.
- (d) Install the outlet plug [51] on the flexible coupling at the vacuum blower outflow with the clamp.
- (e) Install the vent plug assembly [52] in the vent port outlet, at the skin.

SUBTASK 38-32-00-480-011

- (5) Assemble the recirculating pump equipment, SPL-13842 tool.
 - (a) Attach the clean supply hose [45] to the tool and tank 1.
 - (b) Attach the return hose [44] to the tool and tank 2.
 - (c) Attach the recirculation hose assembly [47] to the tool and tank 2.
 - (d) Attach the drain hose [49] to the tool.
 - (e) Attach the supply hose assembly [48] to the tool.
 - (f) Connect hangar pneumatic air supply, STD-6842 to the tool control panel

SUBTASK 38-32-00-860-065

- (6) Connect the drain hose [49] to the service panel drain fitting.

SUBTASK 38-32-00-860-066

- (7) Pull the drain valve handle open to the "DRAIN" position.

SUBTASK 38-32-00-010-053

- (8) For all lavatories on the waste line to be cleaned, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

NOTE: The toilet assembly removal is necessary to attach the plug and flush plug equipment.

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SUBTASK 38-32-00-480-012

- (9) Install the flush plug [41] and supply hose assembly [48] to the most forward toilet.

SUBTASK 38-32-00-480-013

- (10) Install a plug [42] in each lavatory between the most forward toilet and the waste tank.

G. Waste Line Cleaning

SUBTASK 38-32-00-110-011

- (1) Prepare the chemical solution to clean the waste line with one of the chemical cleaners that follows:

NOTE: The quantity of the cleaner necessary for the waste line and tool hoses is 0.16 gallons for each linear foot (2.0 liters for each linear meter).

- (a) Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, or Honey Bee 60 TNP cleaner, B50330
- (b) 5 to 10% Acetic acid, B00636
- (c) 7% Phosphoric acid, B00046

SUBTASK 38-32-00-110-012

- (2) Fill tank 1 with cleaner.

SUBTASK 38-32-00-110-013

- (3) Fill the waste lines with cleaner.
 - (a) Start the flow meter.
 - (b) Move the valve levers to the "CLEAN FLUID" AND "QUICK CLEAN" positions.
 - (c) Move the pump levers to "NEGATIVE PRESSURE PUMP OFF" AND "POSITIVE PRESSURE PUMP ON" positions.
 - (d) Make sure that the hose connections at the recirculating pump equipment, SPL-13842 tool and tanks do not have a leak.
 - (e) Make sure that the supply hose assembly [48] to the toilet connection does not have a leak.
 - (f) Make sure that each lavatory plug [42] does not have a leak.
 - (g) Let the cleaning fluid fill the vacuum waste lines.

NOTE: The waste line will be full when you see the cleaner in the drain hose at the service panel.

SUBTASK 38-32-00-110-014

- (4) Recirculate the cleaning fluid for a minimum of 6 hours.

NOTE: The time necessary to clean the waste lines is 6-10 hours. The condition of the vacuum waste system changes the time necessary

- (a) Move the valve levers to the "RECIRCULATION" positions.
- (b) Move the pump levers to "NEGATIVE PRESSURE PUMP ON" AND "POSITIVE PRESSURE PUMP OFF" positions.
- (c) Record the flow rate.
- (d) Record the differential pressure between the negative pump pressure and the heater pressure.
- (e) If heat is necessary, start the heater.

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- 1) Make sure that the cleaner you use is satisfactory for heat. Follow the manufacturers directions.

NOTE: The heater will not let the temperature be more than 120°F (49°C).

SUBTASK 38-32-00-110-015

- (5) Make sure that the lavatories and hose connections do not have a leak.

SUBTASK 38-32-00-110-016

- (6) Make sure that the recirculation flow continues.

- (a) Look at the drain hose [49] attached to the service panel.

- (b) If the flow from the drain hose [49] falls or stops, do these steps to clean the waste tank:

NOTE: Scale from the waste lines or waste tank can collect and cause a blockage at the waste tank outlet.

- 1) Move the pump lever to "NEGATIVE PRESSURE PUMP OFF" .
- 2) Do this task: Liquid Separator Removal, TASK 38-32-02-000-801.
- 3) Remove the loose scale from the bottom of the waste tank.
- 4) Do this task: Liquid Separator Installation, TASK 38-32-02-400-801
- 5) Move the pump lever to "NEGATIVE PRESSURE PUMP ON".

- (c) Look at the flow meter and pressure gages at the control panel.

- (d) If the flow rate decreases, or the differential pressure between the negative pump and the heater increases, do these steps to clean the filter:

NOTE: Scale from the waste lines or waste tank can collect and cause a blockage at the filter. If the flow rate or the differential pressure increases more than 30%, it is necessary to clean the filter. It is necessary to drain the system to clean the filter.

- 1) Move the valve lever to the "CLEAN FLUID" position.
- 2) When all of the cleaning fluid has drained from the airplane, move the pump lever to "NEGATIVE PRESSURE PUMP OFF".

NOTE: This step will start to drain the waste line. If there is cleaning fluid in tank 1, it will pump into the waste line before the system drains.

- 3) Open the filter [43] housing cap.
- 4) Empty or replace the filter bags.
- 5) Close the filter [43] housing cap.
- 6) Move the valve levers to the "CLEAN FLUID" AND "QUICK CLEAN" positions.
- 7) Move the pump levers to "NEGATIVE PRESSURE PUMP OFF" AND "POSITIVE PRESSURE PUMP ON" positions.
- 8) Let the cleaning fluid fill the vacuum waste lines.

NOTE: The waste line will be full when you see the cleaner in the drain hose at the service panel.

- 9) Move the valve levers to the "RECIRCULATION" positions.
- 10) Move the pump levers to "NEGATIVE PRESSURE PUMP ON" AND "POSITIVE PRESSURE PUMP OFF" positions.

SUBTASK 38-32-00-110-017

- (7) Drain the cleaning fluid from the waste lines.

- (a) Move the valve lever to the "CLEAN FLUID" position.

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- (b) When all of the cleaning fluid has drained from the airplane, move the pump lever to "NEGATIVE PRESSURE PUMP OFF".

SUBTASK 38-32-00-170-014

- (8) Flush the vacuum waste system and recirculating pump equipment, SPL-13842 with water.

- (a) Put 50 gallons of water in tank 1.
- (b) Move the valve levers to the "CLEAN FLUID" AND "QUICK CLEAN" positions.
- (c) Move the pump levers to "NEGATIVE PRESSURE PUMP OFF" AND "POSITIVE PRESSURE PUMP ON" positions.
- (d) Let the water fill the vacuum waste lines.

NOTE: The waste line will be full when you see the water in the drain hose at the service panel.

- (e) Move the pump levers to "NEGATIVE PRESSURE PUMP ON" AND "POSITIVE PRESSURE PUMP OFF" positions.

NOTE: This will let most of the water drain from the airplane.

- (f) When the water has drained from the airplane, move the pump lever to "POSITIVE PRESSURE PUMP OFF".

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-080-010

- (1) Remove the plug [42] from each lavatory.

SUBTASK 38-32-00-080-011

- (2) Remove the flush plug [41] and supply hose assembly [48] from the most forward toilet.

SUBTASK 38-32-00-410-041

- (3) Install all of the toilets. Do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.

SUBTASK 38-32-00-080-012

- (4) Clean the recirculating pump equipment, SPL-13842 filter.

- (a) Open the filter housing cap.
- (b) Clean or replace the filter bags.
- (c) Close the filter housing cap.

SUBTASK 38-32-00-160-021

- (5) Disassemble the recirculating pump equipment, SPL-13842 tool.
 - (a) Remove the clean supply hose [45] from the tool and tank 1.
 - (b) Remove the recirculation hose assembly [47] and the return hose [44] from the tool and tank 1.
 - (c) Remove the drain hose [49] from the tool.

SUBTASK 38-32-00-080-013

- (6) Push the drain valve handle open to the "CLOSED" position.

SUBTASK 38-32-00-080-014

- (7) Remove the drain hose [49] from the service panel drain fitting.

SUBTASK 38-32-00-610-037

- (8) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-32-00-410-042

(9) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-00-410-043

(10) Close the access to the passenger compartment.

SUBTASK 38-32-00-500-001

(11) Obey the local authorities to discard the chemical solution.

———— **END OF TASK** ————

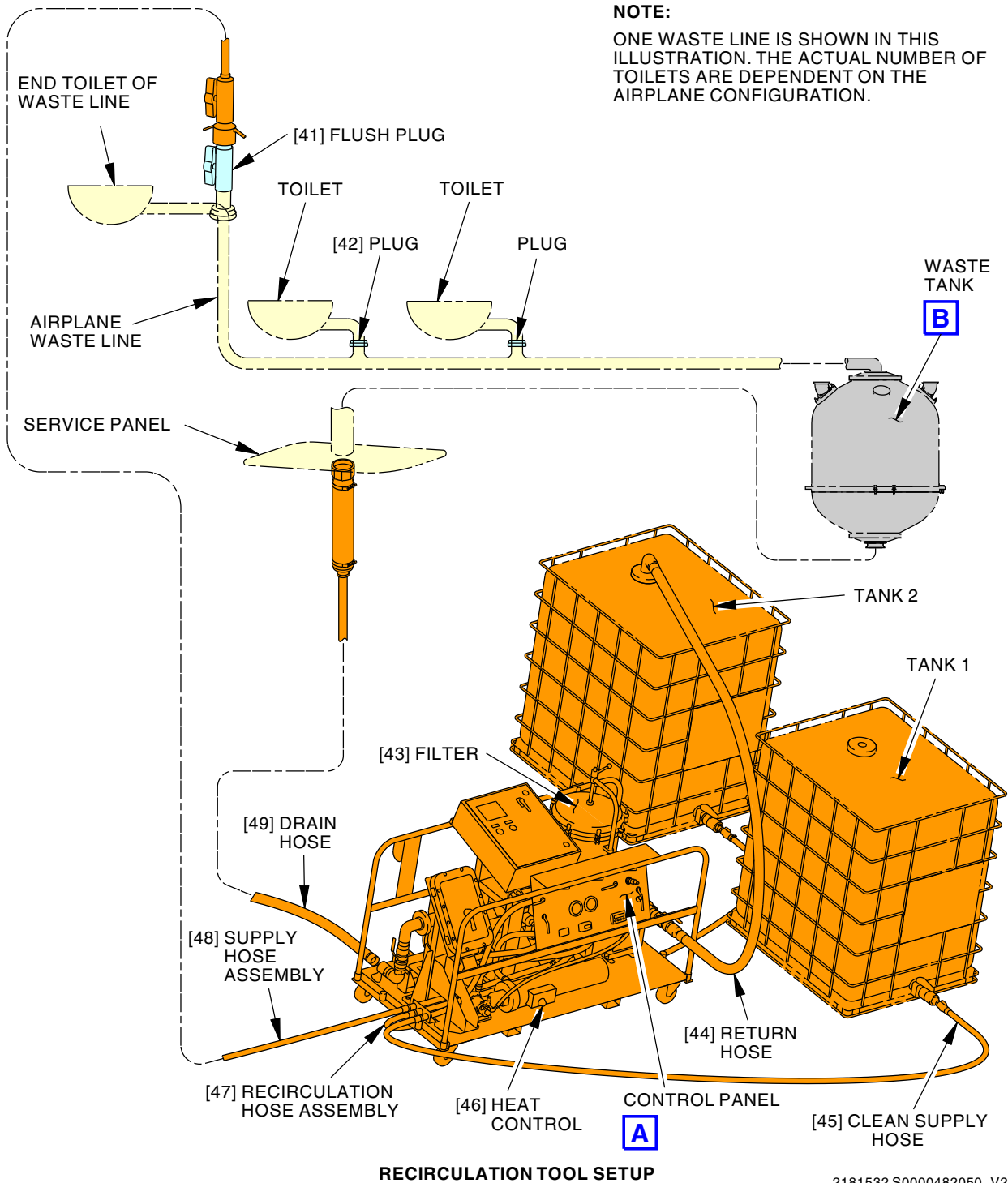
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Recirculating Waste Line Cleaning
Figure 705/38-32-00-990-831 (Sheet 1 of 2)

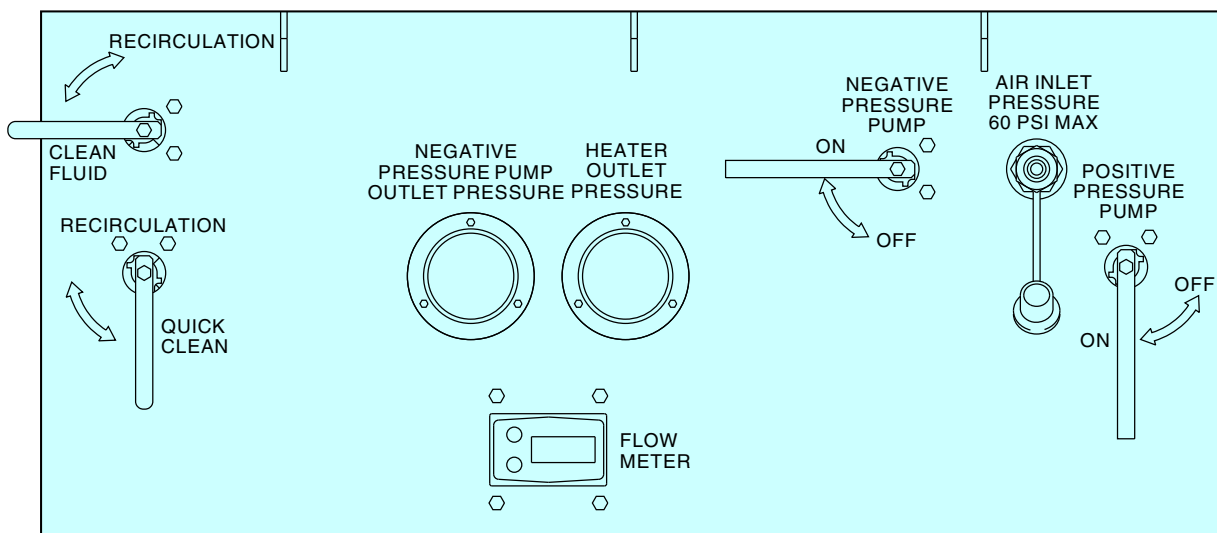
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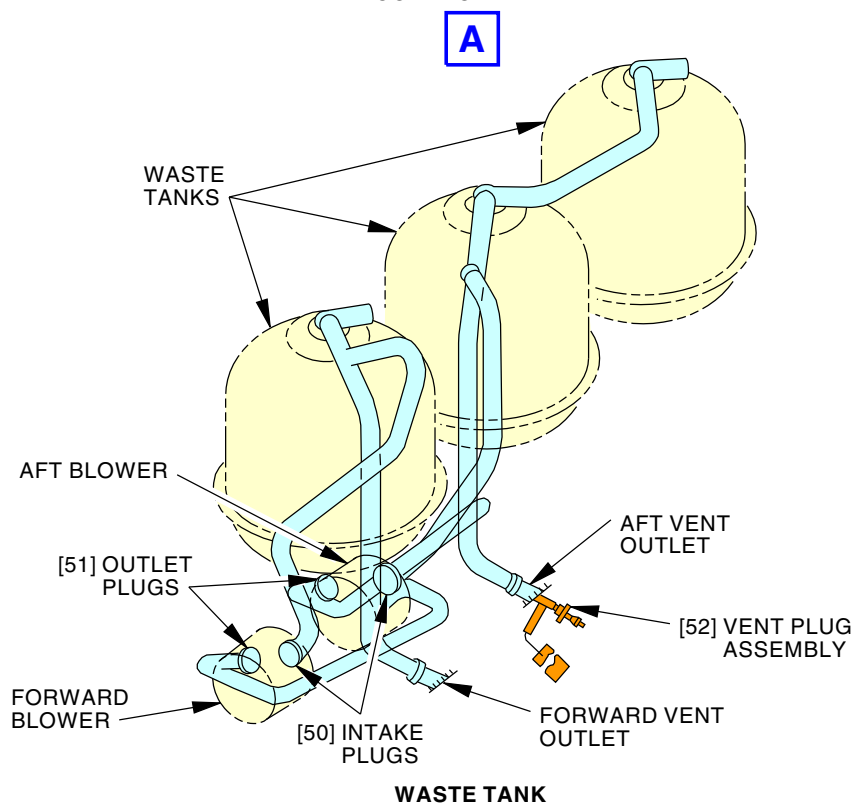
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CONTROL PANEL



NOTE:

BOTH FORWARD AND AFT
PLUG POSITIONS ARE SHOWN.

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Recirculating Waste Line Cleaning
Figure 705/38-32-00-990-831 (Sheet 2 of 2)

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TASK 38-32-00-100-804

8. Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube

A. General

- (1) This task gives the steps for an off-aircraft soak procedure for cleaning a vacuum waste tube that is nearly or completely blocked and can not be cleared by other means.

NOTE: You use this procedure to clean a vacuum waste tube that has a heavy waste build-up or blockage.

- (2) If there is too much or a quickly reoccurring scale buildup, make sure that the toilet flush valves fully close. A valve that is not fully closed can cause a drying effect in the tubes. This drying effect can increase the collection of scale. A valve that is not fully closed will cause air noise at the toilet when a different toilet on the system operates.
- (3) There are additional tasks that give instructions to clean the vacuum waste tubes. Use these tasks to decrease the scale that collects in the vacuum waste tubes. Use operational experience to find which task or mixture of tasks are necessary and the necessary time period between tasks.

These are the additional tasks that you can use:

- (a) A cleaning by a periodic flush of a chemical through the vacuum waste system, Periodic Flush - Vacuum Waste System Cleaning, TASK 38-32-00-100-801.

NOTE: You use this procedure to keep the vacuum waste lines clean of the waste build-up. To get the maximum effect, you must frequently do this task. Frequency and amount is operator determined from experience.

- (b) A pressure washer cleaning of the vacuum waste lines, Pressure Washer Cleaning of the Vacuum Waste Lines, TASK 38-32-00-100-802.

NOTE: You use this procedure to clean the vacuum waste lines of the waste build-up. To get the maximum effect, you must use this procedure before you have frequent problems with the vacuum waste lines.

- (c) An in-situ soak method of cleaning the vacuum waste lines, Soak Method for Cleaning of the Vacuum Waste Lines, TASK 38-32-00-100-803.

NOTE: You use this procedure to clean the vacuum waste lines of the heavy waste build-up. To get the maximum effect, you must use this procedure before the waste lines are fully blocked.

- (d) An in-situ recirculate method of cleaning the vacuum waste lines, Recirculate Method of Cleaning the Vacuum Waste Lines, TASK 38-32-00-110-801.

NOTE: You use this procedure to clean the vacuum waste lines of the heavy waste build-up. To get the maximum effect, you must use this procedure before the waste lines are fully blocked. This method will work quicker than the in-situ soak method.

- (e) A pressure test procedure, Pressure Test Procedure, TASK 38-32-00-780-802.

NOTE: This procedure is used for the in-situ Soak or Recirculate procedures to make sure that the waste lines will not leak while you do the cleaning procedure.

B. References

Reference	Title
38-32-00-000-801	Vacuum Waste Tube Removal (P/B 401)
38-32-00-400-801	Vacuum Waste Tube Installation (P/B 401)

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C. Tools/Equipment

Reference	Description
STD-197	Container - Plastic, Polyethylene or Polypropylene

D. Consumable Materials

Reference	Description	Specification
B00046	Acid - Corrosion Removing, Metal Conditioning, Phosphoric	MIL-C-10578
B00636	Acid, Acetic (Vinegar) (5%-10% Acetic Acid)	Commercially available product
B00637	Acid, Citric	A-A-59147
B00638	Cleaner - Acidic Liquid - Honey Bee 60 (McGean-Rohco)	
B01021	Cleaner - Drain (Enzyme) - Dispoz-All	
B01022	Cleaner - enzyme septic	
B50091	Cleaner - Gly-Vak Toilet Line Scale Remover	AMS 1550B
B50329	Cleaner - Acidic Liquid - Honey Bee 60 T	
B50330	Cleaner - Acidic Liquid - Honey Bee 60 TNP	
G00022	Compound - Chlorine Dioxide For Water Purification - Purogene or Oxine	

E. Location Zones

Zone	Area
100	Lower Half of Fuselage
200	Upper Half of Fuselage

F. Prepare for the Off-Aircraft Soak Procedure for Cleaning a Vacuum Waste Tube

SUBTASK 38-32-00-670-001

- (1) Disinfect the waste lines. Flush the waste line with 1 gal (4 l) to 3 gal (11 l) of the disinfectant solution.

NOTE: The disinfectant is a solution of chlorine dioxide, citric acid, and water.

- (a) Prepare the disinfectant solution as follows:



WARNING

DO NOT BREATHE CHLORINE DIOXIDE GAS. PUT ON A RESPIRATOR, AND GOGGLES. WHEN THE TWO CHEMICALS MIX, THEY MAKE CHLORINE DIOXIDE GAS. CHLORINE DIOXIDE GAS CAN CAUSE INJURIES TO PERSONNEL IF THEY BREATHE IT.

- 1) For each 1 gal (4 l) of disinfectant solution desired, mix 20 fl-oz (0.6 l) of Purogene or Oxine compound, G00022 with 2 oz (57 g) of citric acid, B00637 in a plastic container, STD-197.
 - 2) Stop for 5 minutes (activation period).
 - 3) Use a clean instrument to mix the solution fully.
 - 4) Add water to make the desired quantity of solution.
- (b) Disinfect the waste line(s) you are cleaning.

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- 1) Pour and flush 1 gal (4 l) to 3 gal (11 l) of the disinfectant solution through the toilet bowl, at the vacuum waste line you are cleaning.

NOTE: The quantity of solution necessary to disinfect the vacuum toilet line changes with the length and condition of the line. Operator experience shows that 1 gal (4 l) is sufficient for short vacuum lines, but more than 1 gal (4 l) is necessary for longer vacuum lines. The quantity of disinfectant necessary for a specific vacuum toilet line is established by the operator's experience.

SUBTASK 38-32-00-020-007

- (2) To remove a specific waste tube for cleaning, do this task: Vacuum Waste Tube Removal, TASK 38-32-00-000-801.

G. Off-Aircraft Soak Procedure for Cleaning a Vacuum Waste Tube

SUBTASK 38-32-00-110-005

- (1) Prepare and place in a suitable hydraulic fluid resistant container, the chemical solution to soak the waste tube. Use one of the chemical cleaners that follow:

NOTE: The quantity of the cleaner necessary for the inside of a waste tube is 0.16 gallons for each linear foot (2.0 liters for each linear meter). Calculate the maximum quantity of the cleaner necessary for each tube, or to submerge each tube.

The acid cleaners are primarily effective on hard salt and alkaline deposits. The bacterial and enzymatic cleaners are primarily effective on organic deposits (soap scums, grease, fat, starch and organic debris).

- (a) A 15% glycolic acid, Gly-Vak toilet line scale remover, B50091.
- (b) An 8% to 12% sulfamic acid, Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, or Honey Bee 60 TNP cleaner, B50330.
- (c) A 7% phosphoric acid, B00046, solution.
- (d) A 5% to 10% acetic acid, B00636, solution.
- (e) A bacterial cleaner, such as Dispoz-All cleaner, B01021.
- (f) An enzymatic cleaner, such as enzyme septic cleaner, B01022.

SUBTASK 38-32-00-110-006

- (2) Place the waste tube to be cleaned into the container so it is completely submerged in the cleaning solution.

SUBTASK 38-32-00-110-007

- (3) Let the waste tube soak in the cleaner solution for a minimum of 8 hours.

NOTE: To fully clean the waste tube, more than 24 hours can be necessary to remove the heavy scale.

SUBTASK 38-32-00-140-001

- (4) Make sure all solid material is out of the waste tube before re-installation.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-420-008

- (1) To install the waste tube after cleaning, do this task: Vacuum Waste Tube Installation, TASK 38-32-00-400-801.

SUBTASK 38-32-00-680-002

- (2) Obey the local authorities to discard the chemical solution.

————— **END OF TASK** —————

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TASK 38-32-00-140-801

9. Overboard Vent Tube Cleaning - Cleaning/Painting

A. General

- (1) This procedure uses a brush, operated manually or mechanically turned with a variable speed drill. The brush must have these specifications:
 - (a) 3" round, medium stiff, nylon bristle head.
 - (b) Flexible 3' shaft, capable of 90 degree turns.
- (2) You can do this task in parts. Do the part of the task for the area of the overboard vent system that is necessary to clean.

B. References

Reference	Title
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-00-000-801	Vacuum Waste Tube Removal (P/B 401)
38-32-00-400-801	Vacuum Waste Tube Installation (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-32-07-000-801	Vacuum Check Valve Removal (P/B 401)
38-32-07-400-801	Vacuum Check Valve Installation (P/B 401)
38-33-02-000-801	Waste Tank Continuous Level Sensor Removal (P/B 401)
38-33-02-400-801	Waste Tank Continuous Level Sensor Installation (P/B 401)

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for the Cleaning

SUBTASK 38-32-00-010-050

- (1) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-32-00-010-051

- (2) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-00-010-052

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-910-022

- (4) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

F. Overboard Vent Tube Cleaning

SUBTASK 38-32-00-140-002

- (1) Clean the vent tube from the port at the skin.
- (a) Put the brush into the vent port opening.
 - (b) Turn the brush while you push it into the vent tube.
 - (c) Push the brush until it stops at the vent tube orifice approximately 3 feet down the tube.
 - (d) Remove the brush from the tube.
 - (e) Remove contamination with the vacuum if necessary.
 - (f) If the tube is not clean, do steps (a) through (e) again.
 - (g) If it is necessary to clean more, do these tasks.

NOTE: These tasks are general. To get access it can be necessary to remove more equipment.

- 1) Vacuum Waste Tube Removal, TASK 38-32-00-000-801
- 2) Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube, TASK 38-32-00-100-804

SUBTASK 38-32-00-140-003

- (2) Clean the vent tubes from the vacuum check valve location.
- (a) Remove the vacuum check valve (Vacuum Check Valve Removal, TASK 38-32-07-000-801).
 - (b) Push the brush down (outboard) into the tube opening where the check valve was installed.
 - (c) Turn the brush while you push it into the vent tube.
 - (d) Push the brush until it stops at the vent tube orifice approximately 1 foot down the tube.
 - (e) Remove the brush from the tube.
 - (f) Remove contamination with the vacuum if necessary.
 - (g) If the tube is not clean, do steps (b) through (f) again.
 - (h) If it is necessary to clean more, do these tasks.

NOTE: These tasks are general. To get access it can be necessary to remove more equipment.

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- 1) Vacuum Waste Tube Removal, TASK 38-32-00-000-801
- 2) Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube, TASK 38-32-00-100-804



CAUTION

DO NOT PUSH THE BRUSH WITH TOO MUCH FORCE OR TOO QUICKLY. YOU CAN CAUSE DAMAGE TO THE FLEXIBLE COUPLING.

- (i) Push the brush up (inboard) into the tube opening where the check valve was installed.
- (j) Turn the brush while you push it into the vent tube.
- (k) Push the brush until it stops at the liquid separator approximately 3 feet down the tube.
- (l) Remove the brush from the tube.
- (m) Remove contamination with the vacuum if necessary.
- (n) If the tube is not clean, do steps (i) through (m) again.
- (o) If it is necessary to clean more, do these tasks.

NOTE: These tasks are general. To get access it can be necessary to remove more equipment.

- 1) Vacuum Waste Tube Removal, TASK 38-32-00-000-801
- 2) Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube, TASK 38-32-00-100-804

SUBTASK 38-32-00-140-004

- (3) Clean the vent tubes from the vacuum blower location.
 - (a) Loosen the clamps and remove the flexible couplings from the intake and outflow of the vacuum blower.



CAUTION

DO NOT PUSH THE BRUSH WITH TOO MUCH FORCE OR TOO QUICKLY. YOU CAN CAUSE DAMAGE TO THE FLEXIBLE COUPLING.

- (b) Push the brush down (outboard) into the tube opening where the flexible coupling was installed.
- (c) Turn the brush while you push it into the vent tube.
- (d) Push the brush until it stops at the vent tube Y approximately 3 feet down the tube.
- (e) Remove the brush from the tube.
- (f) Remove contamination with the vacuum if necessary.
- (g) If the tube is not clean, do steps (a) through (f) again.
- (h) If it is necessary to clean more, do these tasks.

NOTE: These tasks are general. To get access it can be necessary to remove more equipment.

- 1) Vacuum Waste Tube Removal, TASK 38-32-00-000-801
- 2) Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube, TASK 38-32-00-100-804

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CAUTION

DO NOT PUSH THE BRUSH WITH TOO MUCH FORCE OR TOO QUICKLY. YOU CAN CAUSE DAMAGE TO THE FLEXIBLE COUPLING.

- (i) Push the brush up (inboard) into the tube opening where the flexible coupling was installed.
- (j) Turn the brush while you push it into the vent tube.
- (k) Push the brush until it stops at the vent tube Y approximately 2 feet down the tube.
- (l) Remove the brush from the tube.
- (m) Remove contamination with the vacuum if necessary.
- (n) If the tube is not clean, do steps (i) through (m) again.
- (o) If it is necessary to clean more, do these tasks.

NOTE: These tasks are general. To get access it can be necessary to remove more equipment.

- 1) Vacuum Waste Tube Removal, TASK 38-32-00-000-801
 - 2) Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube, TASK 38-32-00-100-804
- (4) If a vent tube was removed, do this task: Vacuum Waste Tube Installation, TASK 38-32-00-400-801.
 - (5) Install the flexible couplings to the intake and outflow of the vacuum blower.
 - (6) Install the clamps to the flexible couplings.
 - (7) Do this task: Vacuum Check Valve Installation, TASK 38-32-07-400-801.
- SUBTASK 38-32-00-100-001**
- (8) Clean the vent tube from the upper cap of the center tank to the aft tank upper cap.
 - (a) Do the steps to remove the two continuous level sensor diaphragms from the vent tube (TASK 38-33-02-000-801).
 - (b) At the center tank upper cap, loosen the forward clamp from the flexible coupling.
 - (c) At the aft tank upper cover, loosen the aft clamp from the flexible coupling.
 - (d) Remove the vent tube with the two flexible couplings attached.



CAUTION

DO NOT PUSH THE BRUSH WITH TOO MUCH FORCE OR TOO QUICKLY. YOU CAN CAUSE DAMAGE TO THE FLEXIBLE COUPLING.

- (e) Push the brush into the tube opening where the flexible coupling is installed.
- (f) Turn the brush while you push it into the vent tube.
- (g) Remove the brush from the tube.
- (h) Remove contamination with the vacuum if necessary.
- (i) Use a cloth made moist with water and push/pull cloth through vent tube and the flexible couplings.
- (j) If the vent tube with flexible couplings is not clean, do steps (e) through (i) again.
- (k) Put the clamp in position at each end of the two flexible couplings.

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- (l) Put the vent tube with flexible couplings in its position between the upper cap of the center tank and the upper cap of the aft tank
- (m) Tighten the clamps on the flexible couplings to 20 in-lb (2.26 N·m) maximum.
- (n) Do the steps to install the two continuous level sensors diaphragms on the vent tube (TASK 38-33-02-400-801).
- (o) If it is necessary to clean more, do these tasks:
NOTE: These tasks are general. To get access it can be necessary to remove more equipment.
 - 1) Vacuum Waste Tube Removal, TASK 38-32-00-000-801
 - 2) Off-Airplane Soak Procedure for Cleaning a Vacuum Waste Tube, TASK 38-32-00-100-804.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-00-410-038

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-00-410-039

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-00-410-040

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

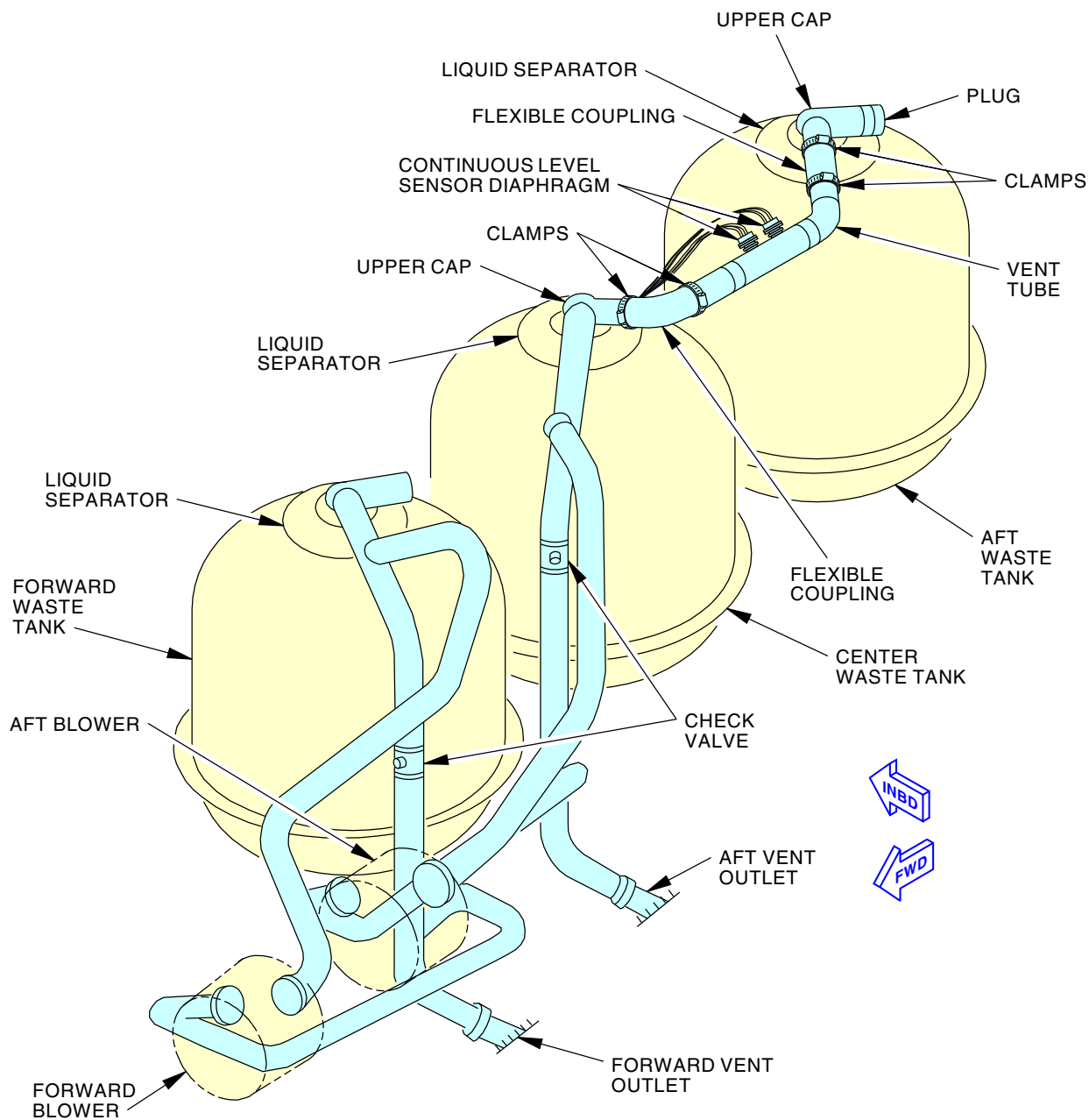
————— END OF TASK —————

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Overboard Vent Tube Cleaning
Figure 706/38-32-00-990-832

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TOILET ASSEMBLY - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks for parts of the toilet system:

- (1) A removal of the vacuum toilet assembly.
- (2) An installation of the vacuum toilet assembly.
- (3) A removal of the flush control assembly.
- (4) An installation of the flush control assembly.
- (5) A removal of the manual shutoff valve.
- (6) An installation of the manual shutoff valve.
- (7) A removal of the flush valve.
- (8) An installation of the flush valve.
- (9) A removal of the antisiphon valve.
- (10) An installation of the antisiphon valve.
- (11) A removal of the rinse valve.
- (12) An installation of the rinse valve.
- (13) A cleaning of the rinse supply line.

TASK 38-32-01-000-801-001

2. Vacuum Toilet Assembly Removal

(Figure 401) (Figure 402)

A. **References**

Reference	Title
12-14-01-616-802	Potable Water System - Drain (P/B 301)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. **Tools/Equipment**

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

Reference	Description
SPL-1946	Plug - Vacuum Waste System Part #: A38007-9 Supplier: 81205

C. **Consumable Materials**

Reference	Description	Specification
A50137	Sealant - Silicone Encapsulant (Dow Corning - Sylgard 170 Silicone Elastomer)	MIL-PRF-23586F
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

D. **Location Zones**

Zone	Area
200	Upper Half of Fuselage

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E. Prepare for the Removal

SUBTASK 38-32-01-010-001-001



WARNING

FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.



WARNING

ALL TOILET COMPONENTS MUST BE SANITIZED AND CLEANED PRIOR TO HANDLING AND SHIPPING (ROUTING) TO HOME SHOP. .

- (1) Get access to the lavatory for the toilet removal.

SUBTASK 38-32-01-040-001-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-001-001

- (3) Close the water shutoff valve for the lavatory.

NOTE: The water shutoff valve is behind the cabinet door below the sink in the lavatory.

SUBTASK 38-32-01-910-027

- (4) Open the door of the cabinet below the sink.

SUBTASK 38-32-01-860-107

- (5) Make sure the drain valve is in the OPEN TO DRAIN position.

NOTE: The drain valve is found below the sink in the lavatory. Disabled, and some first class, lavatories have two drain valves each.

- (a) For the self-close type drain valve, make sure that the lavatory drain valve is held open manually for about one and a half minutes when placing it in the OPEN TO DRAIN position.

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SUBTASK 38-32-01-680-010

- (6) Open the faucet to release the pressure and to drain some of the water.

SUBTASK 38-32-01-010-110

- (7) If it is necessary, do this task: Potable Water System - Drain, TASK 12-14-01-616-802.

SUBTASK 38-32-01-910-001-001

- (8) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-01-010-002-001

- (9) Remove the toilet shroud as follows:
 - (a) Turn the latch handle [2] away from the toilet to open the toilet shroud [1].
 - (b) Pull the bottom edge of the toilet shroud [1] out.
 - (c) Move the toilet shroud [1] down until the top edge disengages from the trim strip on the lavatory wall.

F. Vacuum Toilet Assembly Removal

SUBTASK 38-32-01-020-001-001

- (1) Remove the electrical connector [3] to disconnect the flush control assembly of the vacuum toilet assembly.

SUBTASK 38-32-01-020-002-001

- (2) Disconnect the connection for the rinse water supply [4].

SUBTASK 38-32-01-680-001-001

- (3) Drain the water supply line into a container.

SUBTASK 38-32-01-020-213

- (4) Remove the screen [23] and packing [22] from the rinse valve fitting [21].

SUBTASK 38-32-01-020-003-001

- (5) Remove the clamp [6] that attaches the discharge drain [5] to the vacuum waste line [8] .

SUBTASK 38-32-01-020-004-001

- (6) Remove the sleeve [7] and the packings [9] and disconnect the discharge drain [5].

SUBTASK 38-32-01-020-217

- (7) Remove the sealing caps [140] (P/N BACC50H24) or Sealant, A50137 from the bolts [10].

SUBTASK 38-32-01-020-005-001

- (8) Remove the bolts [10] and washers [17] that attach the vacuum toilet assembly [11] to the lavatory floor.

SUBTASK 38-32-01-020-055-001

- (9) Remove the nut [15] and washer [16] to disconnect the bonding jumper [14]4] from the toilet and then attach the nut [15] and washer [16].

SUBTASK 38-32-01-020-056-001

- (10) Remove the screws [13] and clamps [12] that attach the electrical wires to the lavatory wall.

NOTE: Some lavatory installations do not have the clamp installations.

- (a) Put the screws [13] and clamps [12] back in their position on the lavatory wall.

SUBTASK 38-32-01-020-006-001

- (11) Remove the vacuum toilet assembly [11].

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SUBTASK 38-32-01-020-007-001

- (12) If the vacuum waste system will be operated while the toilet is removed, then do these steps (to install a plug in the vacuum waste line):
- (a) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packing [9] on the waste line vacuum waste plug, SPL-1946.
 - (b) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packing [9] on the vacuum waste line [8].
 - (c) Put the waste line vacuum waste plug, SPL-1946 in the vacuum waste line [8].
 - (d) Attach the vacuum waste plug, SPL-1946 to the vacuum waste line [8] with the clamp [6].

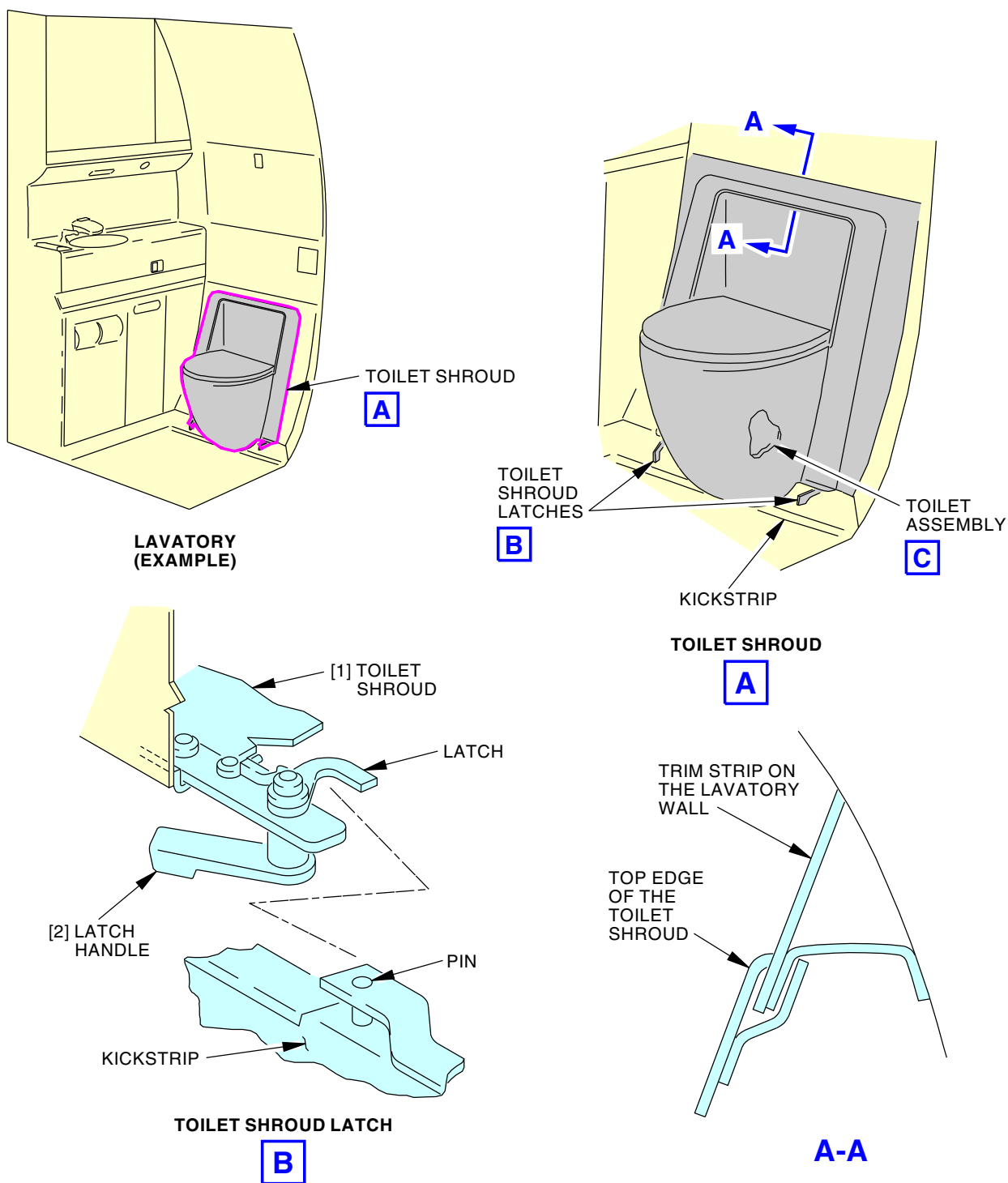
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**Toilet Assembly Installation
Figure 401/38-32-01-990-801-001 (Sheet 1 of 2)**

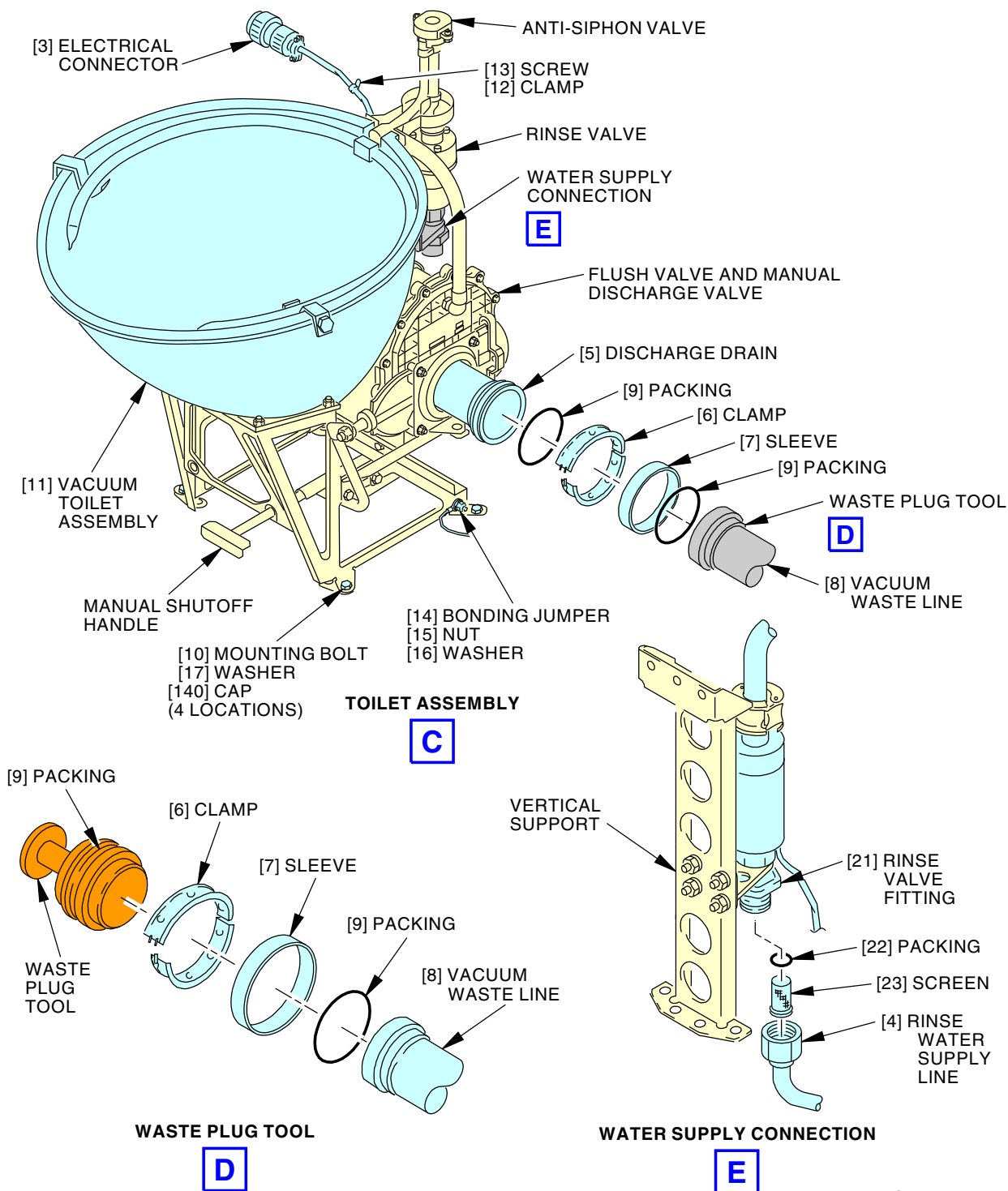
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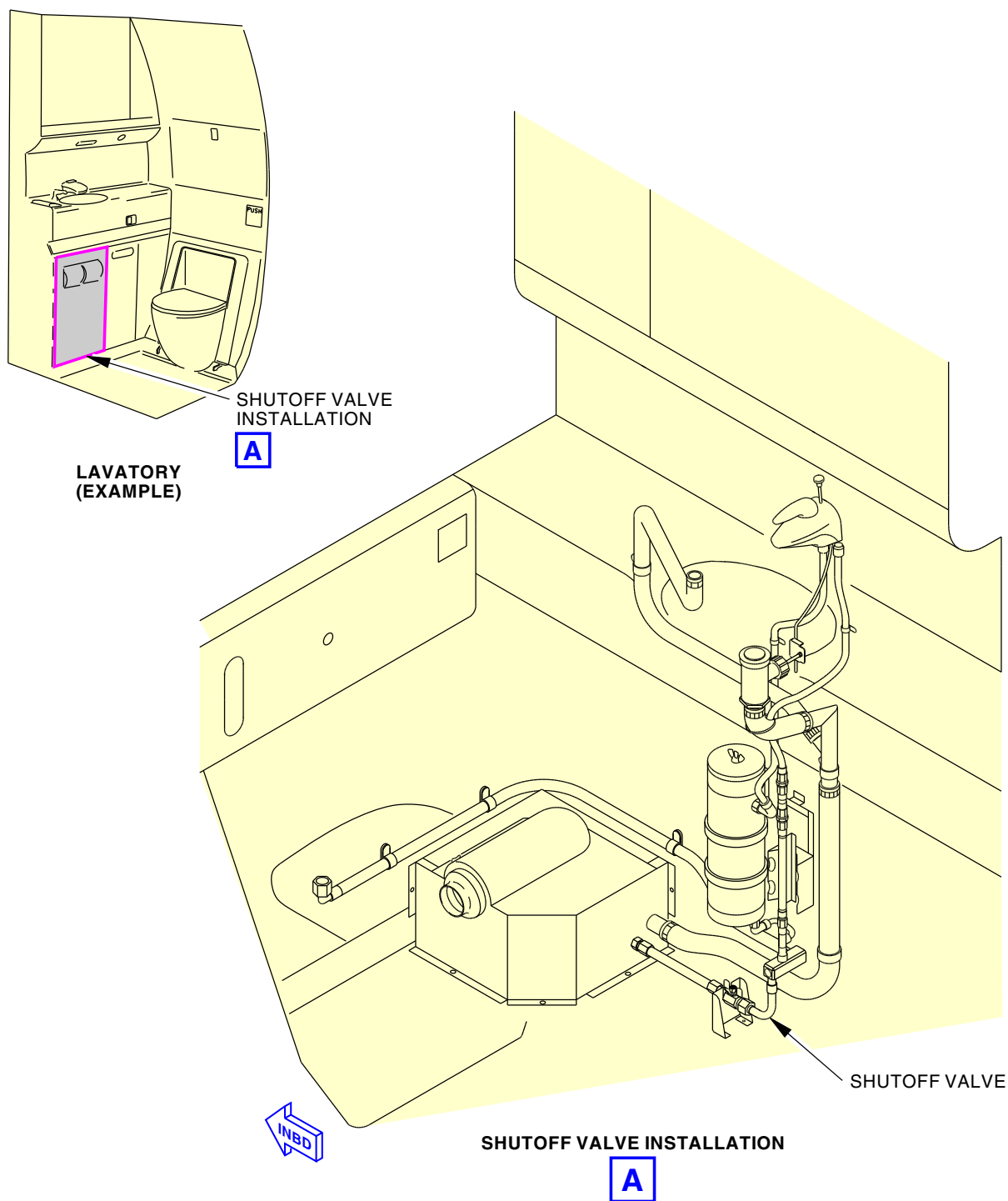
Toilet Assembly Installation
Figure 401/38-32-01-990-801-001 (Sheet 2 of 2)

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**Shutoff Valve Installation
Figure 402/38-32-01-990-825-001**

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TASK 38-32-01-400-801-001

3. Vacuum Toilet Assembly Installation

(Figure 401) (Figure 402)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Tools/Equipment

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

Reference	Description
SPL-1946	Plug - Vacuum Waste System Part #: A38007-9 Supplier: 81205

C. Consumable Materials

Reference	Description	Specification
A50137	Sealant - Silicone Encapsulant (Dow Corning - Sylgard 170 Silicone Elastomer)	MIL-PRF-23586F
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Packing	38-32-08-01C-125	ARO ALL
		38-32-08-01D-115	ARO ALL
		38-32-08-05-180	ARO ALL
		38-32-08-08-050	ARO ALL
		38-32-08-42-045	ARO 001
		38-32-08-56-060	ARO ALL
11	Toilet assembly	25-41-01-66D-234	ARO ALL
		25-41-01-66D-238	ARO ALL

E. Location Zones

Zone	Area
200	Upper Half of Fuselage

F. Install the Toilet Assembly

SUBTASK 38-32-01-420-001-001

- (1) If a plug is installed in the vacuum waste line, then do these steps to remove the waste line plug:
 - (a) Remove the clamp [6] that attaches the waste line vacuum waste plug, SPL-1946 to the vacuum waste line.
 - (b) Pull the plug from the vacuum waste line.

SUBTASK 38-32-01-640-001-001

- (2) Put grease, D00463 or Molykote 111 Compound, D00189 on the new packings [9].

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SUBTASK 38-32-01-420-002-001

- (3) Put the new packings [9] on the vacuum waste line [8] and the discharge drain [5].

SUBTASK 38-32-01-420-003-001

- (4) Put the vacuum toilet assembly [11] in its position.

SUBTASK 38-32-01-420-004-001

- (5) Put the bolts [10] and washers [17] in the installed position, but do not tighten.

SUBTASK 38-32-01-420-005-001

- (6) Install the sleeve [7] and the clamp [6] to connect the vacuum waste line [8] to the discharge drain [5].

NOTE: Turn the clamp (before you latch it) to put it in a position that will give the easiest access to the latch.

SUBTASK 38-32-01-420-006-001

- (7) Tighten the bolts [10] for the toilet.

SUBTASK 38-32-01-420-054-001

- (8) Remove the nut [15] and washer [16] to connect the bonding jumper [14] to the toilet.
 - (a) Install the nut [15] and washer [16] to connect the bonding jumper [14].

SUBTASK 38-32-01-420-233

- (9) Install the caps [140] (P/N BACC50H24) or apply Sealant, A50137 to the bolts [10].

SUBTASK 38-32-01-420-055-001

- (10) Install the screws [13] and clamps [12] that attach the electrical wires to the lavatory wall.

SUBTASK 38-32-01-110-001-001

- (11) Do this task: Rinse Water Supply Cleaning, TASK 38-32-01-100-801-001.

SUBTASK 38-32-01-420-007-001

- (12) Install the packing [22], screen [23] and rinse water supply [4] to the rinse valve fitting [21].

SUBTASK 38-32-01-420-008-001

- (13) Connect the electrical connector [3] to the power supply for the toilet.

G. Vacuum Toilet Assembly Installation Test

SUBTASK 38-32-01-860-108



MAKE SURE THAT YOU CLOSE THE DRAIN VALVE TO PREVENT A FROZEN DRAIN LINE DURING THE WATER SYSTEM OPERATION. THE DRAIN LINE CAN FREEZE DURING FLIGHT. THIS CAN CAUSE DAMAGE TO THE EQUIPMENT.

- (1) Move the drain valve in each lavatory to the CLOSED position.

SUBTASK 38-32-01-040-002-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-028-001

- (3) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-01-860-002-001

- (4) Open the water shutoff valve for the lavatory.

SUBTASK 38-32-01-610-001-001

- (5) If the potable water tank is empty, then, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-32-01-710-001-001

- (6) Flush the toilet a minimum of two times to make sure it operates correctly.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-01-410-001-001

- (1) Do these steps to install the toilet shroud:
- (a) Engage the top edge of the toilet shroud with the trim strip of the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud in.
 - (c) Turn the toilet shroud latches to engage the toilet shroud.
 - (d) If the toilet shroud has been replaced, install the appropriate disposal advisory placard to the underside of the toilet lid.

————— END OF TASK —————

TASK 38-32-01-010-803-001

4. Flush Control Assembly Removal

(Figure 403)

A. Location Zones

<u>Zone</u>	<u>Area</u>
200	Upper Half of Fuselage

B. Prepare for the Removal

SUBTASK 38-32-01-010-003-001

- (1) Get access to the lavatory for the toilet removal.

SUBTASK 38-32-01-040-003-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-004-001

- (3) Close the water shutoff valve for the lavatory.

SUBTASK 38-32-01-010-004-001

- (4) Remove the toilet shroud as follows (Figure 401):
- (a) Turn the latch handle [2] away from the toilet to open the toilet shroud [1].
 - (b) Pull the bottom edge of the toilet shroud [1] out.
 - (c) Move the toilet shroud [1] down until the top edge disengages from the trim strip on the lavatory wall.

C. Flush Control Assembly Removal

SUBTASK 38-32-01-020-008-001

- (1) Disconnect the electrical connector [33] from the power supply of the toilet.

SUBTASK 38-32-01-020-009-001

- (2) Disconnect the electrical connectors [40] for the rinse valve, flush valve motor, and flush valve at the flush control unit assembly [30].

SUBTASK 38-32-01-020-010-001

- (3) Remove the bolts [37], nuts [39], and washers [38] that attach the box and mounting plate [35] of the flush control unit assembly [30] to the toilet pedestal.

SUBTASK 38-32-01-020-011-001

- (4) Remove the flush control unit assembly [30].

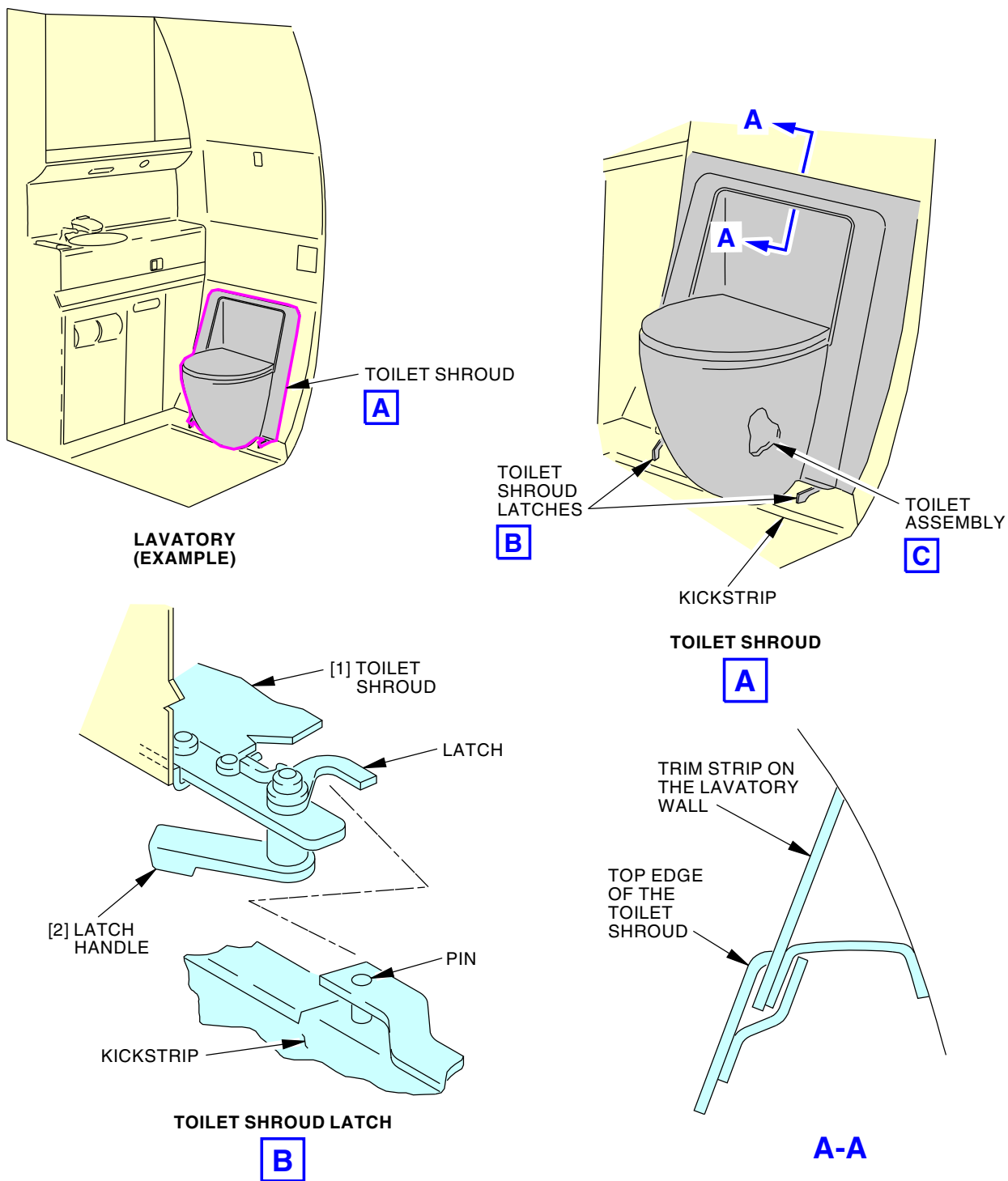
————— **END OF TASK** —————

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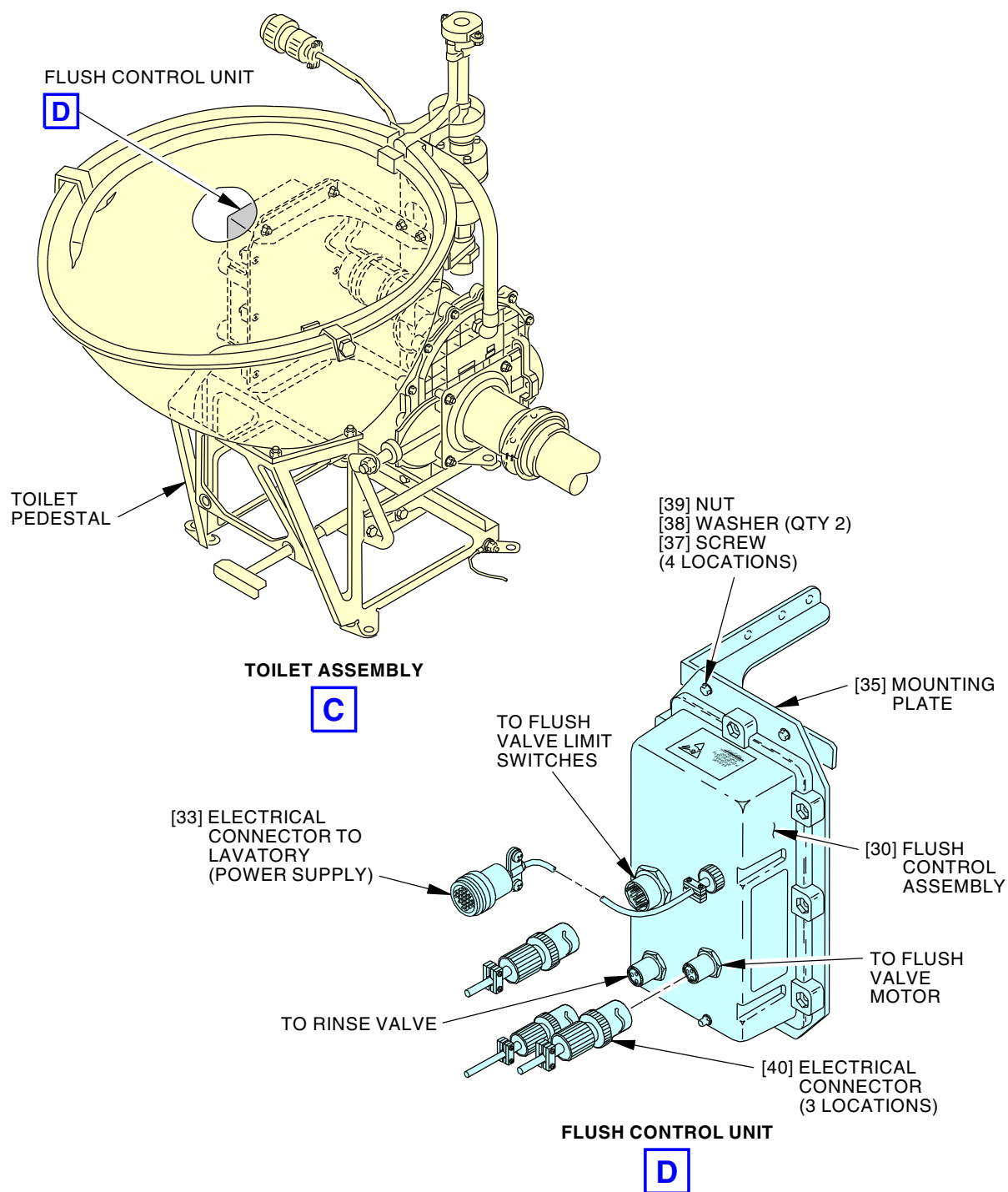
**Flush Control Assembly Installation
Figure 403/38-32-01-990-802-001 (Sheet 1 of 2)**

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**Flush Control Assembly Installation
Figure 403/38-32-01-990-802-001 (Sheet 2 of 2)**

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TASK 38-32-01-400-804-001

5. **Flush Control Assembly Installation**

(Figure 403)

A. References

Reference	Title
12-14-01-600-810	Potable Water Tank - Fill (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
38-10-00-863-801	Potable Water System - Pressurization (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
30	Unit assembly	Not Specified	

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Flush Control Assembly Installation

SUBTASK 38-32-01-420-010-001

- (1) Put the flush control unit assembly [30] in its position on the toilet assembly.
 - (a) Install the bolts [37], washers [38], and nuts [39] that attach the flush control unit assembly [30] to the toilet assembly.

SUBTASK 38-32-01-420-011-001

- (2) Connect the electrical connectors [40] for the rinse valve, flush valve motor, and flush valve to the flush control unit assembly [30].

SUBTASK 38-32-01-420-012-001

- (3) Connect the electrical connector [33] for the power supply for the toilet.

E. Flush Control Assembly Installation Test

SUBTASK 38-32-01-040-004-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-029-001

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

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SUBTASK 38-32-01-860-005-001

- (3) Open the water shutoff valve for the lavatory.

SUBTASK 38-32-01-610-002-001

- (4) If the potable water tank is empty, then, do this task: Potable Water Tank - Fill, TASK 12-14-01-600-810.

SUBTASK 38-32-01-860-006-001

- (5) Do this task: Potable Water System - Pressurization, TASK 38-10-00-863-801.

SUBTASK 38-32-01-710-002-001

- (6) Flush the toilet a minimum of two times to make sure it operates correctly.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-01-410-041-001

- (1) Do these steps to install the toilet shroud:
 - (a) Engage the top edge of the toilet shroud with the trim strip of the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud in.
 - (c) Turn the toilet shroud latches to engage the toilet shroud.
 - (d) If the toilet shroud has been replaced, install the appropriate disposal advisory placard to the underside of the toilet lid.

————— END OF TASK —————

TASK 38-32-01-000-804-001

6. Manual Shutoff Valve Removal

(Figure 404)

A. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-32-01-010-005-001

- (1) Get access to the lavatory for the toilet removal.

SUBTASK 38-32-01-040-005-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-008-001

- (3) Close the water shutoff valve for the lavatory.

SUBTASK 38-32-01-910-002-001

- (4) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-01-010-006-001

- (5) Remove the toilet shroud as follows (Figure 401):
- (a) Turn the latch handle [2] away from the toilet to open the toilet shroud [1].
 - (b) Pull the bottom edge of the toilet shroud [1] out.
 - (c) Move the toilet shroud [1] down until the top edge disengages from the trim strip on the lavatory wall.

SUBTASK 38-32-01-010-007-001

- (6) If it is necessary for better access, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

D. Manual Shutoff Valve Removal

SUBTASK 38-32-01-020-013-001

- (1) Remove the nut [81] and washer [80] that attach the shaft of the manual shutoff valve assembly [74] to the actuating arm [79].

SUBTASK 38-32-01-020-014-001

- (2) Pull the handle for the manual shutoff valve out to disengage the actuating arm [79] from the shaft on the manual shutoff valve assembly [74].

SUBTASK 38-32-01-020-015-001

- (3) Remove the washer [78] from the shaft of the manual shutoff valve assembly [74].

SUBTASK 38-32-01-020-016-001

- (4) Remove the clamp [6] that attaches the discharge drain [5] to the manual shutoff valve assembly [74].

SUBTASK 38-32-01-020-215

- (5) Remove the washers [68], and nuts [67] that attach the manual shutoff valve assembly [74] to the flush valve assembly [66].

SUBTASK 38-32-01-020-216

- (6) Remove the manual shutoff valve assembly [74] and the seal [73] from the valve assembly [66].

SUBTASK 38-32-01-020-018-001

- (7) Remove the discharge drain [5] and the seal [77] from the manual shutoff valve assembly [74].

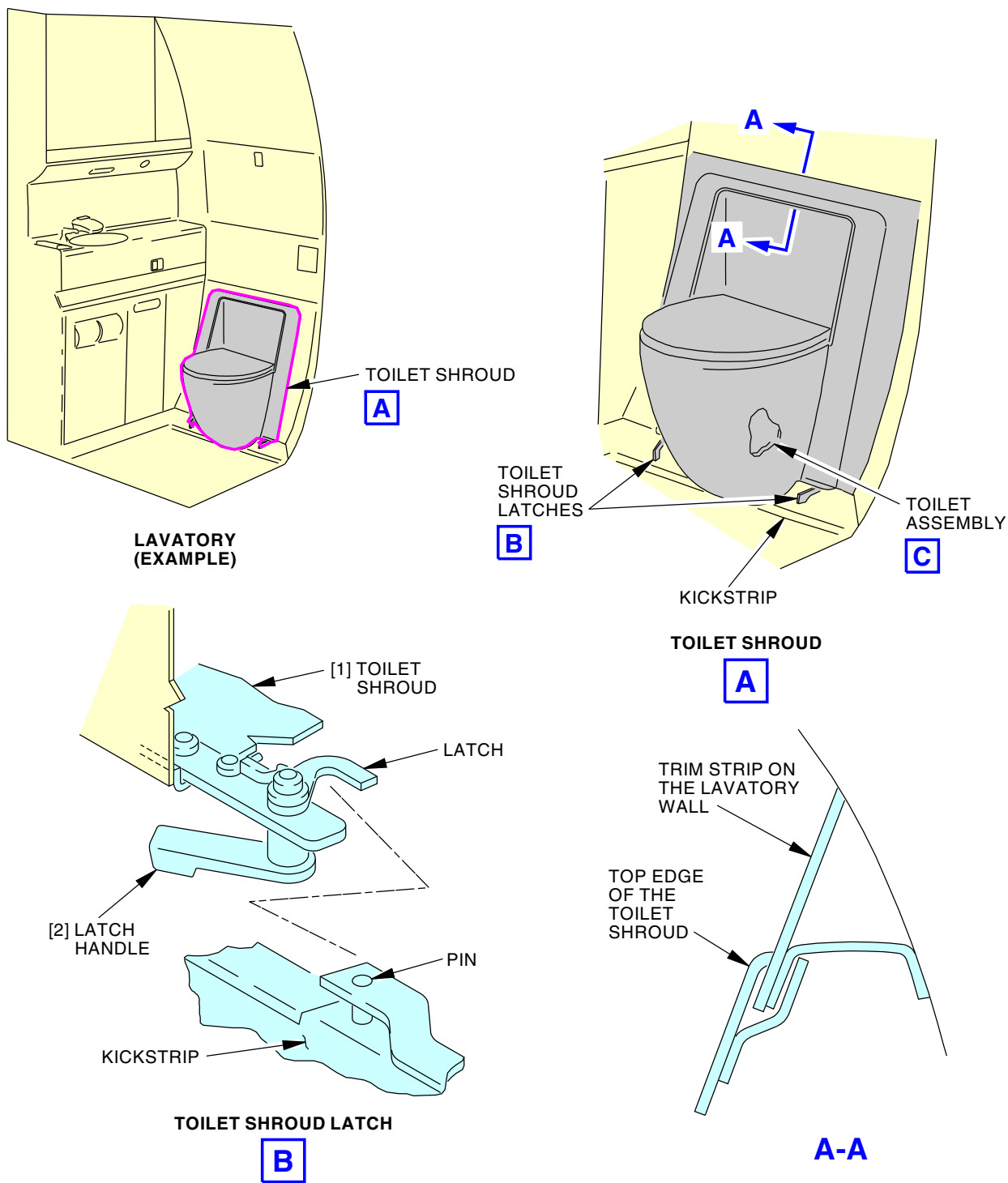
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**Flush Valve, and Manual Shutoff Valve Installation
Figure 404/38-32-01-990-803-001 (Sheet 1 of 2)**

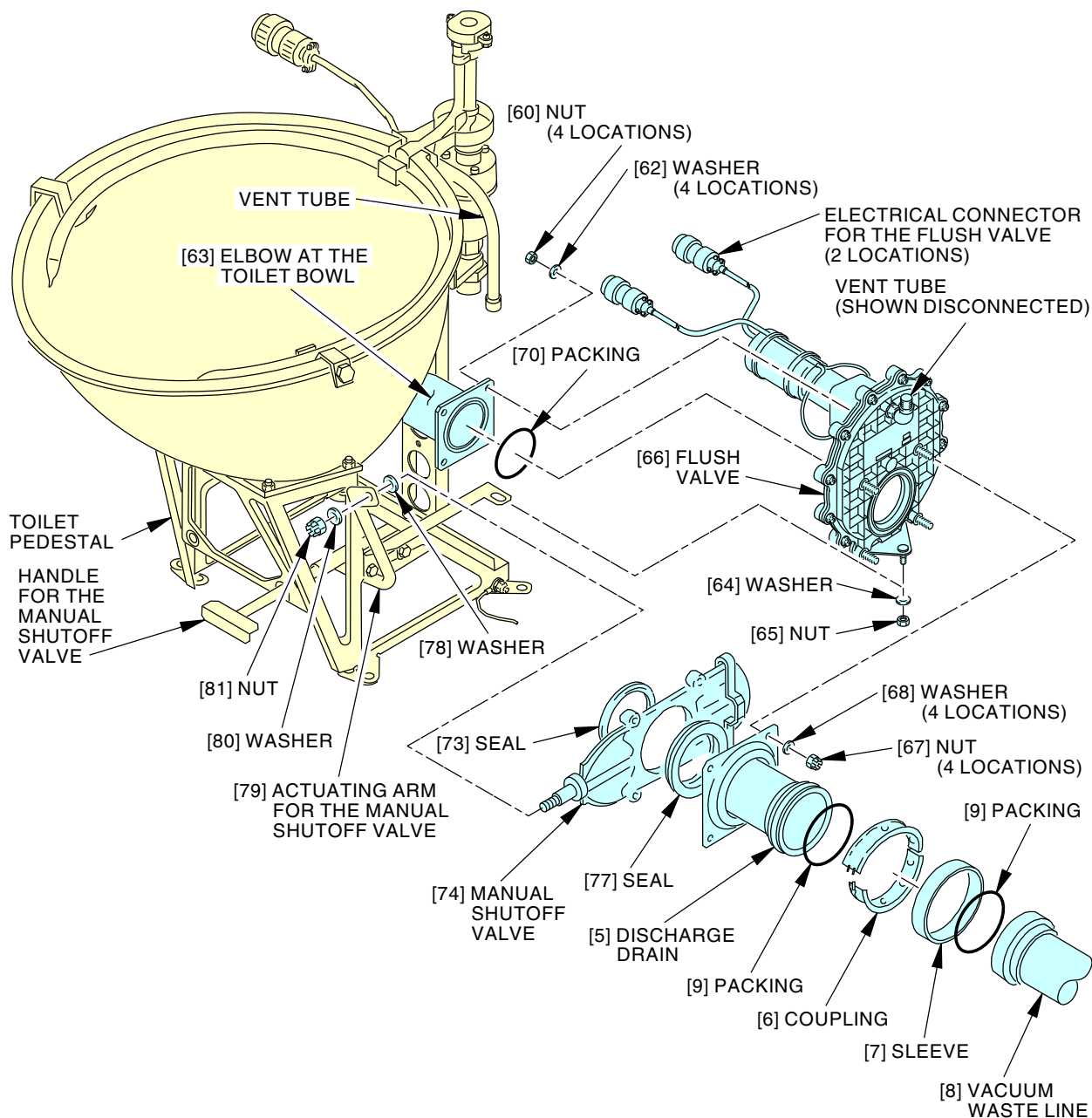
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TOILET ASSEMBLY INSTALLATION



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Flush Valve, and Manual Shutoff Valve Installation
Figure 404/38-32-01-990-803-001 (Sheet 2 of 2)

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TASK 38-32-01-400-805-001

7. Manual Shutoff Valve Installation

(Figure 404)

A. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Packing	38-32-08-01C-125	ARO ALL
		38-32-08-01D-115	ARO ALL
		38-32-08-05-180	ARO ALL
		38-32-08-08-050	ARO ALL
		38-32-08-42-045	ARO 001
		38-32-08-56-060	ARO ALL
73	Seal	Not Specified	
74	Valve assembly	Not Specified	
77	Seal	Not Specified	

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Manual Shutoff Valve Installation

SUBTASK 38-32-01-420-051-001

- (1) Apply the grease, D00463 or Molykote 111 Compound, D00189 on the seal [73] and seal [77].

SUBTASK 38-32-01-420-013-001

- (2) Install the seal [73] so that it is flat against the valve.

SUBTASK 38-32-01-420-014-001

- (3) Install the seal [77] on the discharge drain [5].

SUBTASK 38-32-01-420-015-001

- (4) Put the manual shutoff valve assembly [74] in its position.

SUBTASK 38-32-01-420-236-001

- (5) Install the, washers [68], and nuts [67] that attach the manual shutoff valve assembly [74] and the discharge drain [5] to the valve assembly [66].

SUBTASK 38-32-01-410-003-001

- (6) If you removed the vacuum toilet assembly for better access, do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.

SUBTASK 38-32-01-410-004-001

- (7) If the toilet assembly was not removed, connect the discharge pipe as follows:

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- (a) Put grease, D00463 or Molykote 111 Compound, D00189 on the new packings [9].
- (b) Put the new packings [9] on the vacuum waste line [8] and the discharge drain [5].
- (c) Install the sleeve [7] and the clamp [6] to connect the vacuum waste line [8] to the discharge drain [5].

NOTE: Turn the clamp (before you latch it) to put it in a position that will give the easiest access to the latch.

SUBTASK 38-32-01-420-017-001

- (8) Put the washer [78] on the shaft of the manual shutoff valve assembly [74].

SUBTASK 38-32-01-420-018-001

- (9) Push the handle for the manual shutoff valve in and put the actuating arm [79] on the shaft on the manual shutoff valve assembly [74].

SUBTASK 38-32-01-420-019-001

- (10) Install the nut [81] and the washer [80] that attach the shaft of the manual shutoff valve assembly [74] to the actuating arm [79].

F. Manual Shutoff Valve Installation Test

SUBTASK 38-32-01-040-006-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-030-001

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-01-860-009-001

- (3) Open the water shutoff valve for the lavatory.

SUBTASK 38-32-01-860-010-001

- (4) Pull the handle for the manual shutoff valve out to close the manual shutoff valve.

SUBTASK 38-32-01-710-003-001

- (5) Flush the toilet a minimum of two times to make sure it does not operate.

NOTE: The toilet will fill with water when you flush the toilet. This step makes sure that the manual shutoff valve is serviceable in the closed position.

SUBTASK 38-32-01-860-011-001

- (6) Push the handle for the manual shutoff valve in to open the manual shutoff valve.

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SUBTASK 38-32-01-710-004-001

- (7) Flush the toilet a minimum of two times to make sure it operates correctly.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-01-410-043-001

- (1) Do these steps to install the toilet shroud:
- (a) Engage the top edge of the toilet shroud with the trim strip of the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud in.
 - (c) Turn the toilet shroud latches to engage the toilet shroud.
 - (d) If the toilet shroud has been replaced, install the appropriate disposal advisory placard to the underside of the toilet lid.

————— END OF TASK —————

TASK 38-32-01-000-805-001

8. Flush Valve Removal

(Figure 404)

A. References

Reference	Title
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-32-01-010-008-001

- (1) Get access to the lavatory for the toilet removal.

SUBTASK 38-32-01-040-007-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-013-001

- (3) Close the water shutoff valve for the lavatory.

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SUBTASK 38-32-01-910-003-001

- (4) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-01-010-009-001

- (5) Remove the toilet shroud as follows (Figure 401):
- (a) Turn the latch handle [2] away from the toilet to open the toilet shroud [1].
 - (b) Pull the bottom edge of the toilet shroud [1] out.
 - (c) Move the toilet shroud [1] down until the top edge disengages from the trim strip on the lavatory wall.

SUBTASK 38-32-01-010-010-001

- (6) If it is necessary for better access, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

D. Flush Valve Removal

SUBTASK 38-32-01-020-020-001

- (1) Do this task: Manual Shutoff Valve Removal, TASK 38-32-01-000-804-001.

SUBTASK 38-32-01-020-021-001

- (2) Disconnect the vent tube from the flush valve assembly [66].

SUBTASK 38-32-01-020-022-001

- (3) Disconnect the electrical connector for the flush valve motor and the electrical connector for the limit switches.

SUBTASK 38-32-01-020-023-001

- (4) Remove the nut [65] and washer [64] that attach the bracket to the flush valve assembly [66].

SUBTASK 38-32-01-020-025-001

- (5) Remove the nuts [60] and washers [62] that attach the toilet elbow [63] to the flush valve assembly [66].

SUBTASK 38-32-01-020-027-001

- (6) Remove and then discard the packing [70].

SUBTASK 38-32-01-020-028-001

- (7) Remove the flush valve assembly [66].

————— END OF TASK —————

TASK 38-32-01-400-806-001

9. Flush Valve Installation

(Figure 404)

A. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

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C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
66	Valve assembly	Not Specified	
70	Packing	Not Specified	

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Flush Valve Installation

SUBTASK 38-32-01-420-052-001

- (1) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packings [70].

SUBTASK 38-32-01-420-053-001

- (2) Install the packing [70] between the flush valve assembly [66] and the toilet elbow [63].

SUBTASK 38-32-01-420-020-001

- (3) Put the flush valve assembly [66] in its position on the flange surface of the toilet elbow [63].

SUBTASK 38-32-01-420-021-001

- (4) Loosely install the washer [64] and nut [65] on the stud that attaches the support bracket to the bottom of the flush valve assembly [66].

- (a) Do not tighten the nut.

SUBTASK 38-32-01-420-234-001

- (5) Loosely install the nuts [60] and washers [62] that attach the flush valve assembly [66] to the elbow [63].

- (a) Do not tighten the nuts [60].

SUBTASK 38-32-01-420-025-001

- (6) Connect the vent tube to the flush valve assembly [66].

SUBTASK 38-32-01-420-026-001

- (7) Connect the electrical connector for the flush valve motor and the electrical connector for the limit switches.

SUBTASK 38-32-01-420-235-001

- (8) Tighten the nuts [65] and nuts [60].

SUBTASK 38-32-01-420-028-001

- (9) Do this task: Manual Shutoff Valve Installation, TASK 38-32-01-400-805-001.

SUBTASK 38-32-01-410-006-001

- (10) If it was necessary to remove the vacuum toilet assembly for better access, do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.

F. Flush Valve Installation Test

SUBTASK 38-32-01-040-008-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-031-001

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-01-860-014-001

(3) Open the water shutoff valve for the lavatory.

SUBTASK 38-32-01-710-005-001

(4) Flush the toilet a minimum of two times to make sure it operates correctly.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-01-410-045-001

(1) Do these steps to install the toilet shroud:

- (a) Engage the top edge of the toilet shroud with the trim strip of the lavatory wall.
- (b) Push the bottom edge of the toilet shroud in.
- (c) Turn the toilet shroud latches to engage the toilet shroud.
- (d) If the toilet shroud has been replaced, install the appropriate disposal advisory placard to the underside of the toilet lid.

————— END OF TASK —————

TASK 38-32-01-000-808-001

10. Antisiphon Valve Removal

(Figure 405)

A. References

<u>Reference</u>	<u>Title</u>
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Location Zones

<u>Zone</u>	<u>Area</u>
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-32-01-010-023-001

(1) Get access to the lavatory for the toilet removal.

SUBTASK 38-32-01-040-013-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-022-001

- (3) Close the water shutoff valve for the lavatory.

SUBTASK 38-32-01-910-006-001

- (4) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-01-010-024-001

- (5) Remove the toilet shroud as follows (Figure 401):
- (a) Turn the latch handle [2] away from the toilet to open the toilet shroud [1].
 - (b) Pull the bottom edge of the toilet shroud [1] out.
 - (c) Move the toilet shroud [1] down until the top edge disengages from the trim strip on the lavatory wall.

SUBTASK 38-32-01-010-025-001

- (6) If it is necessary for better access, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

D. Antisiphon Valve Removal

SUBTASK 38-32-01-020-041-001

- (1) Remove the nuts [125] and washers [124] that attach the antisiphon valve [126] to the toilet bowl.

SUBTASK 38-32-01-020-042-001

- (2) Pull up to disconnect the joint between the antisiphon valve [126] and the rinse valve assembly [128].

SUBTASK 38-32-01-020-043-001

- (3) Remove the antisiphon valve [126] and gasket [123] from the toilet bowl.

SUBTASK 38-32-01-020-044-001

- (4) Remove and then discard the packing from these parts:
- (a) The packing [122] from the rinse ring on the toilet bowl.
 - (b) The packing [127] from the antisiphon valve.

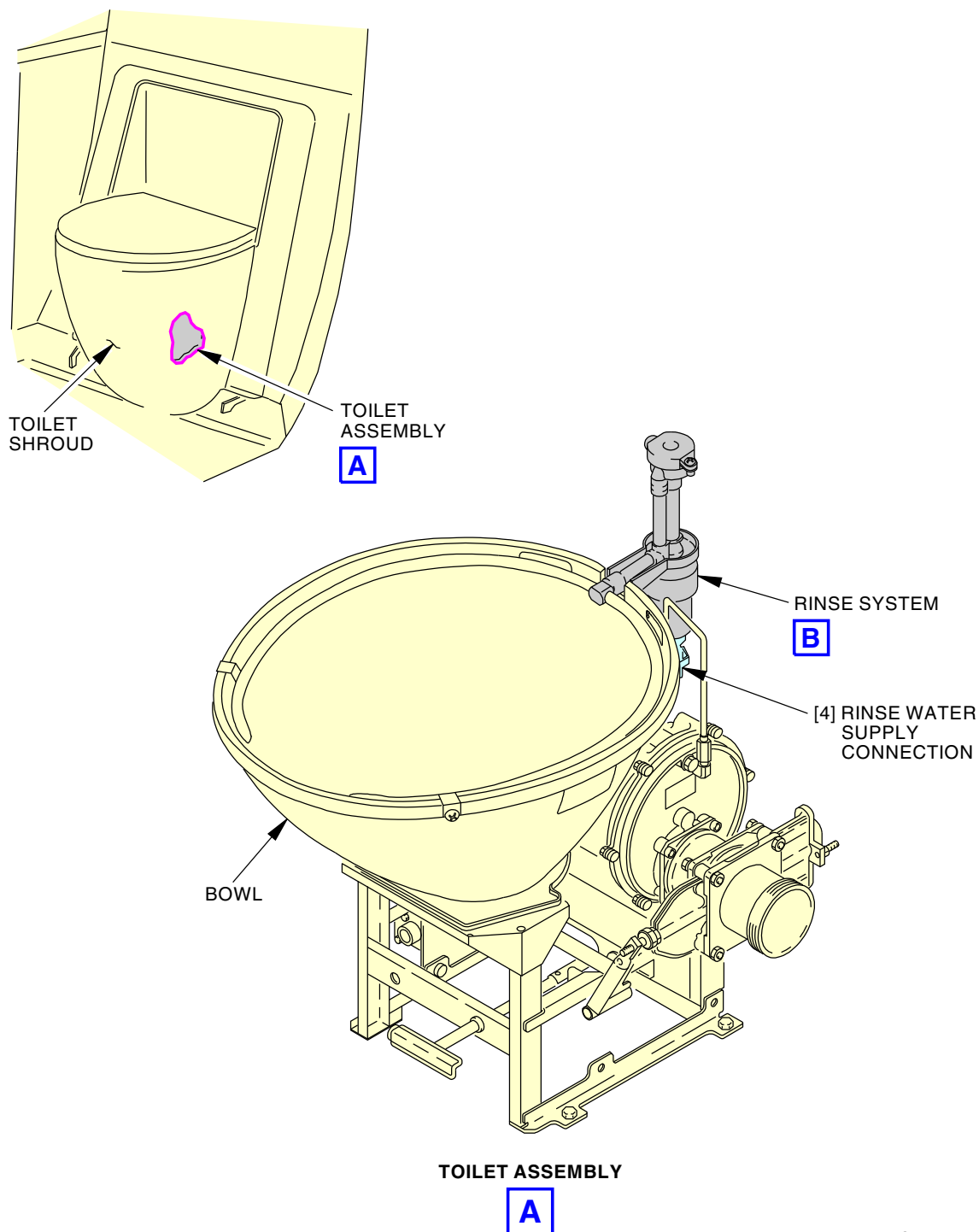
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Rinse Valve and Antisiphon Valve Installation
Figure 405/38-32-01-990-804-001 (Sheet 1 of 2)

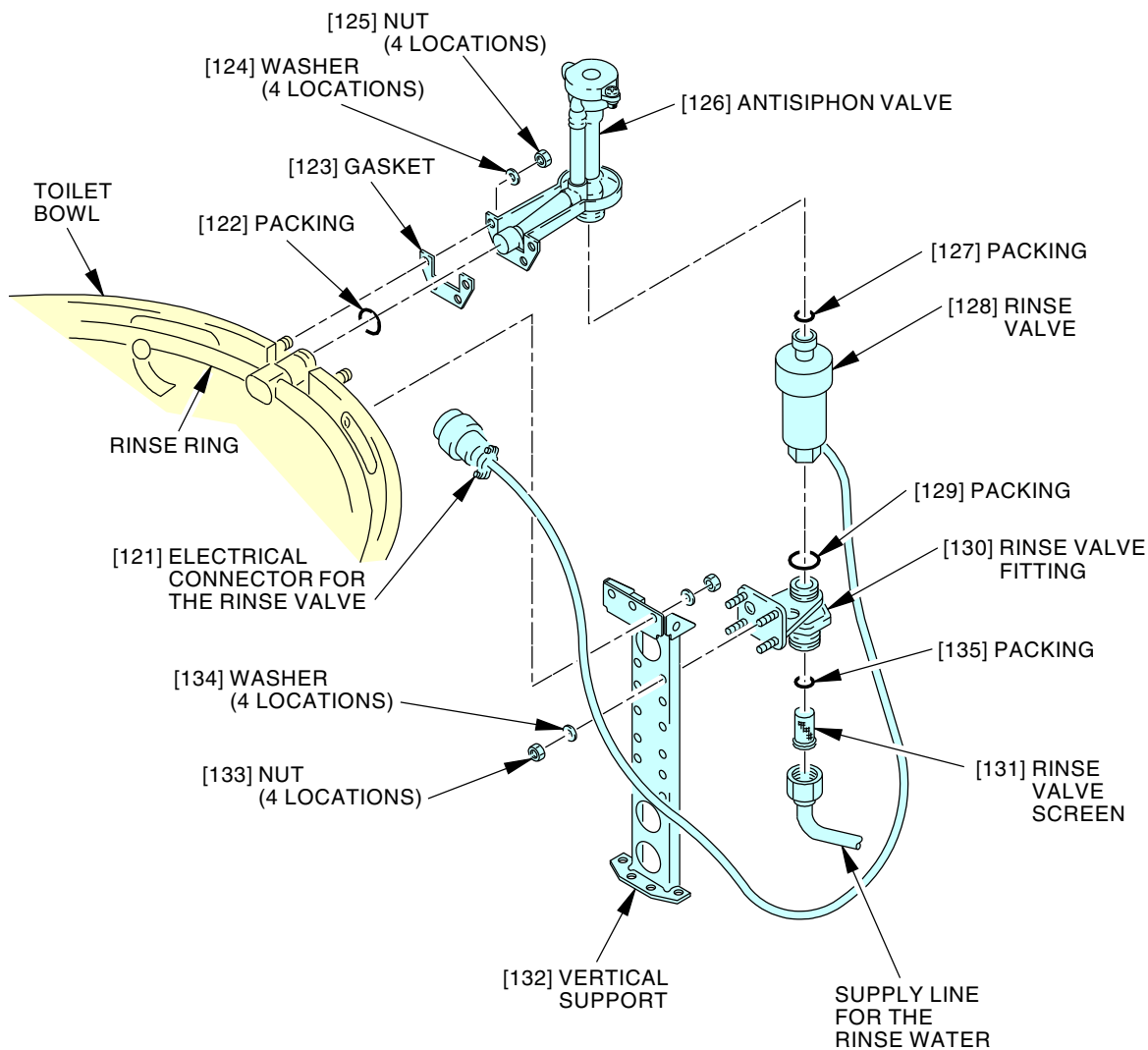
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RINSE SYSTEM

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**Rinse Valve and Antisiphon Valve Installation
Figure 405/38-32-01-990-804-001 (Sheet 2 of 2)**

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TASK 38-32-01-400-802-001

11. Antisiphon Valve Installation

(Figure 405)

A. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
122	Packing	38-32-01-63F-035	ARO ALL
123	Gasket	38-32-01-63F-040	ARO ALL
126	Valve	Not Specified	
127	Packing	38-32-01-63F-045	ARO ALL

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Antisiphon Valve Installation

SUBTASK 38-32-01-640-002-001

(1) Apply the grease, D00463 or Molykote 111 Compound, D00189 on the new packing [122].

SUBTASK 38-32-01-420-037-001

(2) Install the packing [122] on the rinse ring.

SUBTASK 38-32-01-640-003-001

(3) Apply the grease, D00463 or Molykote 111 Compound, D00189 on the new packing [127].

SUBTASK 38-32-01-420-038-001

(4) Install the packing [127] on the antisiphon valve [126].

SUBTASK 38-32-01-420-039-001

(5) Put a new gasket [123] and the antisiphon valve [126] in their position on the toilet bowl.

SUBTASK 38-32-01-420-040-001

(6) Install the washers [124] and nuts [125] that attach the antisiphon valve [126] to the toilet bowl.

SUBTASK 38-32-01-410-012-001

(7) If you removed the vacuum toilet assembly for better access, do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.

F. Antisiphon Valve Installation Test

SUBTASK 38-32-01-040-014-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-034-001

(2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-01-860-023-001

(3) Open the water shutoff valve for the lavatory.

SUBTASK 38-32-01-710-008-001

(4) Flush the toilet a minimum of two times to make sure it operates correctly.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-01-410-051-001

- (1) Do these steps to install the toilet shroud:
- (a) Engage the top edge of the toilet shroud with the trim strip of the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud in.
 - (c) Turn the toilet shroud latches to engage the toilet shroud.
 - (d) If the toilet shroud has been replaced, install the appropriate disposal advisory placard to the underside of the toilet lid.

————— END OF TASK —————

TASK 38-32-01-000-802-001

12. Rinse Valve Removal

(Figure 405)

A. References

<u>Reference</u>	<u>Title</u>
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Location Zones

<u>Zone</u>	<u>Area</u>
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-32-01-010-026-001

- (1) Get access to the lavatory for the toilet removal.

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SUBTASK 38-32-01-040-015-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-01-860-025-001

- (3) Close the water shutoff valve for the lavatory.

SUBTASK 38-32-01-910-007-001

- (4) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-01-010-027-001

- (5) Remove the toilet shroud as follows (Figure 401):
- (a) Turn the latch handle [2] away from the toilet to open the toilet shroud [1].
 - (b) Pull the bottom edge of the toilet shroud [1] out.
 - (c) Move the toilet shroud [1] down until the top edge disengages from the trim strip on the lavatory wall.

SUBTASK 38-32-01-010-028-001

- (6) If it is necessary for better access, do this task: Vacuum Toilet Assembly Removal, TASK 38-32-01-000-801-001.

D. Rinse Valve Removal

SUBTASK 38-32-01-020-046-001

- (1) Remove the wire ties that attach the wires for the rinse valve to the toilet.

SUBTASK 38-32-01-020-047-001

- (2) Disconnect the electrical connector [121] for the rinse valve from the flush control assembly.

SUBTASK 38-32-01-020-048-001

- (3) Disconnect the supply line for the rinse water from the rinse valve fitting [130].

SUBTASK 38-32-01-680-002-001

- (4) Drain the water from the supply line into a container.

SUBTASK 38-32-01-020-049-001

- (5) Remove the rinse valve screen [131] and packing [135] from the rinse valve fitting [130].

SUBTASK 38-32-01-020-050-001

- (6) Do this task: Antisiphon Valve Removal, TASK 38-32-01-000-808-001.

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SUBTASK 38-32-01-020-051-001

- (7) Remove the nuts [133] and washers [134] that attach the rinse valve fitting [130] to the vertical support [132].

SUBTASK 38-32-01-020-052-001

- (8) Remove the rinse valve fitting [130].

SUBTASK 38-32-01-020-053-001

- (9) Remove the rinse valve assembly [128] from the rinse valve fitting [130].

SUBTASK 38-32-01-020-054-001

- (10) Remove and then discard the packing from these parts:
- (a) The packing [127] from the rinse valve.
 - (b) The packing [129] from the rinse valve fitting.

————— END OF TASK —————

TASK 38-32-01-400-803-001

13. Rinse Valve Installation

(Figure 405)

A. References

Reference	Title
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
127	Packing	38-32-01-63F-045	ARO ALL
129	Packing	Not Specified	
130	Fitting	38-32-01-63F-190	ARO ALL
131	Screen	Not Specified	
135	Packing	Not Specified	

D. Location Zones

Zone	Area
200	Upper Half of Fuselage

E. Rinse Valve Installation

SUBTASK 38-32-01-640-004-001

- (1) Apply the grease, D00463 or Molykote 111 Compound, D00189 on new packing [127] and packing [129].

SUBTASK 38-32-01-420-041-001

- (2) Install the packing [127] and packing [129] on the rinse valve assembly [128] and the rinse valve fitting [130].

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SUBTASK 38-32-01-430-001

- (3) Install the rinse valve [128] on the rinse valve fitting [130]. Tighten the connection hand tight.
- (a) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-32-01-420-042-001

- (4) Put the assembled rinse valve [128] and rinse valve fitting [130] in their position on the vertical support [132].

SUBTASK 38-32-01-420-043-001

- (5) Install the nuts [133] and washers [134] that connect the fitting [130] and rinse valve [128] to the vertical support [132].

SUBTASK 38-32-01-420-044-001

- (6) Do this task: Antisiphon Valve Installation, TASK 38-32-01-400-802-001.

SUBTASK 38-32-01-420-045-001

- (7) Install the rinse valve screen [131] and packing [135] in the rinse valve fitting [130].

SUBTASK 38-32-01-110-002-001

- (8) Do this task: Rinse Water Supply Cleaning, TASK 38-32-01-100-801-001.

SUBTASK 38-32-01-420-046-001

- (9) Connect the supply line for the rinse water to the rinse valve fitting [130].

SUBTASK 38-32-01-420-047-001

- (10) Connect the electrical connector [121] for the rinse valve assembly [128] to the flush control assembly.

SUBTASK 38-32-01-420-048-001

- (11) Install the wire ties to attach the wires for the rinse valve assembly [128] to the other wires on the toilet.

SUBTASK 38-32-01-410-014-001

- (12) If you removed the vacuum toilet assembly for better access, do this task: Vacuum Toilet Assembly Installation, TASK 38-32-01-400-801-001.

F. Rinse Valve Installation Test

SUBTASK 38-32-01-040-016-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

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SUBTASK 38-32-01-860-035-001

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-32-01-860-026-001

- (3) Open the water shutoff valve for the lavatory.

SUBTASK 38-32-01-710-009-001

- (4) Flush the toilet a minimum of two times to make sure it operates correctly.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-01-410-053-001

- (1) Do these steps to install the toilet shroud:
- (a) Engage the top edge of the toilet shroud with the trim strip of the lavatory wall.
 - (b) Push the bottom edge of the toilet shroud in.
 - (c) Turn the toilet shroud latches to engage the toilet shroud.
 - (d) If the toilet shroud has been replaced, install the appropriate disposal advisory placard to the underside of the toilet lid.

— END OF TASK —

TASK 38-32-01-100-801-001

14. Rinse Water Supply Cleaning

(Figure 405)

A. General

- (1) Do this task to make sure the potable water system is not contaminated when the vacuum toilet assembly is connected.

B. References

Reference	Title
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)

C. Consumable Materials

Reference	Description	Specification
B00637	Acid, Citric	A-A-59147
G00022	Compound - Chlorine Dioxide For Water Purification - Purogene or Oxine	
G50448	Acid - Citric 50% (Liquid)	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
131	Screen	Not Specified	
135	Packing	Not Specified	

E. Location Zones

Zone	Area
200	Upper Half of Fuselage

F. Rinse Water Supply Cleaning

SUBTASK 38-32-01-670-001-001

- (1) Make a disinfectant as follows:

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- (a) Mix 0.64 fl-oz (0.019 l) of chlorine dioxide Purogene or Oxine compound, G00022 and 0.08 fl-oz (0.0024 l) of citric acid, B00637 (crystal or powder) or 0.13 fl-oz (0.0038 l) of citric acid, G50448 50% (liquid).
- (b) Stop for five minutes.
- (c) Add one gallon of water to complete the disinfectant.

SUBTASK 38-32-01-670-002-001

- (2) Clean the connections on the supply line for the rinse water with the disinfectant.

SUBTASK 38-32-01-670-003-001

- (3) Put approximately one cup (8 fluid ounces) of the disinfectant in the supply line.

SUBTASK 38-32-01-420-049-001

- (4) Install the rinse valve screen [131] and packing [135] in the rinse valve assembly [128].

SUBTASK 38-32-01-420-050-001

- (5) Connect the supply line for the rinse water.
 - (a) Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-32-01-710-010-001

- (6) Flush the toilet a minimum of two times to make sure the disinfectant is out of the supply line.

———— **END OF TASK** ————

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LIQUID SEPARATOR - MAINTENANCE PRACTICES

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) A removal of the liquid separator.
 - (2) An installation of the liquid separator.
 - (3) A cleaning of the liquid separator and liquid separator filter.
 - (4) A replacement of the liquid separator filter.

TASK 38-32-02-000-801

2. Liquid Separator Removal

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. **References**

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

C. **Prepare for the Removal**

SUBTASK 38-32-02-610-003

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-02-610-001

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-02-860-001

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

Left Power Management Panel, P110

Row	Col	Number	Name
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
Z	1	C38307	VAC BLO LAV SYS 2 & 3

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SUBTASK 38-32-02-010-001

- (4) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-32-02-010-002

- (5) To remove the enclosure panels for the waste tanks, do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

D. Liquid Separator Removal

SUBTASK 38-32-02-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Loosen the clamps [2] that attach the flexible coupling [4] to disconnect from the upper cap [9].

SUBTASK 38-32-02-020-002

- (2) For the middle waste tank, loosen the clamps [2] that attach the flexible coupling [10] to disconnect from the upper cap [9].

SUBTASK 38-32-02-020-003

- (3) Loosen the v-band coupling [1].

SUBTASK 38-32-02-020-004

- (4) Remove the upper cap [9], packing [5], and packing [8].
 - (a) Discard the packing [5] and packing [8].

SUBTASK 38-32-02-020-005

- (5) Remove the filter canister [6] for the liquid separator.

SUBTASK 38-32-02-020-006

- (6) Remove the bowl and shroud [7].

————— END OF TASK —————

TASK 38-32-02-400-801

3. Liquid Separator Installation

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	
D00463	Grease - Food Processing Equipment	DOD-G-24650

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C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Coupling	38-32-11-05-040	ARO ALL
		38-32-11-05-085	ARO ALL
5	Packing	38-32-11-05-050	ARO ALL
		38-32-11-05-095	ARO ALL
6	Filter canister	38-32-11-05-060	ARO ALL
7	Bowl and shroud	38-32-11-05-070	ARO ALL
8	Packing	38-32-11-05-055	ARO ALL
9	Cap	38-32-11-05-045	ARO ALL

D. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Liquid Separator Installation

SUBTASK 38-32-02-640-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Apply the grease, D00463 or Molykote 111 Compound, D00189 to the packing [5] and packing [8].

SUBTASK 38-32-02-420-001

- (2) Install the bowl and shroud [7].

SUBTASK 38-32-02-420-002

- (3) Install the filter canister [6] for the liquid separator.

SUBTASK 38-32-02-420-003

- (4) Install the upper cap [9] and packing [5] and packing [8].

SUBTASK 38-32-02-420-004

- (5) Install the v-band coupling [1].

- (a) Tighten the v-band coupling [1] to 90 in-lb (104 kg-cm) - 110 in-lb (127 kg-cm).

SUBTASK 38-32-02-420-005

- (6) Tighten the clamps [2] that attach the flexible coupling [4] to connect from the upper cap [9].

SUBTASK 38-32-02-420-006

- (7) For the middle waste tank, tighten the clamps [2] that attach the flexible coupling [10] to connect from the upper cap [9].

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G. Liquid Separator Installation Test

SUBTASK 38-32-02-860-002

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

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-02-860-003

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-02-710-001

- (3) Flush a toilet connected to the waste tank for which you removed the liquid separator.

SUBTASK 38-32-02-790-001

- (4) Examine the upper cap and the connections for leakage.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-02-610-002

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-02-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-02-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-32-02-100-801

4. Liquid Separator and Liquid Separator Filter Cleaning

NOTE: This procedure is a scheduled maintenance task.

A. General

- (1) This task cleans the liquid separator filter canister.

B. Consumable Materials

<u>Reference</u>	<u>Description</u>	<u>Specification</u>
B00541	Cleaner - General Purpose Household Detergent	

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C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

D. Liquid Separator Cleaning

SUBTASK 38-32-02-020-007



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Do this task: Liquid Separator Removal, TASK 38-32-02-000-801.

SUBTASK 38-32-02-160-001

- (2) Mix the general purpose household detergent cleaner, B00541 with warm water in accordance with directions on the container label.

SUBTASK 38-32-02-160-002

- (3) Soak the liquid separator bowl and shroud [7] and the liquid separator filter canister [6] in the cleaner and water for a minimum of 15 minutes.

SUBTASK 38-32-02-170-001

- (4) Flush the liquid separator bowl and shroud [7] and the liquid separator filter canister [6] with clean water.

SUBTASK 38-32-02-210-003

- (5) Visually check the upper cap [9] to see that it is clean.
(a) Soak the cap in the cleaner and water if it is not clean, use a brush if necessary.

SUBTASK 38-32-02-210-001

- (6) Visually check the liquid separator filter canister [6] to see that it is clean.
(a) Replace the liquid separator filter canister if it is not clean.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-02-420-007

- (1) Do this task: Liquid Separator Installation, TASK 38-32-02-400-801.

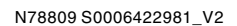
————— END OF TASK —————

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Liquid Separator Maintenance Practices
Figure 201/38-32-02-990-801



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WASTE DRAIN BALL VALVE AND CONTROL CABLE - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the waste drain ball valve.
 - (2) An installation of the waste drain ball valve.
 - (3) A removal of the control cable for the waste drain ball valve.
 - (4) An installation of the control cable for the waste drain ball valve.
 - (5) A removal of the limit switch for the waste drain ball valve.
 - (6) An installation of the limit switch for the waste drain ball valve.
- B. The Waste Drain Ball Valve is referred to as the Ball Valve in this procedure.

TASK 38-32-03-000-801

2. Waste Drain Ball Valve Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
30-71-03-000-801	Waste Drain Line Heater Removal (P/B 401)

B. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
163	Area Below Bulk Cargo Compartment, Left
825	Bulk Cargo Door

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-32-03-610-001



FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to service the waste tanks.

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SUBTASK 38-32-03-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-03-010-002

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-03-860-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

E. Ball Valve Removal

SUBTASK 38-32-03-010-003



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Do this task: Waste Drain Line Heater Removal, TASK 30-71-03-000-801.

SUBTASK 38-32-03-020-001

- (2) Disconnect the electrical receptacle [27] from the limit switch for the ball valve assembly [13].

SUBTASK 38-32-03-020-002

- (3) Remove the clamps [30] below the ball valve attached with the bolt [31] and washer [32] for the cable from the limit switch.

SUBTASK 38-32-03-020-003

- (4) For the forward waste tank, remove the bolt [6], nut [7], cotter pin [9] and washer [8] to disconnect the tie rod assembly [16].

SUBTASK 38-32-03-020-004

- (5) For the middle waste tank, remove the bolt [6], nut [7], cotter pin [9] and washer [8] to disconnect the control cable assembly [28].

SUBTASK 38-32-03-020-005

- (6) For the aft waste tank, remove the bolt [6], nut [7], cotter pin [9] and washer [8] to disconnect the control cable assembly [29].

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SUBTASK 38-32-03-020-006

- (7) Remove the clamshell [10], sleeve [11] and packings [12] above the ball valve assembly [13].
(a) Discard the packings [12].

SUBTASK 38-32-03-020-007

- (8) Remove the V-band clamp [14] and gask-O- seal [15].
(a) Discard the gask-O- seal [15].

SUBTASK 38-32-03-020-008

- (9) Remove the ball valve assembly [13].

————— **END OF TASK** —————

TASK 38-32-03-400-801

3. Waste Drain Ball Valve Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
30-71-03-400-801	Waste Drain Line Heater Installation (P/B 401)
38-32-03-710-801	Waste Drain Ball Valve and Control Cable - Operational Test (P/B 501)

B. Tools/Equipment

Reference	Description
STD-1142	Equipment - Waste System Servicing

C. Consumable Materials

Reference	Description	Specification
D00016	Grease - Aircraft, General Purpose, Wide Temperature Range	MIL-PRF-81322

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Pin	38-32-03-02-035	ARO ALL
		38-32-03-02-087	ARO ALL
		38-32-03-02-126	ARO ALL
12	Packing	38-32-03-04-160	ARO ALL
		38-32-03-06-070	ARO ALL
13	Valve assembly	38-32-03-04-185	ARO ALL
15	Seal	38-32-03-04-175	ARO ALL

E. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
163	Area Below Bulk Cargo Compartment, Left

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Zone	Area
825	Bulk Cargo Door

F. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

G. Ball Valve Installation

SUBTASK 38-32-03-640-001

- (1) Apply the grease, D00016 to the packings [12] and gask-O- seal [15].

SUBTASK 38-32-03-420-024

- (2) Install the gask-O- seal [15] and the packings [12].

NOTE: Align the hole in the gask-O- seal [15] with the pin on the flange.

SUBTASK 38-32-03-420-001

- (3) Put the ball valve assembly [13] in its position.

NOTE: Align the hole in the ball valve assembly [13] with the pin on the flange.

SUBTASK 38-32-03-420-002

- (4) Install the V-band clamp [14].

SUBTASK 38-32-03-420-003

- (5) Tighten the clamp [14] to 50 pound-inches.

SUBTASK 38-32-03-420-004

- (6) Install the sleeve [11] and clamshell [10] to connect the waste line.

SUBTASK 38-32-03-420-005

- (7) For the forward waste tank, install the bolt [6], nut [7], washer [8] and cotter pin [9] to connect the tie rod assembly [16].

SUBTASK 38-32-03-420-006

- (8) For the middle waste tank, install the bolt [6], nut [7], washer [8] and cotter pin [9] to connect the control cable assembly [28].

SUBTASK 38-32-03-420-007

- (9) For the aft waste tank, install the bolt [6], nut [7], washer [8] and cotter pin [9] to connect the control cable assembly [29].

SUBTASK 38-32-03-420-008

- (10) Install the clamps [30], bolt [31] and washer [32] below the ball valve for the cable from the limit switch.

SUBTASK 38-32-03-420-009

- (11) Connect the electrical receptacle [27] from the limit switch for the ball valve assembly [13].

H. Ball Valve Installation Test

SUBTASK 38-32-03-860-002

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND

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Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-03-860-003

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-03-760-001

- (3) Do this task: Waste Drain Ball Valve and Control Cable - Operational Test, TASK 38-32-03-710-801.

SUBTASK 38-32-03-790-001

- (4) To do a leak check of the waste drain ball valve, do these steps:

- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

- (b) At the service panel, make sure that the control handles for the drain ball valves are in the closed position.
- (c) Make sure that the cap for the waste drain fitting outlet is closed.
- (d) Connect the water hose from the waste system servicing equipment, STD-1142, to the applicable rinse fitting on the service panel.
- (e) Use the pump on the service cart to put about 80 gal (303 l) of water into the waste tank.
- (f) Open the cap and inner door (use the PUSH-TO-OPEN lever) of the waste drain fitting at the service panel.
- (g) Make sure that the drain ball valve does not have a leak.

NOTE: You must wait not less than 30 minutes after you put the water in the tanks before you do this step.

- (h) Close the drain cap.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-03-010-004

- (1) Do this task: Waste Drain Line Heater Installation, TASK 30-71-03-400-801.

SUBTASK 38-32-03-610-002

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-32-03-010-005



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (3) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-03-410-001

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-32-03-000-802

4. Control Cable for the Waste Drain Ball Valve Removal

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)

B. Consumable Materials

<u>Reference</u>	<u>Description</u>	<u>Specification</u>
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

C. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left
163	Area Below Bulk Cargo Compartment, Left
825	Bulk Cargo Door

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door
825	Bulk Cargo Door

E. Prepare for the Removal

SUBTASK 38-32-03-010-006

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-03-010-007

- (2) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-03-010-008

- (3) To remove the access panel for the waste tank service panel, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.

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SUBTASK 38-32-03-010-009

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

F. Control Cable Removal

SUBTASK 38-32-03-020-009

- (1) Remove the screw [4] and washer [5] at the service panel to disconnect the handle assembly [3] and washer [39] from the control cable.

SUBTASK 38-32-03-020-010

- (2) Remove the 1-inch nut [1] and tab washer [2] at the service panel to disconnect the control cable.

NOTE: Disconnect the lockwire and then remove the sealant, A00247.

SUBTASK 38-32-03-020-011

- (3) For the forward waste tank, remove the bolt [6], nut [7], cotter pin [9], and washer [8] to disconnect the control cable assembly [17] from the bellcrank assembly [33].

SUBTASK 38-32-03-020-012

- (4) For the middle waste tank, remove the bolt [6], nut [7], cotter pin [9], and washer [8] to disconnect the control cable assembly [28] from the ball valve assembly [13].

SUBTASK 38-32-03-020-013

- (5) For the aft waste tank, remove the bolt [6], nut [7], cotter pin [9], and washer [8] to disconnect the control cable assembly [29] from the ball valve assembly [13].

SUBTASK 38-32-03-020-017

- (6) For the middle and aft waste tank, remove the clamp [34], bolt [35] and washer [36] that attaches the control cable to structure.

SUBTASK 38-32-03-020-014

- (7) Remove the nut [37] and tab washer [38] at the rod end to disconnect the control cable.

SUBTASK 38-32-03-020-015

- (8) Remove the control cable.

SUBTASK 38-32-03-020-016

- (9) For the forward waste tank, if it is necessary to remove the bellcrank assembly [33], do these steps:
- (a) Remove the bolt [23], nut [26], bushing [25], and washers [24] to disconnect the tie rod assembly [16].
 - (b) Remove the bolt [18], countersunk washer [19], bushing [20], washer [21] and nut [22] to disconnect the bellcrank assembly [33].

————— END OF TASK —————

TASK 38-32-03-400-802

5. Control Cable for the Waste Drain Ball Valve Installation

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
12-17-01-610-801	Waste Tank Servicing (P/B 301)

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Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-03-710-801	Waste Drain Ball Valve and Control Cable - Operational Test (P/B 501)
38-32-03-820-801	Waste Drain Ball Valve and Control Cable - Adjustment (P/B 501)

B. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
9	Pin	38-32-03-02-035	ARO ALL
		38-32-03-02-087	ARO ALL
		38-32-03-02-126	ARO ALL
17	Cable assembly	38-32-03-02-099	ARO ALL
28	Cable assembly	38-32-03-02-060	ARO ALL
29	Cable assembly	38-32-03-02-055	ARO ALL

D. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
163	Area Below Bulk Cargo Compartment, Left
825	Bulk Cargo Door

E. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

F. Control Cable Installation

SUBTASK 38-32-03-420-010

- (1) For the forward waste tank, if it was necessary to remove the bellcrank assembly [33], do these steps:
 - (a) Apply the grease, D00633 to the bolt [18] and bushing [20].
 - (b) Install the bolt [18], countersunk washer [19], bushing [20], washer [21] and nut [22] to connect the bellcrank assembly [33].
 - (c) Install the bolt [23], nut [26], bushing [25], and washers [24] to connect the tie rod assembly [16].
 - (d) Make sure the lockwire is installed on the tie rod assembly [16] as shown in (Figure 401).

SUBTASK 38-32-03-420-011

- (2) Put the control cable in its position.

SUBTASK 38-32-03-420-012

- (3) Install the nut [37] and tab washer [38] at the rod end to connect the control cable.

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SUBTASK 38-32-03-420-013

- (4) For the forward waste tank, install the bolt [6], nut [7], cotter pin [9], and washer [8] to connect the control cable assembly [17] to the bellcrank assembly [33].

SUBTASK 38-32-03-420-014

- (5) For the middle waste tank, install the bolt [6], nut [7], cotter pin [9], and washer [8] to connect the control cable assembly [28] to the ball valve assembly [13].

SUBTASK 38-32-03-420-015

- (6) For the aft waste tank, install the bolt [6], nut [7], cotter pin [9], and washer [8] to connect the control cable assembly [29] to the ball valve assembly [13].

SUBTASK 38-32-03-420-016

- (7) Install the 1-inch nut [1] and tab washer [2] at the service panel to connect the control cable.

SUBTASK 38-32-03-420-018

- (8) For the middle and aft waste tank, install the clamp [34], bolt [35] and washer [36] that attaches the control cable to structure.

SUBTASK 38-32-03-420-017

- (9) Install the screw [4] and washer [5] to connect the handle assembly [3] and washer [39] for the control cable at the service panel.

SUBTASK 38-32-03-820-001

- (10) Do this task: Waste Drain Ball Valve and Control Cable - Adjustment, TASK 38-32-03-820-801.

G. Control Cable Installation Test

SUBTASK 38-32-03-860-005

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-03-860-006

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-03-760-002

- (3) Do this task: Waste Drain Ball Valve and Control Cable - Operational Test, TASK 38-32-03-710-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-03-610-003

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-32-03-410-002



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-03-410-003

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-03-410-007

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

————— END OF TASK —————

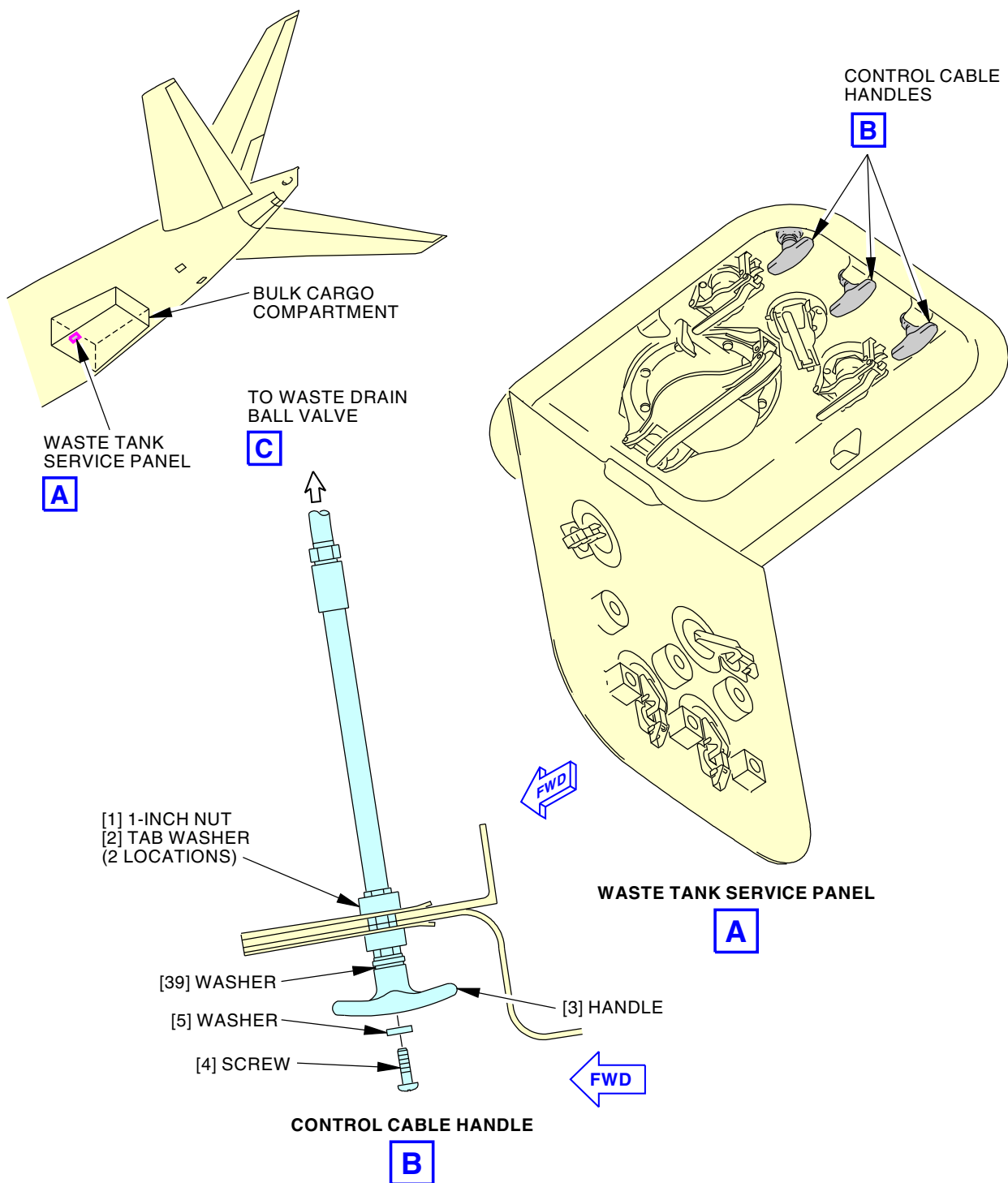
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Waste Drain Ball Valve Installation
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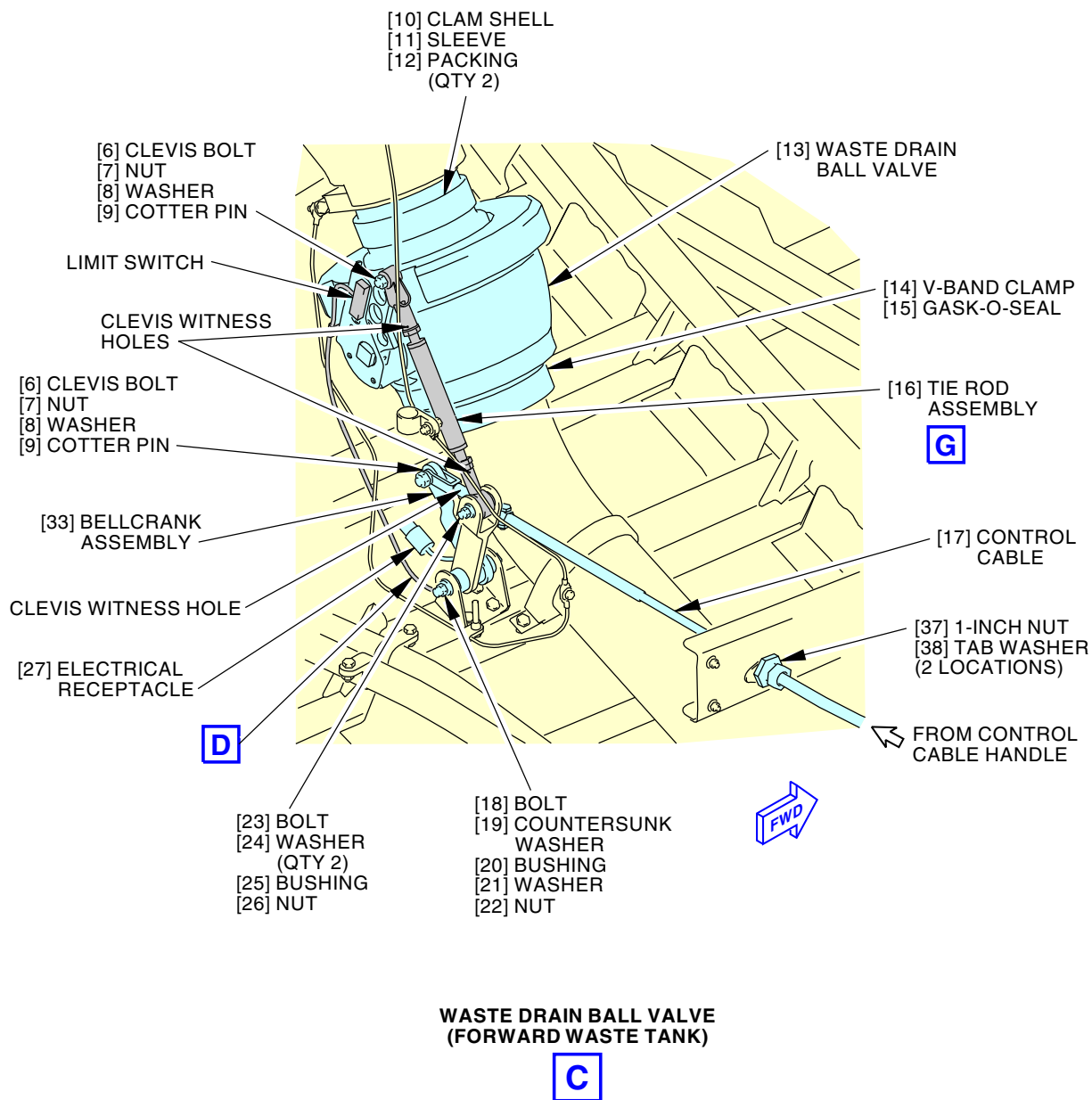
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Waste Drain Ball Valve Installation
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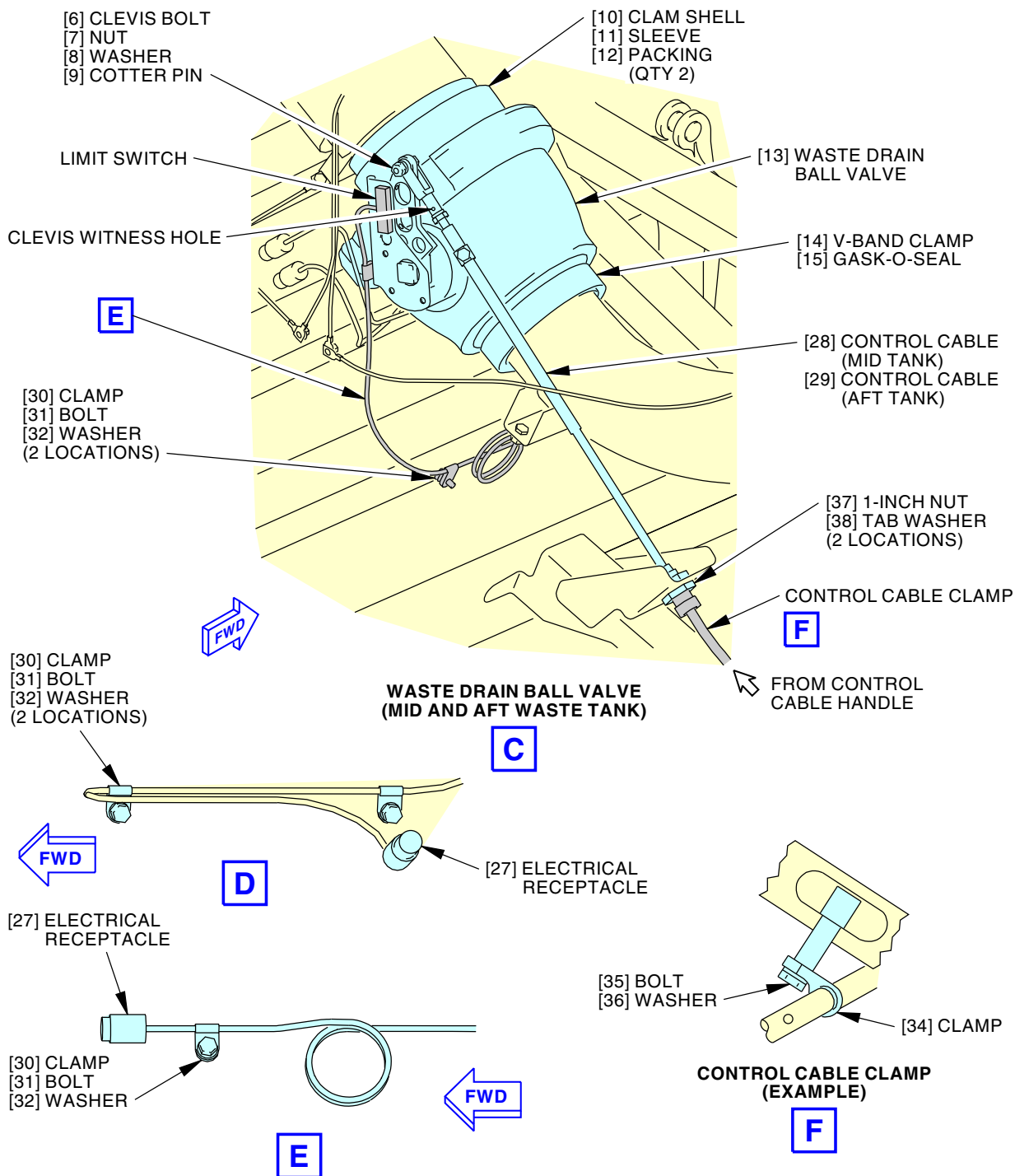
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E21585 S0006422993_V2

**Waste Drain Ball Valve Installation
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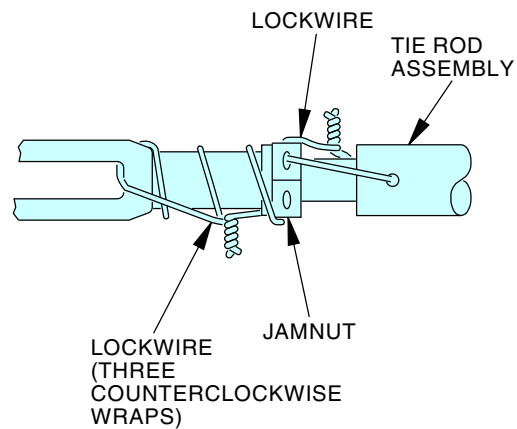
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TIE ROD ASSEMBLY



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Waste Drain Ball Valve Installation
Figure 401/38-32-03-990-801 (Sheet 4 of 4)

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TASK 38-32-03-000-803

6. Waste Drain Ball Valve Limit Switch Removal

(Figure 402)

A. References

Reference	Title
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
30-71-03-000-801	Waste Drain Line Heater Removal (P/B 401)

B. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
163	Area Below Bulk Cargo Compartment, Left
825	Bulk Cargo Door

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-32-03-010-010

- (1) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-32-03-010-011

- (2) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-03-860-008

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

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E. Limit Switch Removal

SUBTASK 38-32-03-010-012



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

(1) Do this task: Waste Drain Line Heater Removal, TASK 30-71-03-000-801.

SUBTASK 38-32-03-020-018

(2) Disconnect the electrical receptacle [27] from the limit switch for the ball valve.

SUBTASK 38-32-03-020-019

(3) Remove the clamps [30] below the ball valve, attached with the bolt [31] and washer [32] for the cable from the limit switch.

SUBTASK 38-32-03-020-020

(4) Remove the screw [54], nut [51] and washer [52] to disconnect the clamp [53].

SUBTASK 38-32-03-020-021

(5) Remove the screws [55] and nuts [51] to disconnect the sensor [56].

SUBTASK 38-32-03-020-022

(6) Remove the electrical receptacle [27] from the sensor [56].

————— **END OF TASK** —————

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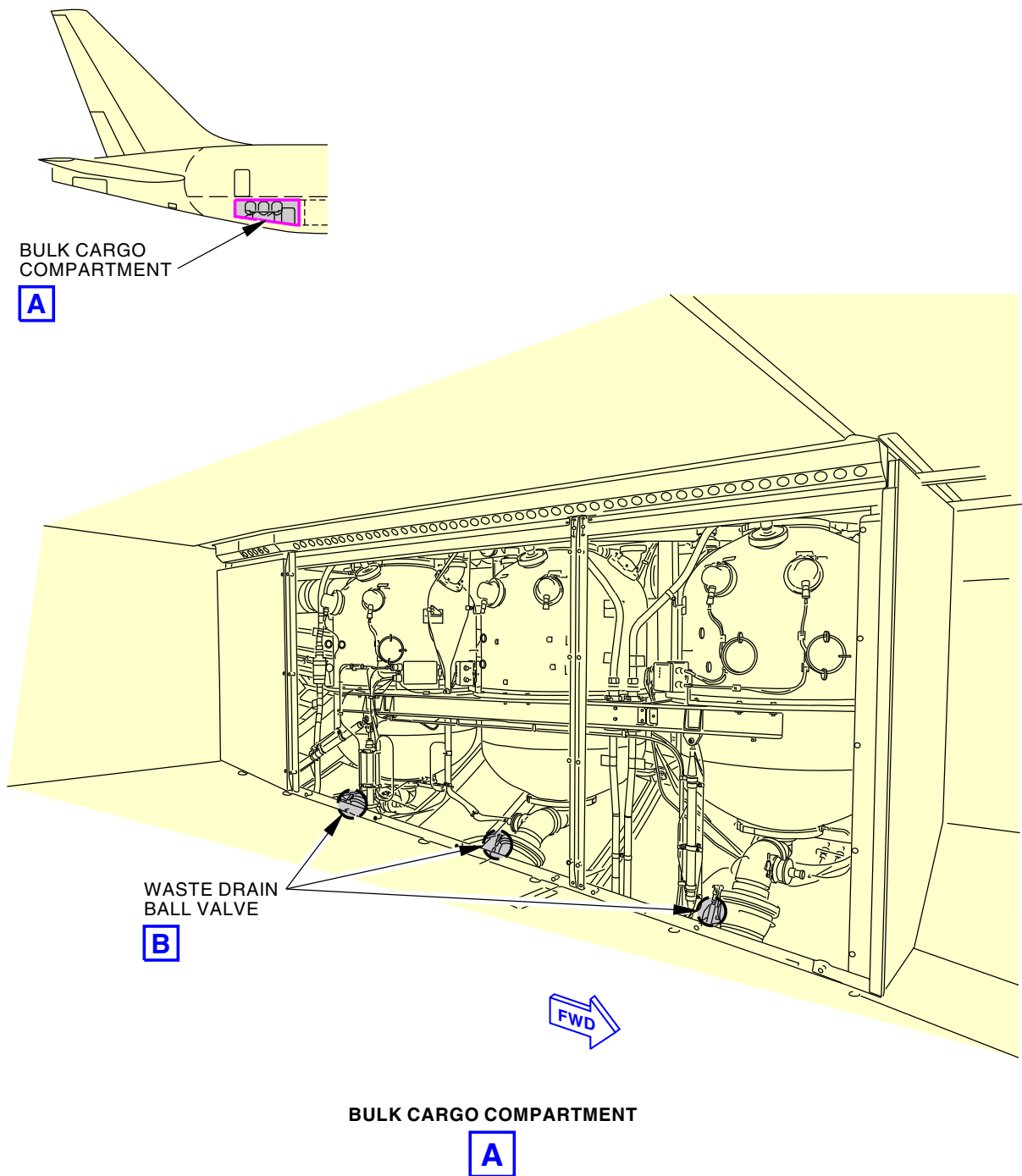
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Limit Switch Installation
Figure 402/38-32-03-990-802 (Sheet 1 of 2)

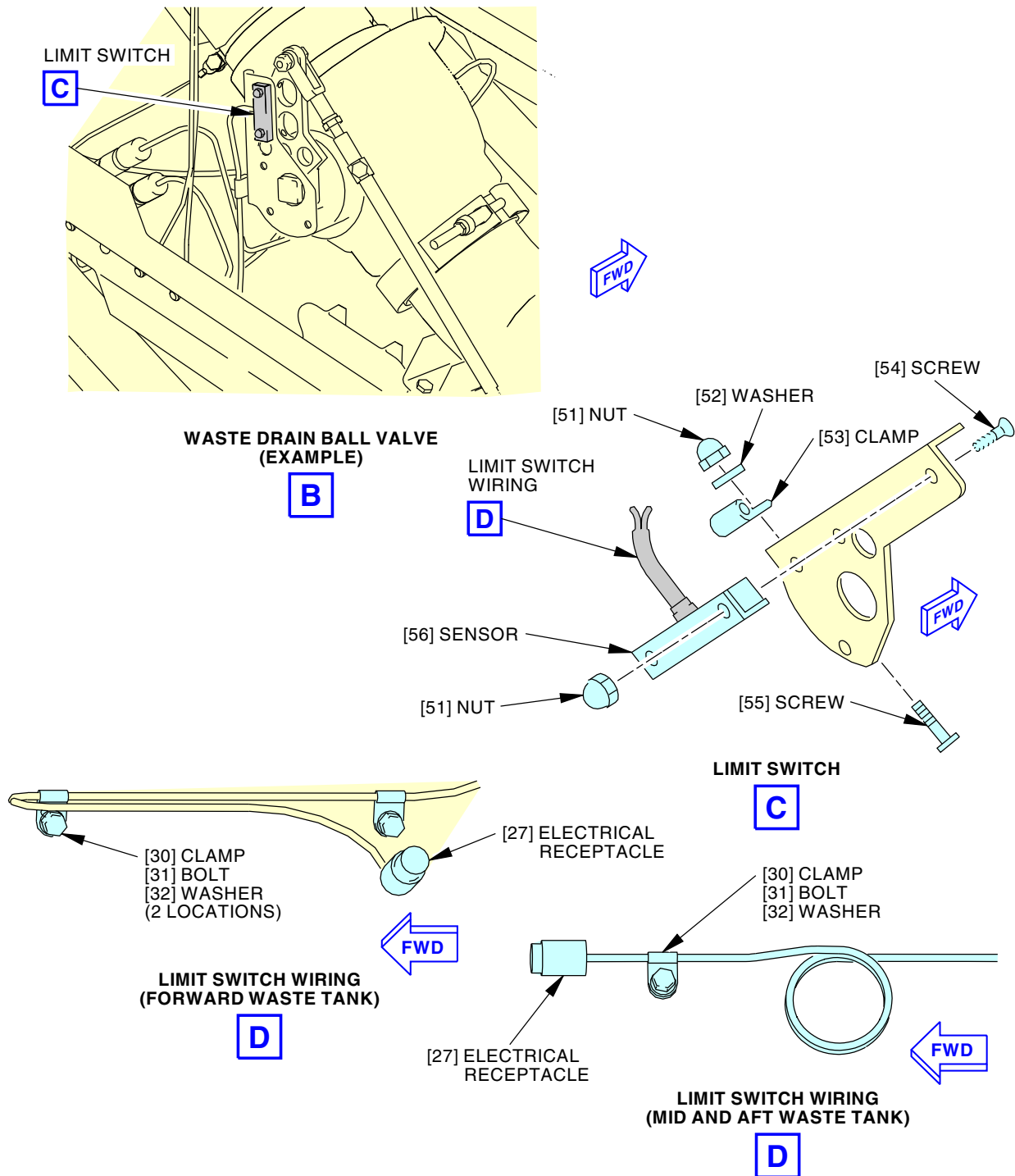
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Limit Switch Installation
Figure 402/38-32-03-990-802 (Sheet 2 of 2)

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TASK 38-32-03-400-803

7. Waste Drain Ball Valve Limit Switch Installation

(Figure 402)

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
30-71-03-400-801	Waste Drain Line Heater Installation (P/B 401)
38-32-03-710-801	Waste Drain Ball Valve and Control Cable - Operational Test (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
56	Sensor	38-32-55-50-065	ARO ALL

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
163	Area Below Bulk Cargo Compartment, Left
825	Bulk Cargo Door

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Limit Switch Valve Installation

SUBTASK 38-32-03-420-019



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Put the sensor [56] in its position.

SUBTASK 38-32-03-420-020

- (2) Install the screws [54] and nuts [51].

SUBTASK 38-32-03-420-021

- (3) Install the screw [54], nut [51] and washer [52] to connect the clamp [53].

SUBTASK 38-32-03-420-022

- (4) Install the electrical receptacle [27] on the sensor [56].

SUBTASK 38-32-03-420-023

- (5) Install the clamps [30], bolt [31] and washer [32] below the ball valve for the cable from the limit switch.

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F. Limit Switch Installation Test

SUBTASK 38-32-03-860-009

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-03-860-010

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-03-760-003

- (3) Do this task: Waste Drain Ball Valve and Control Cable - Operational Test, TASK 38-32-03-710-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-03-010-013

- (1) Do this task: Waste Drain Line Heater Installation, TASK 30-71-03-400-801.

SUBTASK 38-32-03-610-004

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-03-010-014



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (3) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-03-410-004

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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WASTE DRAIN BALL-VALVE AND CONTROL CABLE - ADJUSTMENT/TEST

1. General

- A. This procedure has these tasks:
- (1) An operational test of the waste drain ball valve and control cable.
 - (2) An adjustment of the control cable for the waste drain ball valve.
- B. The Waste Drain Ball Valve is referred to as the Ball Valve in this procedure.

TASK 38-32-03-710-801

2. Waste Drain Ball Valve and Control Cable - Operational Test

A. **General**

- (1) This task does these tests at the same time:
 - (a) An operational test to measure the necessary force to use the control cable for the ball valve.
 - (b) An operational test to make sure the switch on the ball valve operates correctly.

B. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

C. **Tools/Equipment**

Reference	Description
STD-1142	Equipment - Waste System Servicing
STD-1184	Scale - Spring, 0-100 Lbs, Tension

D. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

E. **Access Panels**

Number	Name/Location
163AL	Waste Tank Service Door

F. **Prepare for the Test**

SUBTASK 38-32-03-910-001

- (1) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

SUBTASK 38-32-03-010-015

- (2) At the waste service panel, do these steps:
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door
 - (b) Open the cap on the waste drain valve assembly.

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- (c) Connect the waste drain hose from the toilet service waste system servicing equipment, STD-1142 to the waste drain valve assembly.
- (d) Push the PUSH-TO-OPEN lever on the waste drain valve assembly.

SUBTASK 38-32-03-860-012

- (3) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-03-860-013

- (4) do this task: Supply Electrical Power, TASK 24-22-00-860-805

G. Operational Test

SUBTASK 38-32-03-480-001

- (1) Connect the spring scale (0-100 Lbs), STD-1184 to the handle for the ball valve.

SUBTASK 38-32-03-710-001

- (2) Do a test of the force that is necessary to open the ball valve as follows:
 - (a) Pull down on the spring scale (0-100 Lbs), STD-1184 until the ball valve is fully open.
 - (b) At the same time, read the maximum force on the spring scale (0-100 Lbs), STD-1184.
 - (c) Make sure the maximum force on the spring scale (0-100 Lbs), STD-1184 is less than 50 pounds.
 - (d) Disconnect the spring scale (0-100 Lbs), STD-1184 from the handle for the ball valve.
 - (e) Push on the handle for the ball valve until the ball valve is closed.

SUBTASK 38-32-03-710-002

- (3) Make sure the switch on the ball valve operates correctly as follows:
 - (a) Pull down on the handle until the ball valve is fully open.
 - (b) Push the flush switch for a toilet attached to the waste system with the open ball valve.
 - (c) Do a check of the vacuum blower operation as follows:
 - 1) For the forward waste tank, make sure the forward vacuum blower does not operate.
 - 2) For the middle and aft waste tank, make sure the aft vacuum blower does not operate.

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- (d) Push on the handle for the ball valve until the ball valve is closed.
- (e) Push the flush switch for a toilet attached to the waste system with the closed ball valve.
- (f) Do a check of the vacuum blower operation as follows:
 - 1) For the forward waste tank, make sure the forward vacuum blower does operate.
 - 2) For the middle and aft waste tank, make sure the aft vacuum blower does operate.
- (g) If the vacuum blower does not operate, do this task: Waste Drain Ball Valve and Control Cable - Adjustment, TASK 38-32-03-820-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-03-610-005

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-03-410-008

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

————— END OF TASK —————

TASK 38-32-03-820-801

3. Waste Drain Ball Valve and Control Cable - Adjustment

(Figure 501)

A. General

- (1) Use this procedure to do the adjustment of the control cable on the ball valve.

NOTE: When the ball valve is open, the limit switch stops the operation of the toilets.

B. References

<u>Reference</u>	<u>Title</u>
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
20-10-23-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

C. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

D. Prepare for the Adjustment

SUBTASK 38-32-03-610-006

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-03-010-016

- (2) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

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SUBTASK 38-32-03-010-017

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-03-860-015

- (4) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-03-860-016

- (5) do this task: Supply Electrical Power, TASK 24-22-00-860-805

E. Ball Valve and Control Cable Adjustment

SUBTASK 38-32-03-820-002

- (1) For the forward waste tank, do the adjustment of the tie rod as follows:
- Adjust the tie rod to give the 8.27 inch dimension from the rod end center to the clevis end center.
 - Tighten the jamnuts.
 - Do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.
 - Make sure you can see the threads in the clevis witness hole at each end of the tie rod.

SUBTASK 38-32-03-820-003

- (2) Do the control cable adjustment as follows:
- With the handle for the ball valve pushed up, adjust the 1-inch nut to give the 1.60 inch dimension.
 - Tighten the 1-inch nut at the service panel from 35 to 40 pound-inches.
 - Make sure the 1-inch nut and tab washer are attached to the bulkhead fitting.
 - For the middle waste tank, make sure you align the bulkhead fitting to give more than 0.10 inch clearance for the control cable to the adjacent structure.
 - Tighten the 1-inch nut at the bulkhead fitting from 35 to 40 pound-inches.
 - Make sure the ball valve is fully closed.
 - Make sure the handle for the ball valve is fully pushed to give the 1.60 inch dimension.
 - Pull the play out of the control cable from the ball valve end.
 - For the forward waste tank, turn the outer slider to initially align the clevis end of the control cable to the bell crank assembly.

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- (j) For the middle and aft waste tank, turn the outer slider to initially align the clevis end of the control cable to the ball valve.
- (k) Make sure you can see the threads in the outer sleeve witness hole.
- (l) For the forward waste tank, make sure you vertically align the cable lock bolt to give clearance for the bell crank assembly.
- (m) For the middle waste tank, make sure you vertically align the cable lock bolt to give clearance for the adjacent structure.
- (n) Tighten the cable lock nut from 40 to 50 pound-inches.
- (o) For the forward waste tank, turn the clevis to correctly align the end of the control cable to the bell crank assembly.
 - 1) To install the three counterclockwise wraps of lockwire as shown in (Figure 501), do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.
- (p) For the middle and aft waste tank, turn the clevis to correctly align the end of the control cable to the ball valve.
- (q) Make sure you can see the threads in the clevis witness hole.
- (r) Tighten the jamnut for the clevis.
- (s) At the service panel and the bulkhead fitting, do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-23-400-801.

SUBTASK 38-32-03-760-004

- (3) Do this task: Waste Drain Ball Valve and Control Cable - Operational Test, TASK 38-32-03-710-801.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-03-610-007

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-03-410-005



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-03-410-006

- (3) Close the access to the bulk cargo compartment (TASK 06-46-00-800-801).

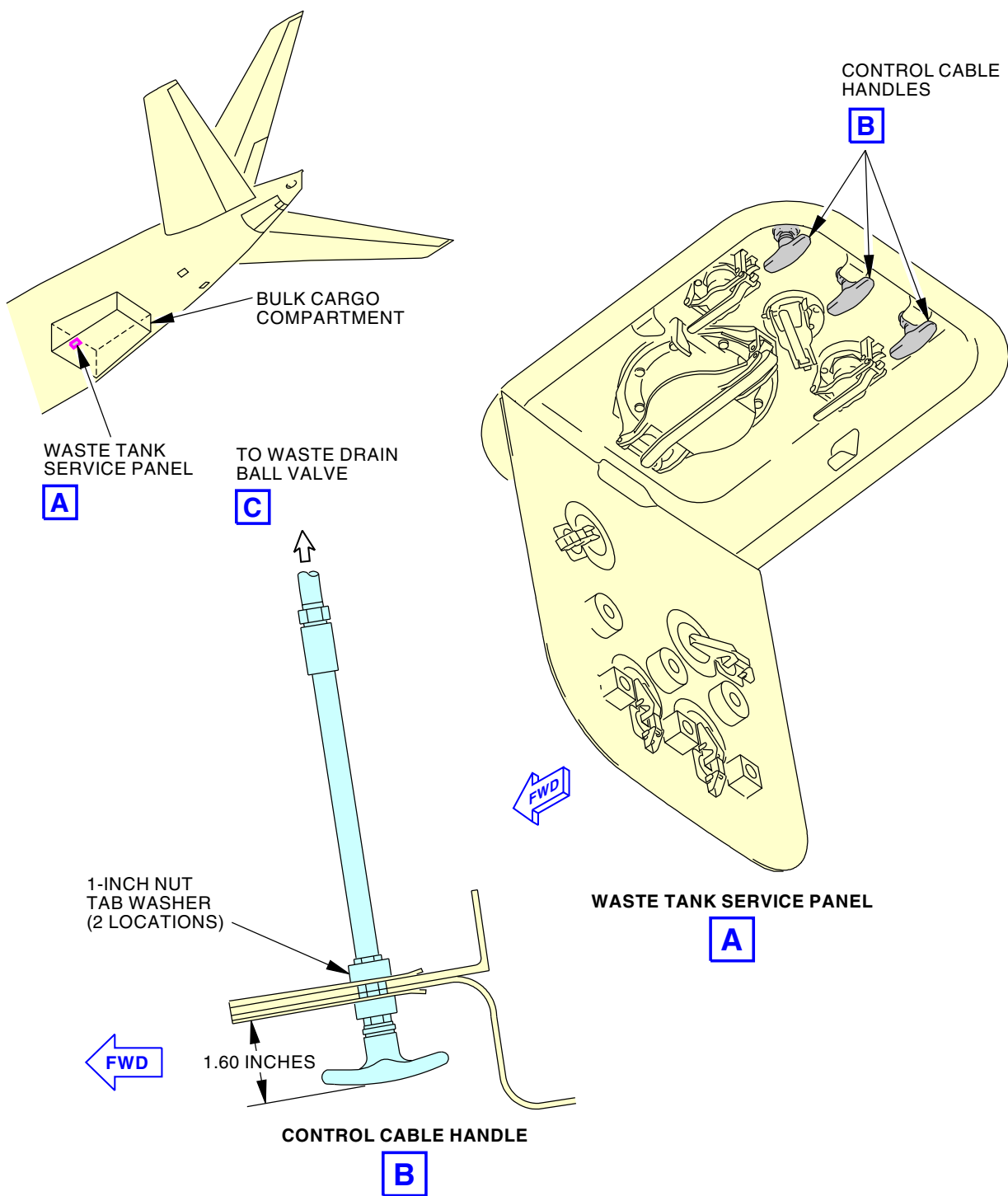
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**Waste Tank Ball Valve Adjustment
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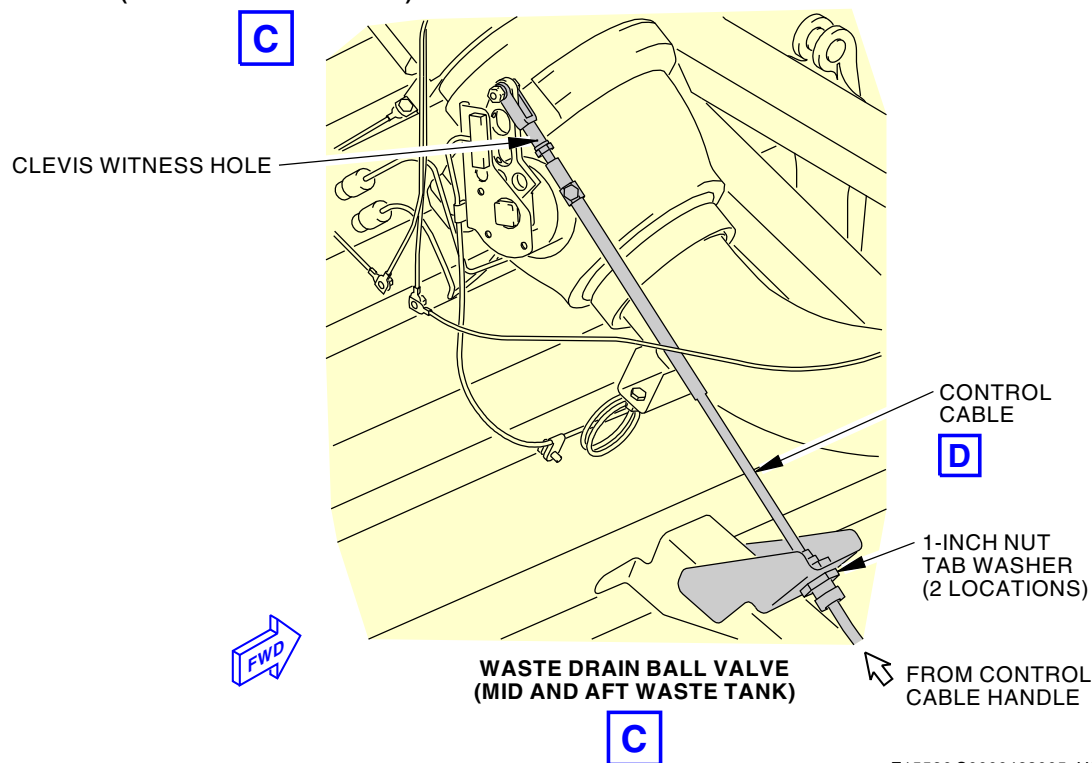
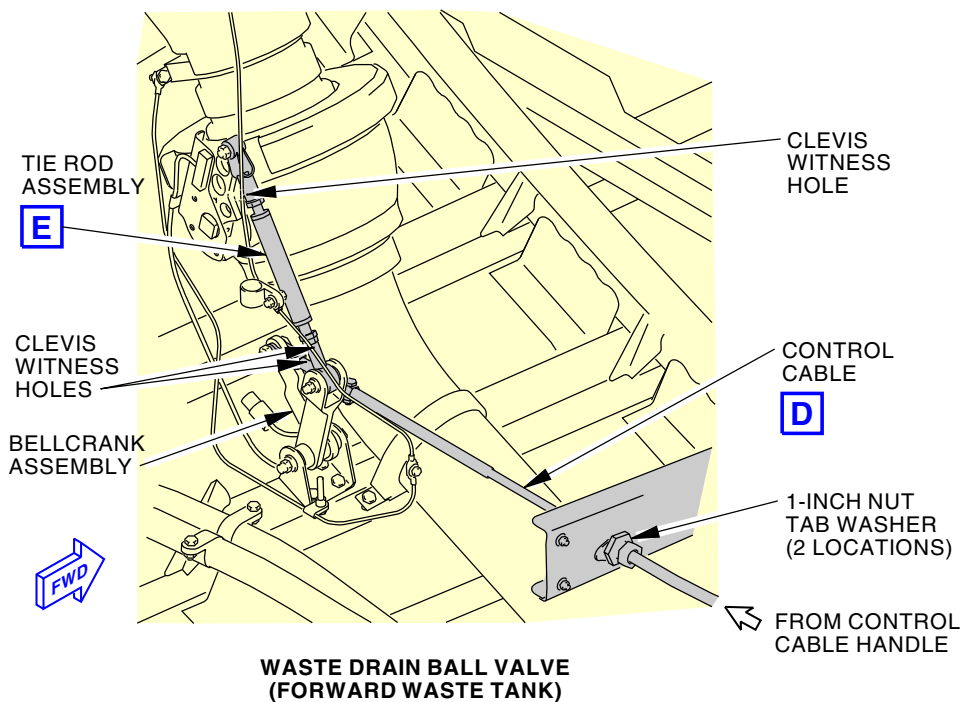
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**Waste Tank Ball Valve Adjustment
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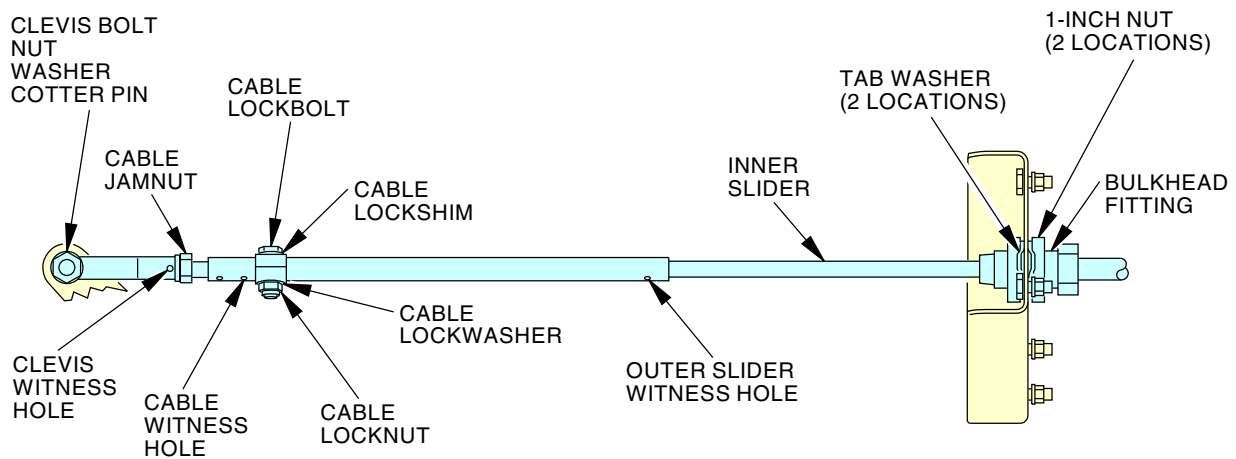
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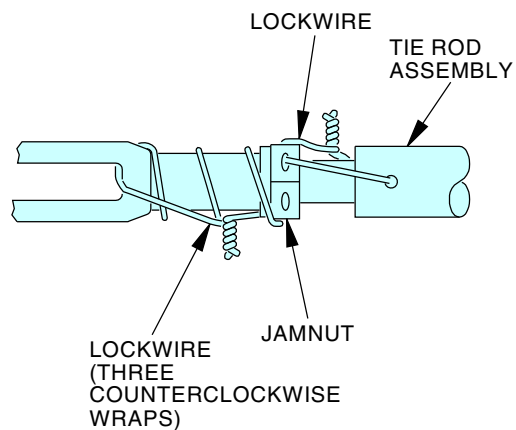
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CONTROL CABLE

D



TIE ROD ASSEMBLY

E

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**Waste Tank Ball Valve Adjustment
Figure 501/38-32-03-990-803 (Sheet 3 of 3)**

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FLUSH SWITCH - REMOVAL/INSTALLATION

1. General

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

TASK 38-32-04-000-801

2. Flush Switch Removal

(Figure 401)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 38-32-04-010-001

- (1) Get access to the lavatory (TASK 06-41-00-800-801).

SUBTASK 38-32-04-860-001

- (2) For the necessary lavatory,
Open these circuit breakers and install safety tags:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

D. Flush Switch Removal

SUBTASK 38-32-04-010-002

- (1) Open the shroud dispenser to get access to the switch assembly [4].

SUBTASK 38-32-04-020-001

- (2) Remove the screw [9] to remove the switch cover [8] for the switch assembly [4].

SUBTASK 38-32-04-020-002

- (3) Disconnect the electrical connectors for the switch assembly [4].

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SUBTASK 38-32-04-020-003

- (4) Remove the screws [7] and washers [6] to remove the bracket [5].

SUBTASK 38-32-04-020-004

- (5) Remove the screws [10], nuts [2] and washers [3] to remove the switch assembly [4].

————— END OF TASK —————

TASK 38-32-04-400-801

3. Flush Switch Installation

(Figure 401)

A. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Fuselage (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Switch assembly	Not Specified	

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Flush Switch Installation

SUBTASK 38-32-04-420-001

- (1) Put the switch assembly [4] in its position on the bracket [5].

SUBTASK 38-32-04-420-002

- (2) Install the screws [10], nuts [2] and washers [3].

SUBTASK 38-32-04-420-003

- (3) Put the bracket [5] in its position on the shroud dispenser.

SUBTASK 38-32-04-420-004

- (4) Install the screws [7] and washers [6].

SUBTASK 38-32-04-420-005

- (5) Connect the electrical connectors for the switch assembly [4].

SUBTASK 38-32-04-420-006

- (6) Install the switch cover [8] and the screw [9].

E. Flush Switch Installation Test

SUBTASK 38-32-04-860-002

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-04-860-003

(2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-04-710-001

(3) Push the flush switch to make sure the toilet operates.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-04-410-001

(1) Close the shroud dispenser in the lavatory.

SUBTASK 38-32-04-410-002

(2) Close the access to the lavatory (TASK 06-41-00-800-801).

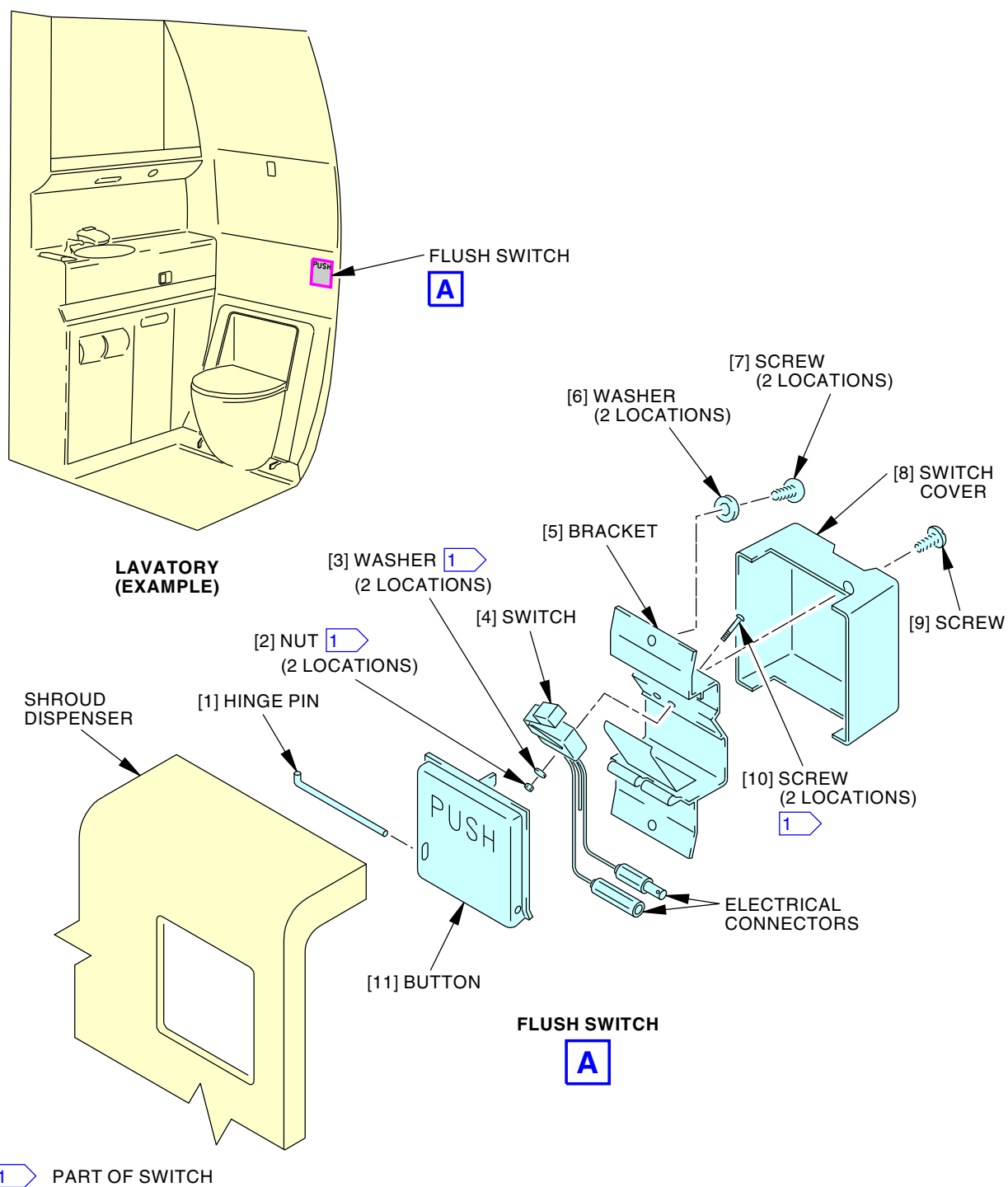
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**Flush Switch Installation
Figure 401/38-32-04-990-801**

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VACUUM BLOWER - REMOVAL/INSTALLATION

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
- (1) A removal of the vacuum blower.
 - (2) An installation of the vacuum blower.
 - (3) A replacement of the filter for the vacuum blower.

NOTE: There are two possible vacuum blowers types. Vacuum blower, part number 606802-2, has a filter. Vacuum blower, part number 645172-(), does not have a filter. The two vacuum blower types are interchangeable.

TASK 38-32-06-000-801

2. Vacuum Blower Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

<u>Reference</u>	<u>Title</u>
25-52-06-000-801	Sidewall Liner Removal (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-32-06-010-001

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-06-010-002

- (2) Do this task: Sidewall Liner Removal, TASK 25-52-06-000-801.

SUBTASK 38-32-06-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

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(Continued)

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

E. Vacuum Blower Removal

SUBTASK 38-32-06-020-001

- (1) Disconnect the electrical connector [11] from the vacuum blower assembly [4].

SUBTASK 38-32-06-020-002

- (2) To disconnect the vacuum blower assembly [4], do these steps:
- (a) For the outlet piping for the vacuum blower, disconnect the clamps [5] to disconnect the flexible coupling [3].
 - (b) For the inlet piping for the vacuum blower, disconnect the clamps [2] to disconnect the flexible coupling [1].

SUBTASK 38-32-06-020-003

- (3) Remove the nut to disconnect the jumper assembly [10] from the vacuum blower assembly [4].

NOTE: Install the nut on the vacuum blower assembly [4].

SUBTASK 38-32-06-020-004

- (4) Remove the bolts [6], washers [7], washers [8], and nuts [9].

SUBTASK 38-32-06-020-005



DO NOT POSITION OR STAND THE VACUUM BLOWER ON EITHER END.
INTERNAL DAMAGE TO THE VACUUM BLOWER CAN OCCUR.

- (5) Remove the vacuum blower assembly [4] from its position.

———— **END OF TASK** ————

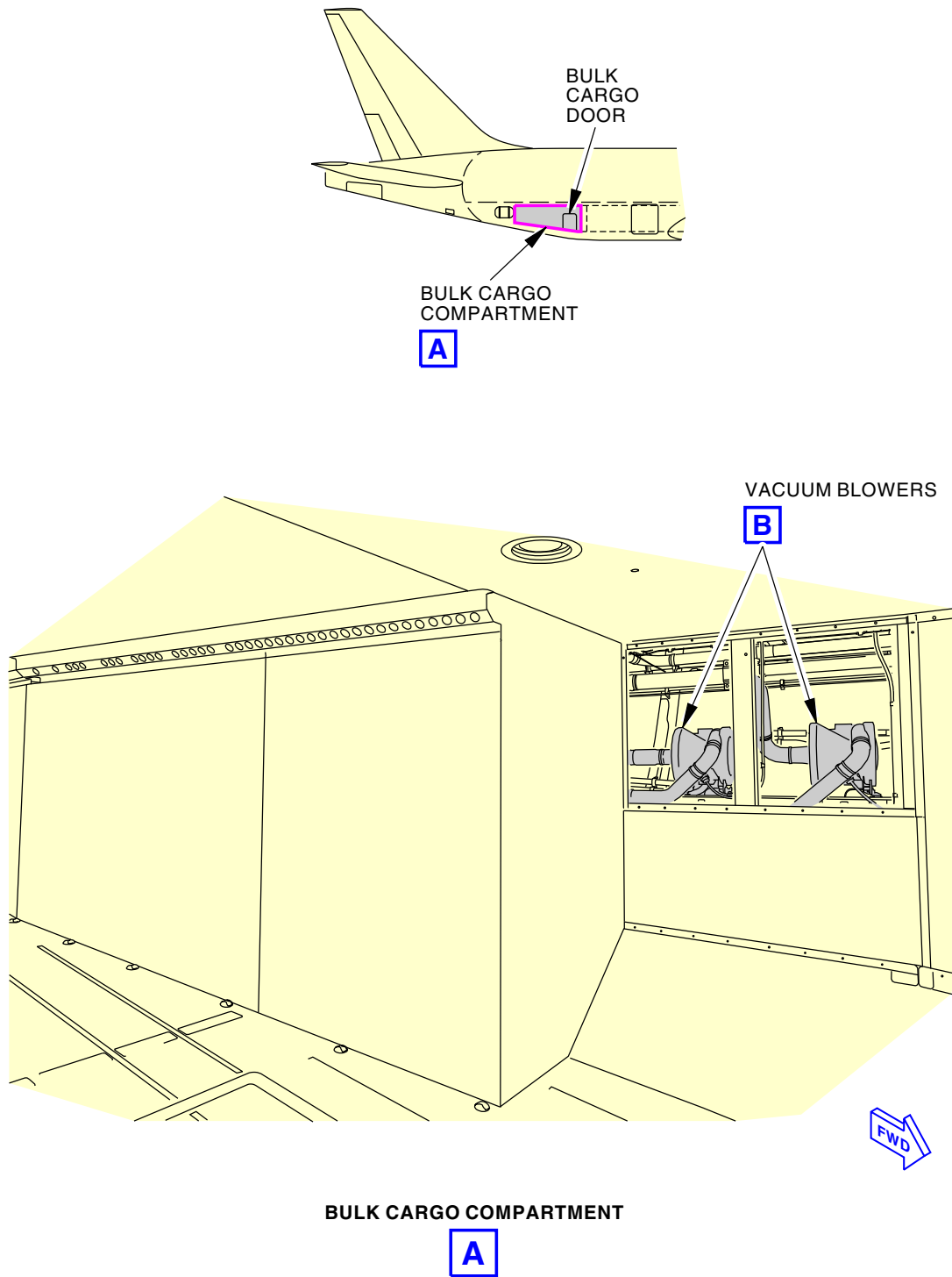
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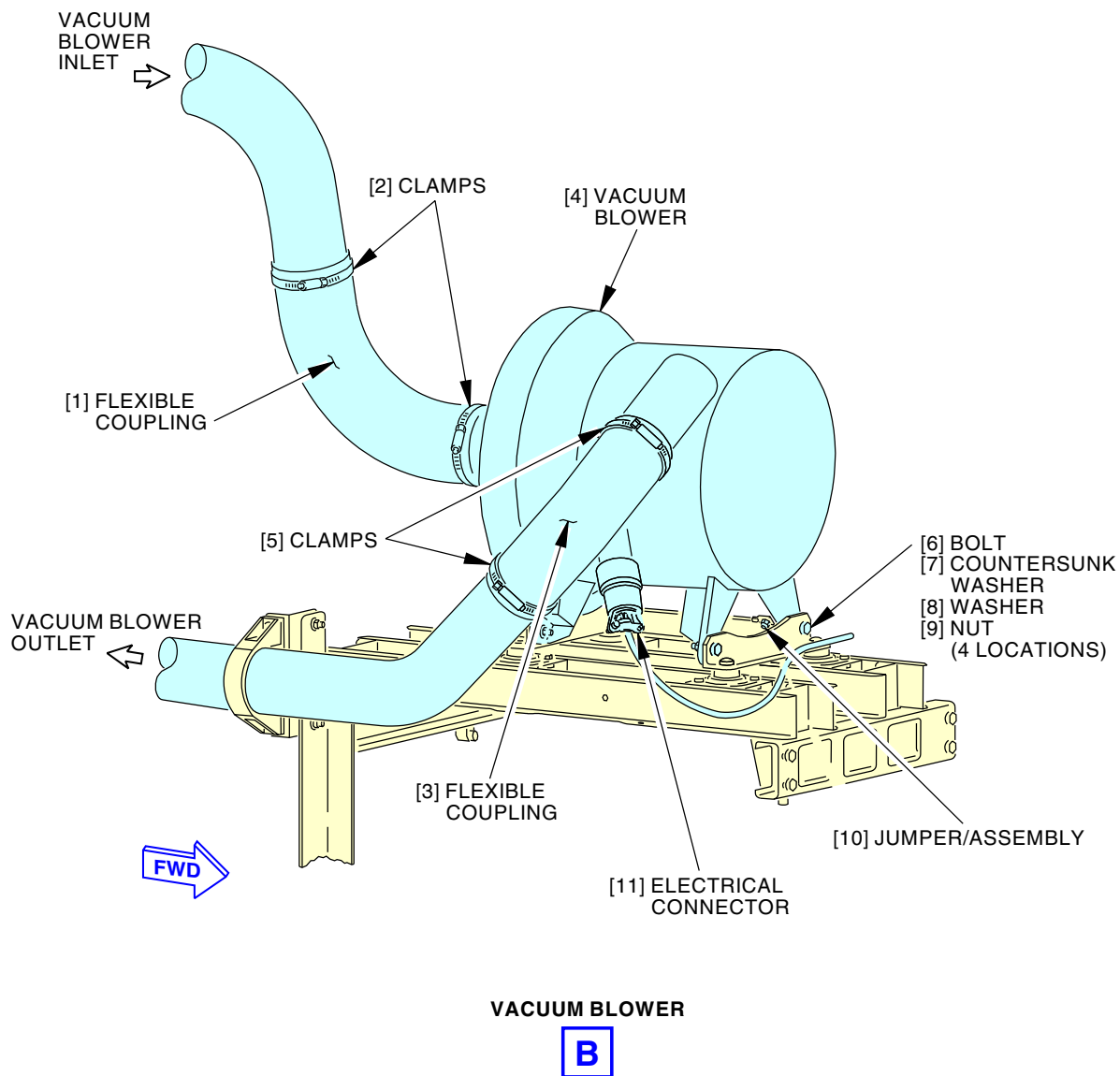
Vacuum Blower Installation
Figure 401/38-32-06-990-803 (Sheet 1 of 2)

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**Vacuum Blower Installation
Figure 401/38-32-06-990-803 (Sheet 2 of 2)**

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TASK 38-32-06-400-801

3. Vacuum Blower Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-06-400-801	Sidewall Liner Installation (P/B 401)
38-32-00-140-801	Overboard Vent Tube Cleaning - Cleaning/Painting (P/B 701)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Blower assembly	38-32-06-01-030	ARO ALL

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Vacuum Blower Installation

SUBTASK 38-32-06-140-001

- (1) Examine the vacuum blower surface and the inside of the vent tube. If you see waste material, do this task: Overboard Vent Tube Cleaning - Cleaning/Painting, TASK 38-32-00-140-801.

SUBTASK 38-32-06-420-001



DO NOT POSITION OR STAND THE VACUUM BLOWER ON EITHER END.
INTERNAL DAMAGE TO THE VACUUM BLOWER CAN OCCUR.

- (2) Put the vacuum blower assembly [4] in its position.

SUBTASK 38-32-06-420-002

- (3) Install the bolts [6], washers [7], washers [8], and nuts [9] for the vacuum blower assembly [4].
NOTE: Install the aft bolts [6] with the head aft and the forward bolts [6] with the head forward.

SUBTASK 38-32-06-420-003

- (4) Connect the vacuum blower assembly [4] as follows:
- (a) For the inlet piping for the vacuum blower, connect the flexible coupling [1] with the clamps [2].
 - (b) For the outlet piping for the vacuum blower, connect the flexible coupling [3] with the clamps [5].
 - (c) Tighten clamps [2] and [5] to 13 in-lb (1 N·m)-18 in-lb (2 N·m).

SUBTASK 38-32-06-020-006

- (5) Remove the nut that attaches the jumper assembly [10] from the vacuum blower assembly [4].
NOTE: The nut is on the vacuum blower assembly [4].

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SUBTASK 38-32-06-420-004

- (6) Connect the jumper assembly [10] with the nut from the vacuum blower assembly [4].

SUBTASK 38-32-06-420-005

- (7) Connect the electrical connector [11] to the vacuum blower assembly [4].

F. Vacuum Blower Installation Test

SUBTASK 38-32-06-860-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-06-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-06-760-001

- (3) Make sure the vacuum blower operates as follows:
- (a) Make sure the vacuum blower starts when you push the flush switch for a toilet attached to the vacuum blower.
NOTE: If the vacuum blower operates before you push the flush switch, there is a problem in the control circuits.
 - (b) Make sure the vacuum blower stops after approximately 15 seconds.
NOTE: If the vacuum blower continues to operate after approximately 15 seconds, there is a problem in the control circuits.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-06-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Sidewall Liner Installation, TASK 25-52-06-400-801.

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SUBTASK 38-32-06-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-32-06-960-801

4. Vacuum Blower Filter Replacement

(Figure 402)

NOTE: This procedure is a scheduled maintenance task.

A. References

<u>Reference</u>	<u>Title</u>
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-06-000-801	Sidewall Liner Removal (P/B 401)
25-52-06-400-801	Sidewall Liner Installation (P/B 401)

B. Tools/Equipment

<u>Reference</u>	<u>Description</u>
STD-1280	Source - Air, Regulated, Dry Filtered, 0-30 PSIG

C. Expendables/Parts

<u>AMM Item</u>	<u>Description</u>	<u>AIPC Reference</u>	<u>AIPC Effectivity</u>
31	Packing	38-32-06-01-052	ARO ALL
32	Filter	38-32-06-01-053	ARO ALL

D. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left

E. Access Panels

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

F. Prepare for the Removal

NOTE: There are two possible vacuum blowers types. Vacuum blower, part number 606802-2, has a filter. Vacuum blower, part number 645172-(), does not have a filter. The two vacuum blower types are interchangeable.

SUBTASK 38-32-06-010-004

- (1) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-06-010-005

- (2) Do this task: Sidewall Liner Removal, TASK 25-52-06-000-801.

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SUBTASK 38-32-06-040-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

G. Vacuum Blower Filter Removal

SUBTASK 38-32-06-020-007

- (1) Remove the packings [31] that attach the vacuum blower filter [32] to the vacuum blower.

SUBTASK 38-32-06-020-008

- (2) Remove the vacuum blower filter [32] from the vacuum blower.

H. Vacuum Blower Filter Cleaning

SUBTASK 38-32-06-420-008

- (1) Clean the vacuum blower filter [32] with an 0-30 psig dry filtered regulated air source, STD-1280 in the opposite direction of the usual flow.

SUBTASK 38-32-06-420-009

- (2) Do a check of the vacuum blower filter [32] for damage or signs of worn areas.
- (a) If the vacuum blower filter [32] has damage or signs of worn areas, use a new vacuum blower filter [32].
- (b) If the vacuum blower filter [32] is serviceable, then continue.

I. Vacuum Blower Filter Installation

SUBTASK 38-32-06-420-006

- (1) Put the vacuum blower filter [32] in its position.

SUBTASK 38-32-06-420-007

- (2) Install the packings [31] that attach the vacuum blower filter [32] to the vacuum blower.

J. Vacuum Blower Filter Installation Test

SUBTASK 38-32-06-860-004

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND

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Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-06-860-005

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-06-760-002

- (3) Make sure the vacuum blower operates as follows:
- (a) Make sure the vacuum blower starts when you push the flush switch for a toilet attached to the vacuum blower.
NOTE: If the vacuum blower operates before you push the flush switch, there is a problem in the control circuits.
 - (b) Make sure the vacuum blower stops after approximately 15 seconds.
NOTE: If the vacuum blower continues to operate after approximately 15 seconds, there is a problem in the control circuits.

K. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-06-010-006



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Sidewall Liner Installation, TASK 25-52-06-400-801.

SUBTASK 38-32-06-410-002

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

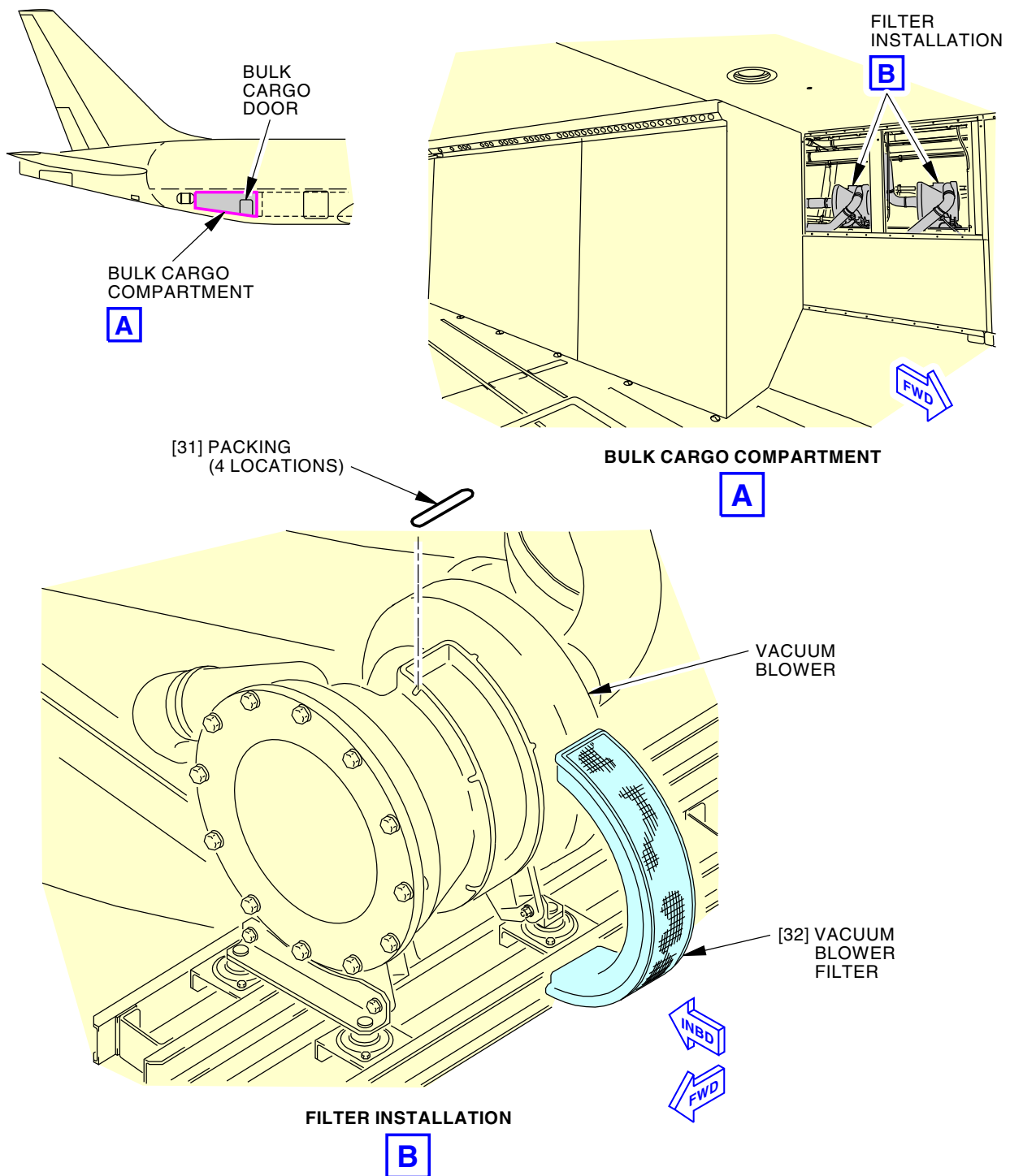
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Vacuum Blower Filter Installation
Figure 402/38-32-06-990-802

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VACUUM CHECK VALVE - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the vacuum check valve.
 - (2) An installation of the vacuum check valve.
- B. The "vacuum check valve" is referred to as the "check valve" in this procedure.

TASK 38-32-07-000-801

2. Vacuum Check Valve Removal

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

C. Prepare for the Removal

SUBTASK 38-32-07-010-001

- (1) Get access to the bulk cargo compartment (TASK 06-46-00-800-801).

SUBTASK 38-32-07-010-002

- (2) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-07-040-001

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

Left Power Management Panel, P110

Row	Col	Number	Name
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-07-910-001

- (4) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

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D. Check Valve Removal

SUBTASK 38-32-07-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

(1) Loosen the clamps [2] to disconnect the flexible couplings [1] from the check valve [3].

SUBTASK 38-32-07-020-002

(2) Remove the check valve [3].

————— END OF TASK —————

TASK 38-32-07-400-801

3. Vacuum Check Valve Installation

(Figure 401)

A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-00-140-801	Overboard Vent Tube Cleaning - Cleaning/Painting (P/B 701)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Valve	38-32-07-02-390	ARO ALL

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

D. Check Valve Installation

SUBTASK 38-32-07-140-001

(1) Examine the check valve surface and the inside of the vent tube. If you see waste material, do this task: Overboard Vent Tube Cleaning - Cleaning/Painting, TASK 38-32-00-140-801.

SUBTASK 38-32-07-420-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

(2) Put the check valve [3] in its position with the flow arrow in the down direction.

SUBTASK 38-32-07-420-002

(3) Connect the flexible couplings [1] with the clamps [2].

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SUBTASK 38-32-07-420-003

- (4) Tighten clamps [2] to 13 in-lb (1 N·m)-18 in-lb (2 N·m).

E. Check Valve Installation Test

SUBTASK 38-32-07-860-001

- (1) Close these circuit breakers:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-07-860-002

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-07-710-001

- (3) Flush a toilet in the waste system for the vacuum blower attached to the check valve.

SUBTASK 38-32-07-790-001

- (4) Make sure there is no leakage at the check valve connections.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-07-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-07-410-002

- (2) Close the access to the bulk cargo compartment (TASK 06-46-00-800-801).

————— END OF TASK —————

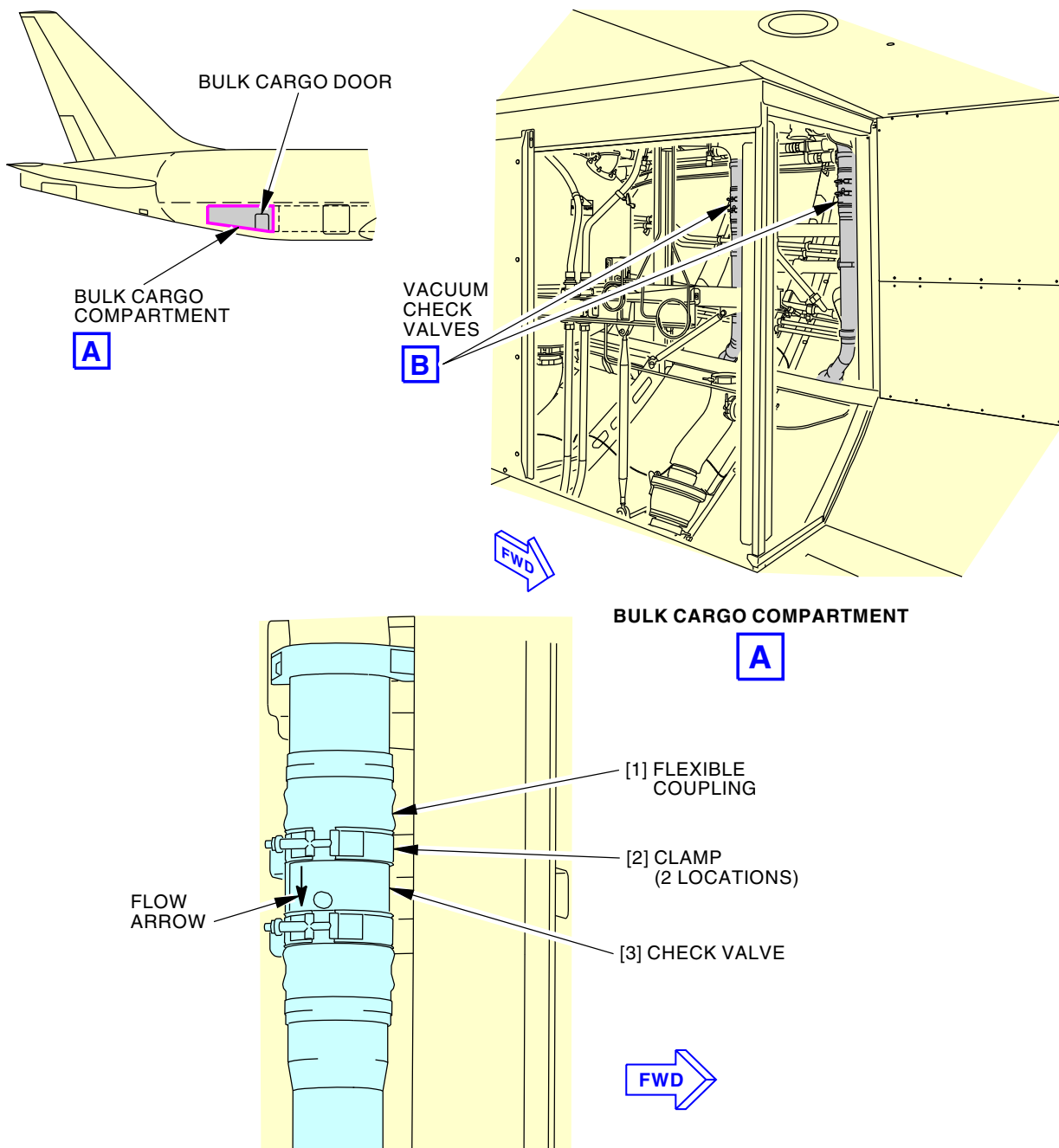
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NOTE:
THE FORWARD WASTE
TANK IS NOT SHOWN.

VACUUM CHECK VALVE

B

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Vacuum Check Valve Installation
Figure 401/38-32-07-990-801

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AIRCRAFT MAINTENANCE MANUAL
WASTE TANK - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) A removal of the waste tank.
 - (2) An installation of the waste tank.
 - (3) A cleaning of the waste tank.

TASK 38-32-11-000-801

2. Waste Tank Removal

NOTE: Figure 201

A. General

- (1) To remove the middle waste tank you must first remove the forward waste tank.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Prepare for Removal

SUBTASK 38-32-11-610-001



FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.



ALL TOILET COMPONENTS MUST BE SANITIZED AND CLEANED PRIOR TO HANDLING AND SHIPPING (ROUTING) TO HOME SHOP..

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

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SUBTASK 38-32-11-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-11-010-002

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-32-11-020-018

- (4) After you remove the waste tank enclosure panels, do these additional steps to remove the enclosure panel forward inboard post [44]:
- (a) Remove the two bolts [39] and washers [42] that attach the receptacle assembly [43] to the floor beam.
 - (b) Remove the receptacle assembly [43] from the floor beam.
 - (c) Remove the forward inboard post [44] from the waste tank enclosure.

SUBTASK 38-32-11-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-11-910-001

- (6) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

F. Waste Tank Removal

SUBTASK 38-32-11-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Disconnect the electrical connectors [14] from the point level sensors.
- (a) Cut and remove the straps attaching the wiring to the tank.

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SUBTASK 38-32-11-020-031

- (2) Disconnect the bonding jumper [41] from the grounding studs between the level sensors.

SUBTASK 38-32-11-020-002

- (3) Remove the bolts [16], nuts [17] and washers [18] to disconnect the bracket assembly [15] for the capillary tube.

SUBTASK 38-32-11-020-003

- (4) Disconnect the rinse hose [9] from the rinse nozzle.

SUBTASK 38-32-11-020-004

- (5) Remove the bolts [11], nuts [13] and washers [12] to disconnect the bracket assembly [10].

SUBTASK 38-32-11-020-005

- (6) Remove the couplings [7] with gask-O- seals [8] to disconnect the waste inlet fittings [6] from the waste tank assembly [28].
 - (a) Discard the gask-O- seal [8].

SUBTASK 38-32-11-020-006

- (7) To disconnect the vent tubes, do these steps:
 - (a) For the forward waste tank, loosen the clamps [2] to disconnect the flexible coupling [3] and plug [1].
 - (b) For the middle waste tank, loosen the clamps [2] to disconnect the flexible couplings [5], [4].
 - (c) For the aft waste tank, loosen the clamps [2] to disconnect the flexible coupling [5] and plug [1].

SUBTASK 38-32-11-010-003

- (8) Remove the vent tubes and the waste tubes above the waste tank assembly [28] for removal access.

SUBTASK 38-32-11-020-007

- (9) To disconnect the LCM bracket assembly [20] from the lower part of the waste tank assembly [28], do these steps.
 - (a) Remove the bolt [21], nut [23] and washer [22], washer [38] in the center of the LCM bracket assembly [20].
 - (b) Remove the bolts [21] and washer [22] in the other positions of the LCM bracket assembly [20].

SUBTASK 38-32-11-020-008

- (10) Remove the V-band clamp [26] with gask-O- seal [27] to disconnect the elbow tube assembly from the lower part of the waste tank assembly [28].
 - (a) Discard the gask-O- seal [27].

SUBTASK 38-32-11-020-009

- (11) Remove the bolts [24] and washers [25] on the inboard side of the waste tank assembly [28].

SUBTASK 38-32-11-020-016

- (12) Remove the bolts [35] and washers [25] on the outboard side of the waste tank assembly [28].

SUBTASK 38-32-11-020-017

- (13) Remove the bolts [36] and washers [25] in the front of the waste tank assembly [28].

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SUBTASK 38-32-11-020-010



WARNING

BE CAREFUL WHEN YOU MOVE THE WASTE TANK. BECAUSE THE WASTE TANK WEIGHS MORE THAN 44 POUNDS, INJURY TO PERSONS CAN OCCUR.



CAUTION

MOVE THE WASTE TANK CAREFULLY BECAUSE IT HAS A HONEYCOMB CORE WITH A GRAPHITE-COMPOSITE SKIN. THE WASTE TANK IS EASILY DAMAGED. DO NOT MOVE THE TANK BY ROLLING IT. DO NOT HIT THE TANK, OR LET IT FALL. THESE CAN CAUSE DAMAGE THAT YOU CANNOT SEE. IF YOU ARE NOT CAREFUL, YOU WILL CAUSE DAMAGE TO THE TANK, AND DECREASE ITS LIFE.

- (14) Remove the waste tank assembly [28] from its position.

NOTE: The waste tanks are a honeycomb core with a graphite composite skin, which is easily damaged. When you move the waste tank, make sure that you use sufficient support with a foam pad. Make sure that you also use sufficient protection from external damage.

SUBTASK 38-32-11-020-014

- (15) After you remove the forward waste tank assembly [28], do these additional steps to remove the middle waste tank:

- (a) Remove the bolts [30], bolts [37] and washers [31] to disconnect the cross member assembly [29] from the waste tank cradle.
- (b) Disconnect the rinse hoses from the rinse filters for the forward and middle waste tanks.
- (c) Remove the bolts [32] and washers [33] that attach the rinse filter bracket assembly [34] to the waste tank cradle.



CAUTION

MOVE THE WASTE TANK CAREFULLY BECAUSE IT HAS A HONEYCOMB CORE WITH A GRAPHITE-COMPOSITE SKIN. THE WASTE TANK IS EASILY DAMAGED. DO NOT MOVE THE TANK BY ROLLING IT. DO NOT HIT THE TANK, OR LET IT FALL. THESE CAN CAUSE DAMAGE THAT YOU CANNOT SEE. IF YOU ARE NOT CAREFUL, YOU WILL CAUSE DAMAGE TO THE TANK, AND DECREASE ITS LIFE.

- (d) Remove the middle waste tank assembly [28] as shown above.

NOTE: The waste tanks are a honeycomb core with a graphite composite skin, which is easily damaged. When you move the waste tank, make sure that you use sufficient support with a foam pad. Make sure that you also use sufficient protection from external damage.

————— **END OF TASK** —————

TASK 38-32-11-400-801

3. Waste Tank Installation

NOTE: Figure 201

A. General

- (1) If you removed the middle waste tank, you must first install the middle waste tank, then install the forward waste tank.

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B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
20-10-14-400-801	Aluminum Foil Markers Installation (P/B 401)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-33-00-740-801	LCM BITE Operational Test (P/B 501)

C. Tools/Equipment

Reference	Description
STD-1142	Equipment - Waste System Servicing

D. Consumable Materials

Reference	Description	Specification
G50236	Tie - Cable Wrap - PLT1.5M	SS-5540
G50809	Strap - Plastic, Adjustable, Self-locking, 5.50 Inches (139.70 mm) Long	BACS38K5

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Seal	38-32-08-05-185	ARO ALL
		38-32-08-14-285	ARO ALL
		38-32-08-27-190	ARO ALL
		38-32-11-03-040	ARO ALL
27	Seal	38-32-03-04-170	ARO ALL
28	Tank assembly	38-32-11-05-030	ARO ALL
		38-32-11-05-036	ARO 018-999

F. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

G. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

H. Waste Tank Installation

SUBTASK 38-32-11-420-032

(1) If you are installing a new waste tank, do this step:

- Install a new toilet distribution placard [40] on the water tank (Aluminum Foil Markers Installation, TASK 20-10-14-400-801).

SUBTASK 38-32-11-420-001



WARNING

BE CAREFUL WHEN YOU MOVE THE WASTE TANK. BECAUSE THE WASTE TANK WEIGHS MORE THAN 44 POUNDS, INJURY TO PERSONS CAN OCCUR.

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(WARNING PRECEDES)



CAUTION

MOVE THE WASTE TANK CAREFULLY BECAUSE IT HAS A HONEYCOMB CORE WITH A GRAPHITE-COMPOSITE SKIN. THE WASTE TANK IS EASILY DAMAGED. DO NOT MOVE THE TANK BY ROLLING IT. DO NOT HIT THE TANK, OR LET IT FALL. THESE CAN CAUSE DAMAGE THAT YOU CANNOT SEE. IF YOU ARE NOT CAREFUL, YOU WILL CAUSE DAMAGE TO THE TANK, AND DECREASE ITS LIFE.



CAUTION

USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (2) Put the waste tank assembly [28] in its position.

SUBTASK 38-32-11-420-002



CAUTION

MOVE THE WASTE TANK CAREFULLY BECAUSE IT HAS A HONEYCOMB CORE WITH A GRAPHITE-COMPOSITE SKIN. THE WASTE TANK IS EASILY DAMAGED. DO NOT MOVE THE TANK BY ROLLING IT. DO NOT HIT THE TANK, OR LET IT FALL. THESE CAN CAUSE DAMAGE THAT YOU CANNOT SEE. IF YOU ARE NOT CAREFUL, YOU WILL CAUSE DAMAGE TO THE TANK, AND DECREASE ITS LIFE.

- (3) Install the bolts [24] and washers [25] on the inboard side of the waste tank assembly [28].

SUBTASK 38-32-11-420-020

- (4) Install the bolts [35] and washers [25] on the outboard side of the waste tank assembly [28].

SUBTASK 38-32-11-420-021

- (5) Install the bolts [36] and washers [25] in the front of the waste tank assembly [28].

SUBTASK 38-32-11-420-003

- (6) Put the gask-O- seal [27] in its position to connect the elbow tube assembly to the lower part of the waste tank assembly [28].

SUBTASK 38-32-11-420-004

- (7) Install the V-band clamp [26] to connect the elbow tube assembly.

SUBTASK 38-32-11-420-005

- (8) Tighten the V-band clamp [26] to 50 pound-inches.

SUBTASK 38-32-11-420-006

- (9) To connect the LCM bracket assembly [20] to the lower part of the waste tank assembly [28], do these steps.

- (a) Install the bolt [21], nut [23] and washer [22], washer [38] in the center of the LCM bracket assembly [20].
- (b) Install the bolts [21] and washer [22] in the other positions of the LCM bracket assembly [20].

SUBTASK 38-32-11-420-007

- (10) Connect the vent tubes and the waste tubes removed above the waste tank assembly [28] for access.

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SUBTASK 38-32-11-420-008

- (11) To connect the vent tubes, do these steps:
- (a) For the forward waste tank, tighten the clamps [2] to connect the flexible coupling [3] and plug [1].
 - (b) For the middle waste tank, tighten the clamps [2] to connect the flexible couplings [5], [4].
 - (c) For the aft waste tank, tighten the clamps [2] to connect the flexible coupling [5] and plug [1].

SUBTASK 38-32-11-420-009

- (12) Put the gask-O-seals [8] in its position to connect the waste inlet fittings [6] to the waste tank assembly [28].

SUBTASK 38-32-11-420-010

- (13) Install the V-band couplings [7] to connect the waste inlet fittings [6].

SUBTASK 38-32-11-420-011

- (14) Tighten the V-band couplings [7] to 45 pound-inches.

SUBTASK 38-32-11-420-012

- (15) Install the bolts [11], nuts [13] and washers [12] to connect the bracket assembly [10].

SUBTASK 38-32-11-420-013

- (16) Connect the rinse hose [9] to the rinse nozzle.

SUBTASK 38-32-11-420-014

- (17) Install the bolts [16], nuts [17] and washers [18] to connect the bracket assembly [15] for the capillary tube.

SUBTASK 38-32-11-420-031

- (18) Connect the bonding jumper [41] to the grounding studs between the level sensors.

SUBTASK 38-32-11-420-015

- (19) Connect the electrical connectors [14] to the point level sensors.
- (a) Coil the excess wiring and attach it to the tank with the adjustable plastic strap, G50809 or tie wrap - PLT1.5M, G50236.

SUBTASK 38-32-11-020-015

- (20) After you install the middle waste tank assembly [28], do these steps:
- (a) Install the bolts [30], bolts [37] and washers [31] to connect the cross member assembly [29] to the waste tank cradle.
 - (b) Install the bolts [32] and washers [33] that attach the rinse filter bracket assembly [34] to the waste tank cradle.
 - (c) Connect the rinse hoses from the rinse filters for the forward and middle waste tanks.
 - (d) Do the steps for the installation of the forward waste tank assembly [28].

I. Waste Tank Installation Test

SUBTASK 38-32-11-860-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND

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Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-11-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-11-610-002

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-11-790-002

- (4) To do a leak check of the waste tank drain line connections, do these steps:

- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

- (b) At the service panel, make sure that the control handle for the drain ball valve is in the closed position.
- (c) Make sure that the cap for the waste drain fitting outlet is closed.
- (d) Connect the water hose from the waste system servicing equipment, STD-1142, to the applicable rinse fitting on the service panel.
- (e) Use the pump on the service cart to put about 200 gal (757 l) of water into the waste tank.
- (f) Make sure that the waste tank drain line connections do not have a leak.

NOTE: You must wait for not less than 30 minutes after you put the water in the tank before you do this step.

SUBTASK 38-32-11-610-003

- (5) Flush a toilet attached to the waste tank.

SUBTASK 38-32-11-610-008

- (6) Do this task: LCM BITE Operational Test, TASK 38-33-00-740-801.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-11-020-019

- (1) Before you install the waste tank enclosure panels, do these additional steps to install the enclosure panel forward inboard post [44]:
- (a) Put the forward inboard post [44] in place on the waste tank enclosure.
- (b) Put the receptacle assembly [43] in place on the floor beam.

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- (c) Install the two washers [42] and bolts[39] that attach the receptacle assembly [43] to the floor beam.

SUBTASK 38-32-11-010-004



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-11-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-32-11-100-801

4. Waste Tank Cleaning

A. General

- (1) This task has these methods for cleaning the waste tank:
- (a) Clean the waste tank (in the airplane) with the cleaning tool.
 - (b) Soak the waste tank with HOT water plus a cleaning solution.

B. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-00-100-801	Cargo Compartment Cleaning (P/B 701)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-33-01-000-801	Waste Tank Point Level Sensor Removal (P/B 401)
38-33-01-400-801	Waste Tank Point Level Sensor Installation (P/B 401)
51-00-57-100-801	Acid Spillage Cleanup (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-1944	Cleaner - Lavatory Waste Tank Part #: A38009-11 Supplier: 81205
STD-1088	Source - Cold Water, Regulated, 0-60 PSIG
STD-1142	Equipment - Waste System Servicing

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D. Consumable Materials

Reference	Description	Specification
B00638	Cleaner - Acidic Liquid - Honey Bee 60 (McGean-Rohco)	
B50117	Detergent - General	
B50329	Cleaner - Acidic Liquid - Honey Bee 60 T	
B50330	Cleaner - Acidic Liquid - Honey Bee 60 TNP	

E. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

F. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

G. Prepare for Cleaning

SUBTASK 38-32-11-610-004



ALWAYS PUT ON RUBBER GLOVES BEFORE YOU DO MAINTENANCE ON THE TOILET SYSTEM, OR TOUCH PARTS THAT TOUCHED WASTE MATERIAL. FULLY CLEAN YOUR HANDS WITH SOAP AND WATER AFTER MAINTENANCE IS COMPLETED. THE TOILET WASTE CAN CAUSE ILLNESS AND INJURIES TO PERSONNEL.



DO NOT TOUCH THE POTABLE WATER SYSTEM AFTER YOU DO SERVICING OR MAINTENANCE TO THE WASTE SYSTEM. AT NO TIME LET THE SAME PERSONNEL DO WORK ON THE TWO SYSTEMS AT THE SAME TIME. CHANGE YOUR CLOTHES, AND CLEAN YOUR HANDS FULLY WITH SOAP AND WATER BEFORE YOU TOUCH THE POTABLE WATER SYSTEM. CONTAMINATION OF THE POTABLE WATER SYSTEM CAN CAUSE ILLNESS AND INJURIES TO PERSONS THAT DRINK THE WATER.



DO NOT TOUCH THE TOILET COMPONENTS OR MOVE OR SEND THEM TO A DIFFERENT LOCATION UNTIL THEY ARE CLEAN. DIRTY TOILET COMPONENTS CAN CAUSE ILLNESS AND INJURIES TO PERSONNEL.

- (1) Do this task to drain and flush the waste tank, but do not add the chemical precharge fluid: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-11-010-005

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-11-010-006

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

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SUBTASK 38-32-11-040-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-11-910-002

- (5) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

H. Clean the Waste Tank With the Cleaner Tool

SUBTASK 38-32-11-480-005

- (1) Connect the drain hose as follows:

- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

- (b) Open the cap on the waste drain valve assembly.
- (c) Connect the waste drain hose from the service waste system servicing equipment, STD-1142 to the waste drain valve assembly.
- (d) Push the PUSH-TO-OPEN lever on the waste drain valve assembly.
- (e) Pull a handle to open the waste drain ball valve.

SUBTASK 38-32-11-480-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS HAVE A HONEYCOMB CORE WITH A GRAPHITE-COMPOSITE SKIN. THE WASTE TANKS ARE EASILY DAMAGED. DO NOT HIT THE TANKS, OR LET THEM FALL. THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE. DO NOT USE A PRESSURE OF MORE THAN 60 PSI (414 KPA) TO CLEAN A WASTE TANK. TOO MUCH PRESSURE CAN CAUSE DAMAGE, AND DECREASE ITS LIFE.

- (2) To install the tank cleaner at the point level sensor, do these steps:
- (a) Do this task: Waste Tank Point Level Sensor Removal, TASK 38-33-01-000-801.
- (b) Install the tank lavatory waste tank cleaner, SPL-1944.

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SUBTASK 38-32-11-420-030



IF YOU USE CHEMICALS, MAKE SURE THAT THEY QUALIFY TO THE WASTE TANK TEST IN D6-17487. IF YOU USE CHEMICALS THAT DO NOT QUALIFY TO THIS SPECIFICATION, DAMAGE TO THE TANK CAN OCCUR.

- (3) Connect a water source (0-60 PSIG), STD-1088 to the tank cleaner.

SUBTASK 38-32-11-140-001

- (4) Make sure the water pressure is a minimum of 45 psig (310 kPa) to the tank cleaner tool.

SUBTASK 38-32-11-140-002



KEEP THE WATER TEMPERATURE AND PRESSURE BELOW THE LIMITS. IF YOU USE WATER AT A HIGHER TEMPERATURE OR PRESSURE, YOU CAN CAUSE DAMAGE TO THE TANK.

- (5) Make sure that water pressure is not more than 60 psig (414 kPa) and that water temperature is not more than 160°F (71°C).

NOTE: Hot water and higher water pressure will clean the waste tank faster.

SUBTASK 38-32-11-170-001

- (6) Operate the tank cleaner as follows:

- (a) Supply water pressure and flow to the tank cleaner tool.

NOTE: It is recommended that you operate the tank cleaner for approximately 60 minutes.

- (b) Operate the tank cleaner for a minimum 15 minutes.

- (c) Make sure the waste system servicing equipment, STD-1142 has sufficient capacity to contain the waste water.

- (d) Stop the operation of the tank cleaner.

SUBTASK 38-32-11-080-001

- (7) Disconnect the water supply line from the tank cleaner.

SUBTASK 38-32-11-080-002

- (8) To remove the tank cleaner at the point level sensor; do these steps:

- (a) Remove the tank cleaner.

- (b) Do a visual check of the inner side of the waste tank to make sure the waste tank is clean.

1) If the inner side of the waste tank is not clean, do this procedure again.

- (c) If the inner side of the waste tank is clean, do this task: Waste Tank Point Level Sensor Installation, TASK 38-33-01-400-801.

SUBTASK 38-32-11-080-003

- (9) Disconnect the drain line as follows:

- (a) Push the handle to close the waste drain ball valve.

- (b) Disconnect the waste drain hose from the waste drain valve assembly.

- (c) Close the cap on the waste drain valve assembly.

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- (d) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

I. Soak the Waste Tank with Hot Water Plus a Cleaning Solution.

SUBTASK 38-32-11-680-001

- (1) Drain the waste system servicing equipment, STD-1142 of all chemical precharge.

SUBTASK 38-32-11-480-003

- (2) Connect the drain hose as follows:

- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

- (b) Open the cap on the waste drain valve assembly.
(c) Connect the waste drain hose from the toilet service cart to the waste drain valve assembly.
(d) Push the PUSH-TO-OPEN lever on the waste drain valve assembly.
(e) Make sure the waste drain ball valve is in the closed position.

SUBTASK 38-32-11-480-004

- (3) Connect the rinse hose as follows:

- (a) Open the cap on the rinse fitting assembly for the waste tank you are to clean.
(b) Connect a rinse hose from the waste system servicing equipment, STD-1142 to the rinse fitting assembly.

SUBTASK 38-32-11-610-005



USE A CLEANING SOLUTION FROM THE WASTE-TANK TEST SPECIFICATION. OTHER CLEANING SOLUTIONS CAN CAUSE DAMAGE TO THE TANK.



CLEAN AND NEUTRALIZE ALL SPILLS OR LEAKS THAT INVOLVE HONEY BEE 60 CLEANER, B00638, HONEY BEE 60 T CLEANER, B50329, OR HONEY BEE 60 TNP CLEANER, B50330. EXPOSURE OF ALUMINUM STRUCTURES TO THE CLEANER WILL CAUSE CORROSION.

- (4) Fill the waste system servicing equipment, STD-1142 with a mixture of water and soap or cleaner solution. Make the cleaner solution using one of the following detergents/cleaners. Dilute the cleaner with water per the manufacturers instructions.
- (a) Soap - general detergent, B50117 (commercially available)
NOTE: If you use a soap solution, it must not foam.
- (b) Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, or Honey Bee 60 TNP cleaner, B50330.

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SUBTASK 38-32-11-170-002



FILL THE WASTE TANK ONLY TO THE TOP OF THE WASTE TANK. TOO MUCH FLUID IN THE WASTE TANK CAN CAUSE DAMAGE TO THE VACUUM BLOWER.

- (5) Fill the waste tank with 60 gallons of the disinfectant solution.



KEEP THE WATER TEMPERATURE AND PRESSURE BELOW THE LIMITS. IF YOU USE WATER AT A HIGHER TEMPERATURE OR PRESSURE, YOU CAN CAUSE DAMAGE TO THE TANK.

- (a) Make sure that water pressure is not more than 60 psig (414 kPa) and that water temperature is not more than 160°F (71°C).
- (b) Make sure that the water pressure is a minimum of 30 psig (207 kPa).

NOTE: If the water pressure is less than the minimum pressure, the waste tank will not get clean.

SUBTASK 38-32-11-170-003

- (6) Let the cleaning solution stay in the waste tank for 30 to 60 minutes.

SUBTASK 38-32-11-610-006

- (7) Do this task to drain and flush the waste tank, but do not add the chemical precharge fluid: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-11-210-001

- (8) Do a visual check of the inner side of the waste tank to make sure the waste tank is clean.
- (a) If the inner side of the waste tank is not clean, do this procedure again.
- (b) If the inner side of the waste tank is clean, then continue.

SUBTASK 38-32-11-100-002



CLEAN AND NEUTRALIZE ALL SPILLS OR LEAKS THAT INVOLVE HONEY BEE 60 CLEANER, B00638, HONEY BEE 60 T CLEANER, B50329, OR HONEY BEE 60 TNP CLEANER, B50330. EXPOSURE OF ALUMINUM STRUCTURES TO THE CLEANER WILL CAUSE CORROSION.

- (9) Clean and neutralize spills or leaks of Honey Bee 60 cleaner, B00638, Honey Bee 60 T cleaner, B50329, or Honey Bee 60 TNP cleaner, B50330 per TASK 51-00-57-100-801 and TASK 25-52-00-100-801.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-11-440-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-32-11-610-007

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-11-410-002



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (3) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-11-410-003

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-11-410-004

- (5) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

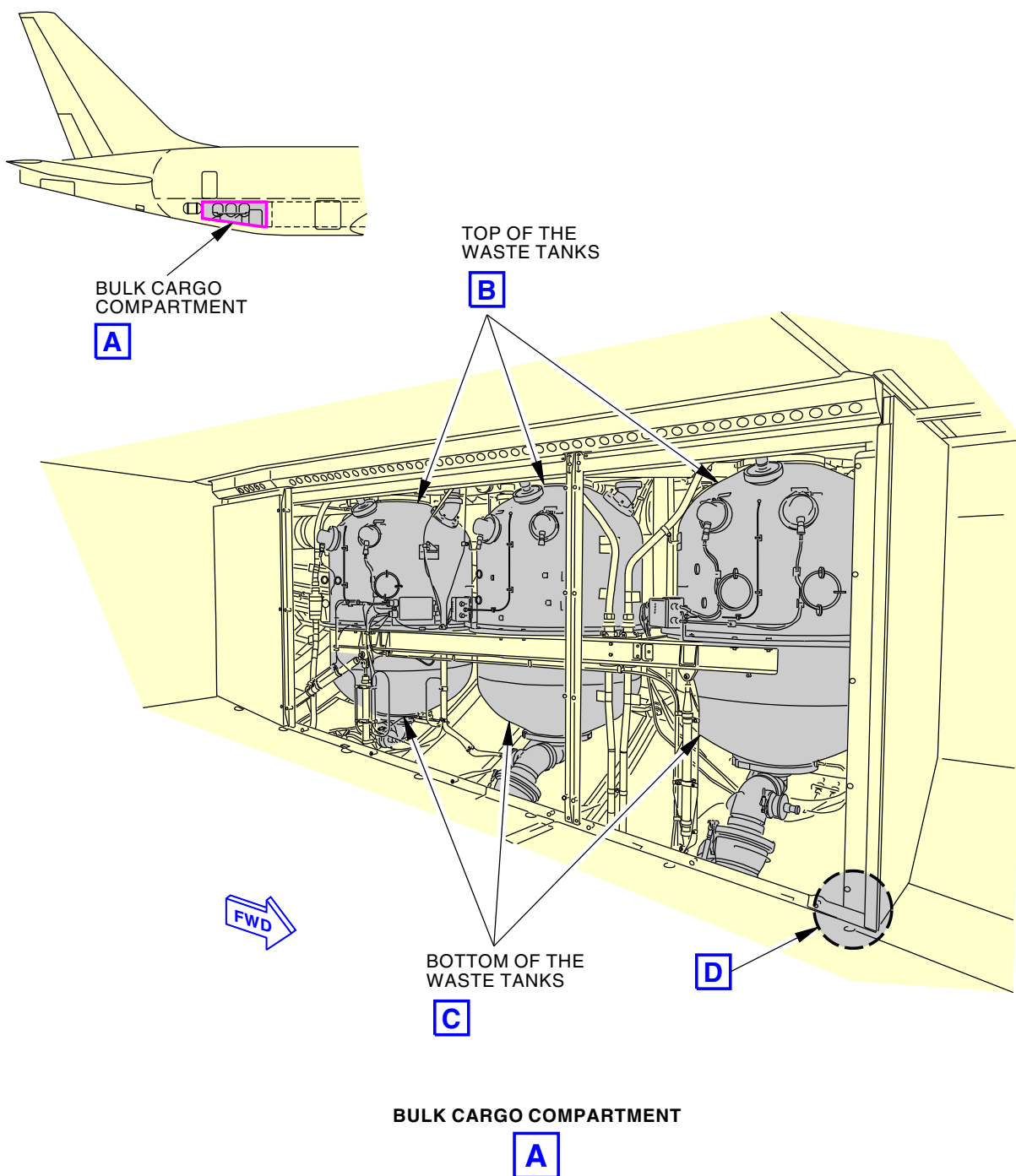
————— END OF TASK —————

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2058242 S0000422565_V3

**777-300ER Waste Tank Installation
Figure 201/38-32-11-990-803 (Sheet 1 of 4)**

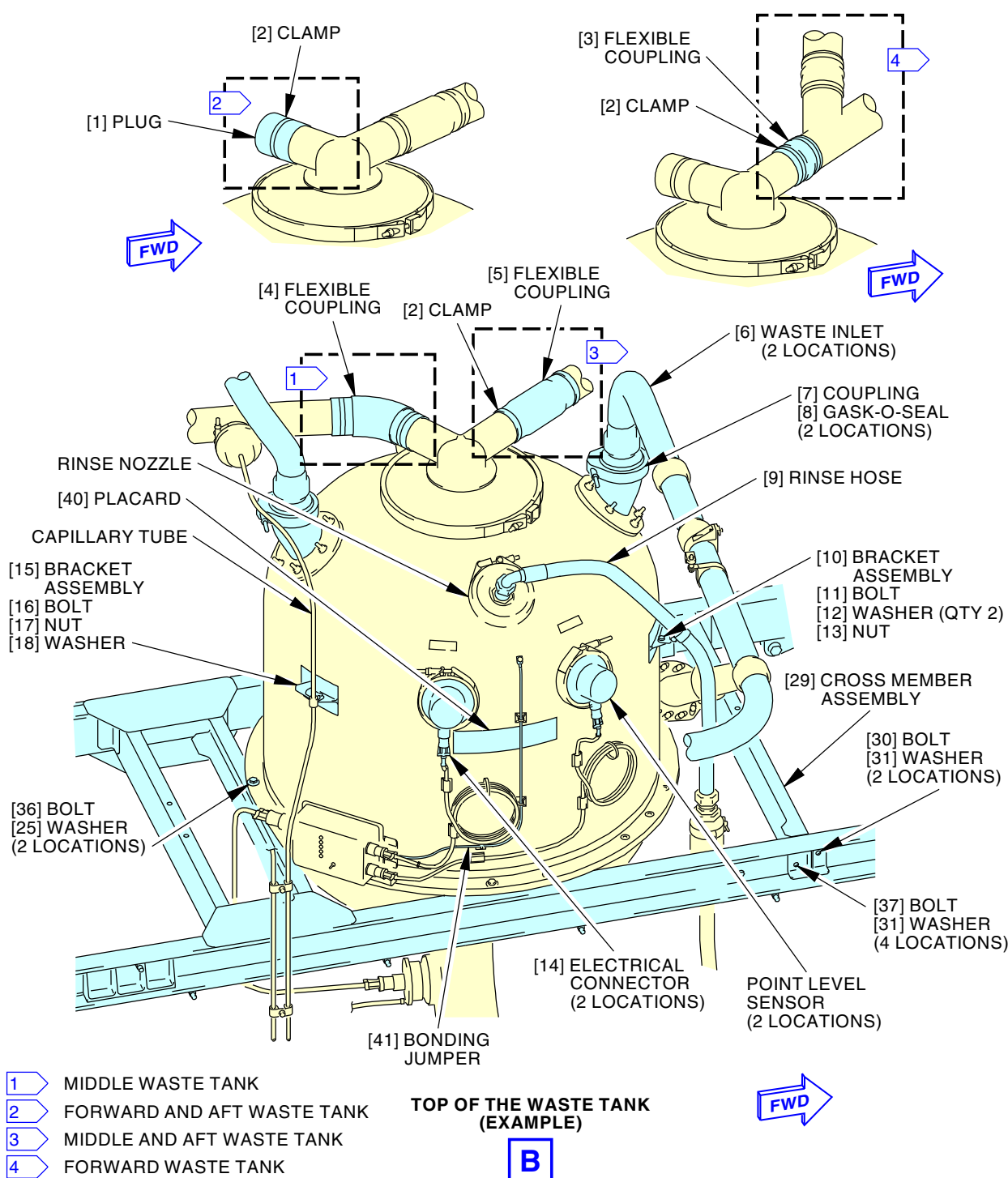
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2058306 S0000422568_V2

777-300ER Waste Tank Installation
Figure 201/38-32-11-990-803 (Sheet 2 of 4)

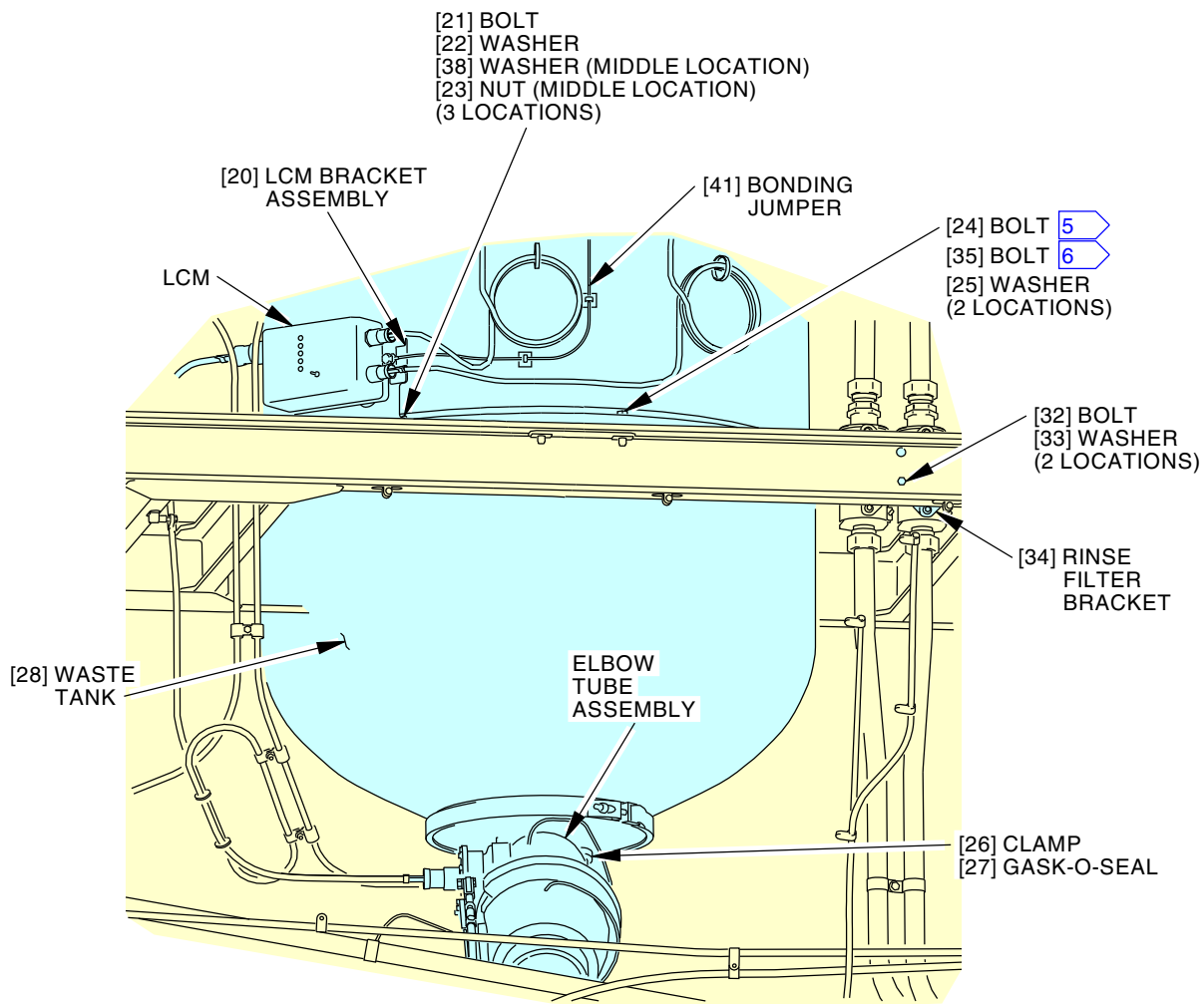
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**BOTTOM OF THE WASTE TANK
(EXAMPLE)**

C



FRONT SIDE

REAR SIDE (NOT SHOWN)

2058313 S0000422569_V2

**777-300ER Waste Tank Installation
Figure 201/38-32-11-990-803 (Sheet 3 of 4)**

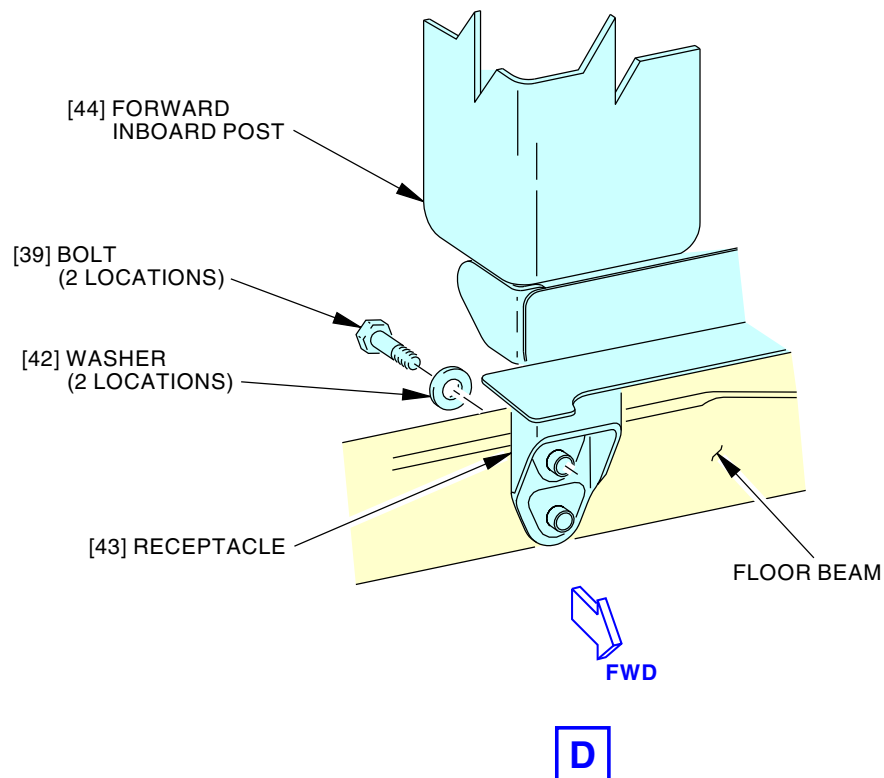
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N78814 S0006423049_V3

777-300ER Waste Tank Installation
Figure 201/38-32-11-990-803 (Sheet 4 of 4)

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WASTE DRAIN VALVE ASSEMBLY - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the drain valve assembly
 - (2) An installation of the drain valve assembly.
- B. The Waste Drain Valve Assembly is referred to as the Drain Valve Assembly in this procedure.

TASK 38-32-12-000-801

2. Waste Drain Valve Assembly Removal

(Figure 401)

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-11-000-801	Bulk Cargo Floor Removal (P/B 401)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

C. **Access Panels**

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

D. **Prepare for the Removal**

SUBTASK 38-32-12-610-001



FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-12-010-001

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-32-12-010-002

- (3) To remove the access panel for the waste tank service panel, do this task: Bulk Cargo Floor Removal, TASK 25-52-11-000-801.

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SUBTASK 38-32-12-010-003

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

E. Waste Drain Valve Assembly Removal

SUBTASK 38-32-12-020-001

- (1) Remove the clamp [2] to disconnect the waste elbow tube [1] from the drain valve assembly [5].

SUBTASK 38-32-12-020-002

- (2) Remove the gask-o- seal [3] between the waste elbow tube [1] from the drain valve assembly [5].

SUBTASK 38-32-12-020-003

- (3) Remove the bolts [7] and washers [6] from the drain valve assembly [5].

SUBTASK 38-32-12-020-004

- (4) Remove the drain valve assembly [5].

SUBTASK 38-32-12-020-005

- (5) Remove the toilet drain gasket [4] from the drain valve assembly [5] or the waste tank service panel.

————— END OF TASK —————

TASK 38-32-12-400-801

3. Waste Drain Valve Assembly Installation

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)

B. Tools/Equipment

<u>Reference</u>	<u>Description</u>
STD-1142	Equipment - Waste System Servicing

C. Consumable Materials

<u>Reference</u>	<u>Description</u>	<u>Specification</u>
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

D. Expendables/Parts

<u>AMM Item</u>	<u>Description</u>	<u>AIPC Reference</u>	<u>AIPC Effectivity</u>
3	Seal	38-32-03-04-170	ARO ALL
4	Gasket	38-32-03-01-225	ARO ALL
5	Valve assembly	38-32-03-01-045	ARO ALL

E. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left

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F. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

G. Waste Drain Valve Assembly Installation

SUBTASK 38-32-12-390-001

- (1) Apply a fay surface seal with sealant, A00247 to both sides of the toilet drain gasket [4].

SUBTASK 38-32-12-420-001

- (2) Install the toilet drain gasket [4] to the waste tank service panel.

SUBTASK 38-32-12-390-002

- (3) Apply a fay surface seal with sealant, A00247 to the drain valve assembly [5].

SUBTASK 38-32-12-420-002

- (4) Put the drain valve assembly [5] in its position.

SUBTASK 38-32-12-420-003

- (5) Install the bolts [7] and washers [6] for the drain valve assembly [5].

SUBTASK 38-32-12-420-004

- (6) Install the gask-o- seal [3] between the waste elbow tube [1] and the drain valve assembly [5].

SUBTASK 38-32-12-420-005

- (7) Install the clamp [2] to connect the waste elbow tube [1] to the drain valve assembly [5].

H. Waste Drain Valve Assembly Installation Test

SUBTASK 38-32-12-610-002

- (1) Open the cap on the drain valve assembly.

SUBTASK 38-32-12-610-003

- (2) Open the cap on the rinse fitting assembly.

NOTE: There is one rinse fitting assembly on the service panel for each waste tank.

SUBTASK 38-32-12-610-004

- (3) Connect a rinse water hose from the service waste system servicing equipment, STD-1142 to the rinse fitting assembly.

SUBTASK 38-32-12-170-001

- (4) Fill the waste tank with 30 gallons to 50 gallons of water.

SUBTASK 38-32-12-860-001

- (5) Pull the handle to open the waste drain ball valve for the filled waste tank.

SUBTASK 38-32-12-790-001

- (6) Let the water sit on the drain valve assembly for 5 minutes.

SUBTASK 38-32-12-790-002

- (7) Examine the drain valve assembly and the connections for leakage.

SUBTASK 38-32-12-610-006

- (8) Connect the drain hose from the service truck to the drain valve assembly.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-12-610-005

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-32-12-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

SUBTASK 38-32-12-410-002

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-12-410-003

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

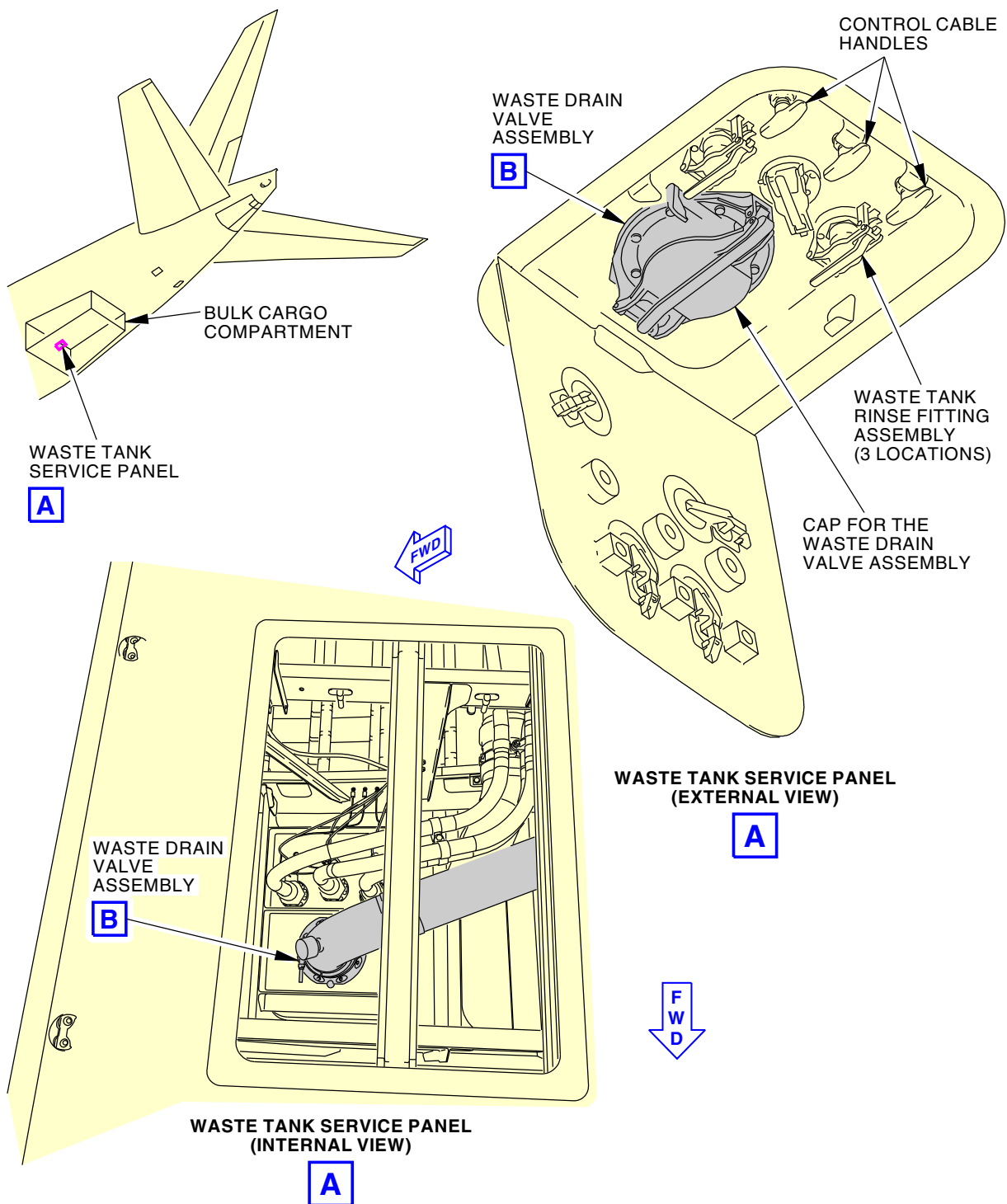
————— END OF TASK —————

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D20876 S0006423054_V2

**Waste Drain Valve Assembly Installation
Figure 401/38-32-12-990-801 (Sheet 1 of 2)**

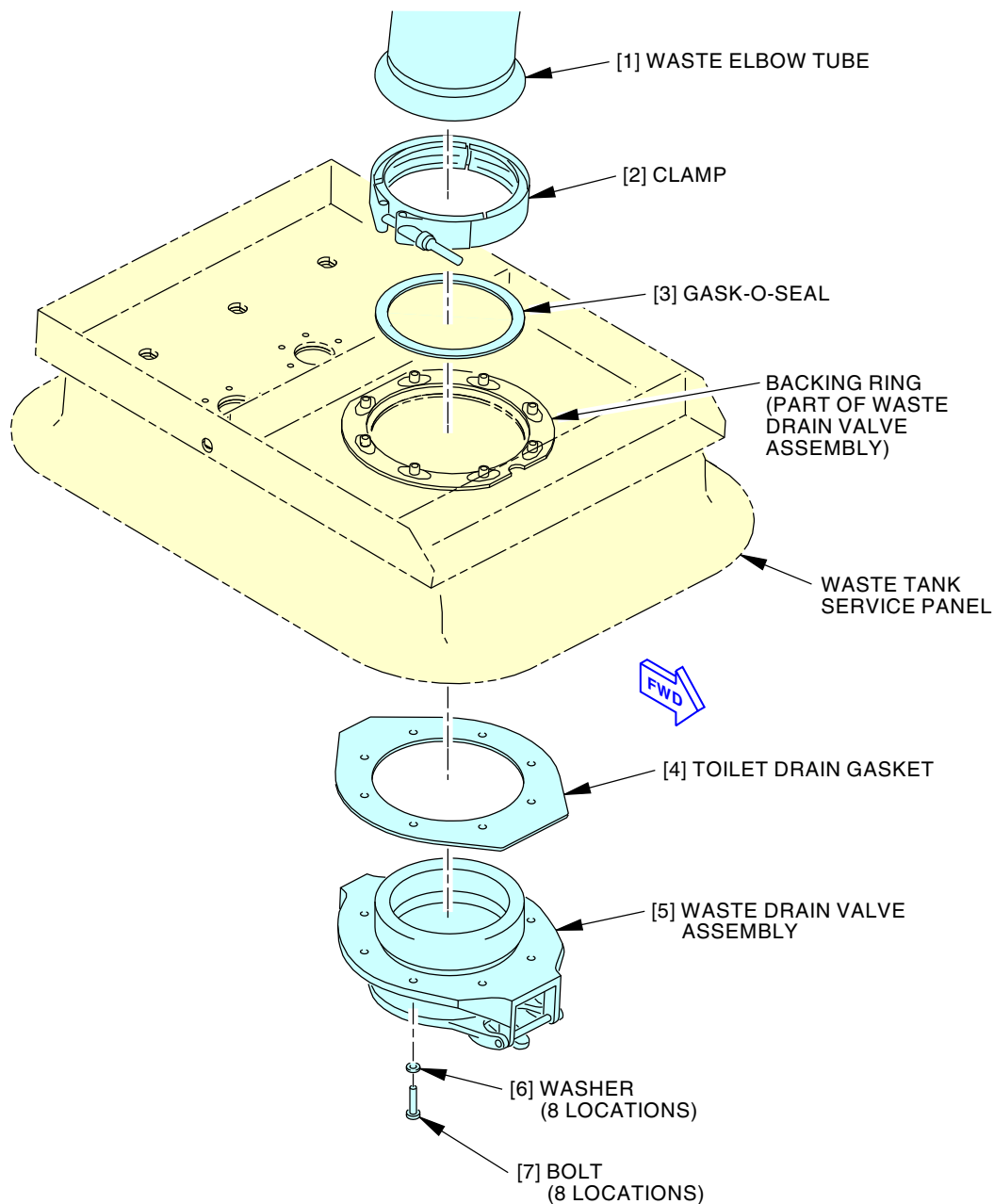
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WASTE DRAIN VALVE ASSEMBLY



D20880 S0006423055_V2

**Waste Drain Valve Assembly Installation
Figure 401/38-32-12-990-801 (Sheet 2 of 2)**

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WASTE TANK RINSE FITTING ASSEMBLY - REMOVAL/INSTALLATION

1. **General**

A. This procedure has these tasks:

- (1) A removal of the waste tank rinse fitting assembly
- (2) An installation of the waste tank rinse fitting assembly.

TASK 38-32-14-000-801

2. **Waste Tank Rinse Fitting Assembly Removal**

(Figure 401)

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
30-71-04-000-801	Waste Tank Rinse Fitting Heater Removal (P/B 401)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

C. **Access Panels**

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

D. **Prepare for the Removal**

SUBTASK 38-32-14-610-001



WARNING

FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.



WARNING

ALL TOILET COMPONENTS MUST BE SANITIZED AND CLEANED PRIOR TO HANDLING AND SHIPPING (ROUTING) TO HOME SHOP..

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-14-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

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SUBTASK 38-32-14-010-003

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

E. Waste Tank Rinse Fitting Assembly Removal

SUBTASK 38-32-14-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) To remove the rinse fitting heater [2] from the rinse fitting cap assembly [5], do this task: Waste Tank Rinse Fitting Heater Removal, TASK 30-71-04-000-801.

SUBTASK 38-32-14-020-002

- (2) Loosen the B-nut of the rinse hose [1] to disconnect the rinse fitting cap assembly [5].

SUBTASK 38-32-14-020-003

- (3) Remove the bolts [4] that attaches the rinse fitting cap assembly [5] to the rinse fitting ring assembly [3].

SUBTASK 38-32-14-020-004

- (4) Remove the rinse fitting cap assembly [5].

————— **END OF TASK** —————

TASK 38-32-14-400-801

3. Waste Tank Rinse Fitting Assembly Installation

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-11-400-801	Bulk Cargo Floor Installation (P/B 401)
30-71-04-400-801	Waste Tank Rinse Fitting Heater Installation (P/B 401)

B. Tools/Equipment

<u>Reference</u>	<u>Description</u>
STD-1142	Equipment - Waste System Servicing

C. Consumable Materials

<u>Reference</u>	<u>Description</u>	<u>Specification</u>
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95

D. Expendables/Parts

<u>AMM Item</u>	<u>Description</u>	<u>AIPC Reference</u>	<u>AIPC Effectivity</u>
3	Ring assembly	38-32-03-01-030	ARO ALL
5	Cap assembly	38-32-03-01-025	ARO ALL

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E. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

F. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

G. Waste Tank Rinse Fitting Assembly Installation

SUBTASK 38-32-14-390-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Apply a fay surface seal with sealant, A00247 to the rinse fitting ring assembly [3].

SUBTASK 38-32-14-420-001

- (2) Put the rinse fitting ring assembly [3] in its position.

SUBTASK 38-32-14-390-002

- (3) Apply a fay surface seal with sealant, A00247 to the rinse fitting cap assembly [5].

SUBTASK 38-32-14-420-002

- (4) Put the rinse fitting cap assembly [5] in its position.

SUBTASK 38-32-14-420-003

- (5) Install the bolts [4] for the rinse fitting cap assembly [5].

SUBTASK 38-32-14-420-004

- (6) Install the rinse hose [1].

SUBTASK 38-32-14-420-005

- (7) To install the rinse hose heater [2], do this task: Waste Tank Rinse Fitting Heater Installation, TASK 30-71-04-400-801.

H. Waste Tank Rinse Fitting Assembly Installation Test

SUBTASK 38-32-14-610-002

- (1) Open the cap of the rinse fitting.

SUBTASK 38-32-14-610-003

- (2) Connect a rinse water hose from the service waste system servicing equipment, STD-1142 to the rinse fitting.

SUBTASK 38-32-14-170-001

- (3) Fill the waste tank with 30 gallons to 50 gallons of water.

SUBTASK 38-32-14-790-001

- (4) Examine the rinse fitting assembly and the connections for leakage.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-14-610-004

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-32-14-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Bulk Cargo Floor Installation, TASK 25-52-11-400-801.

SUBTASK 38-32-14-410-002

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-32-14-410-003

- (4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door

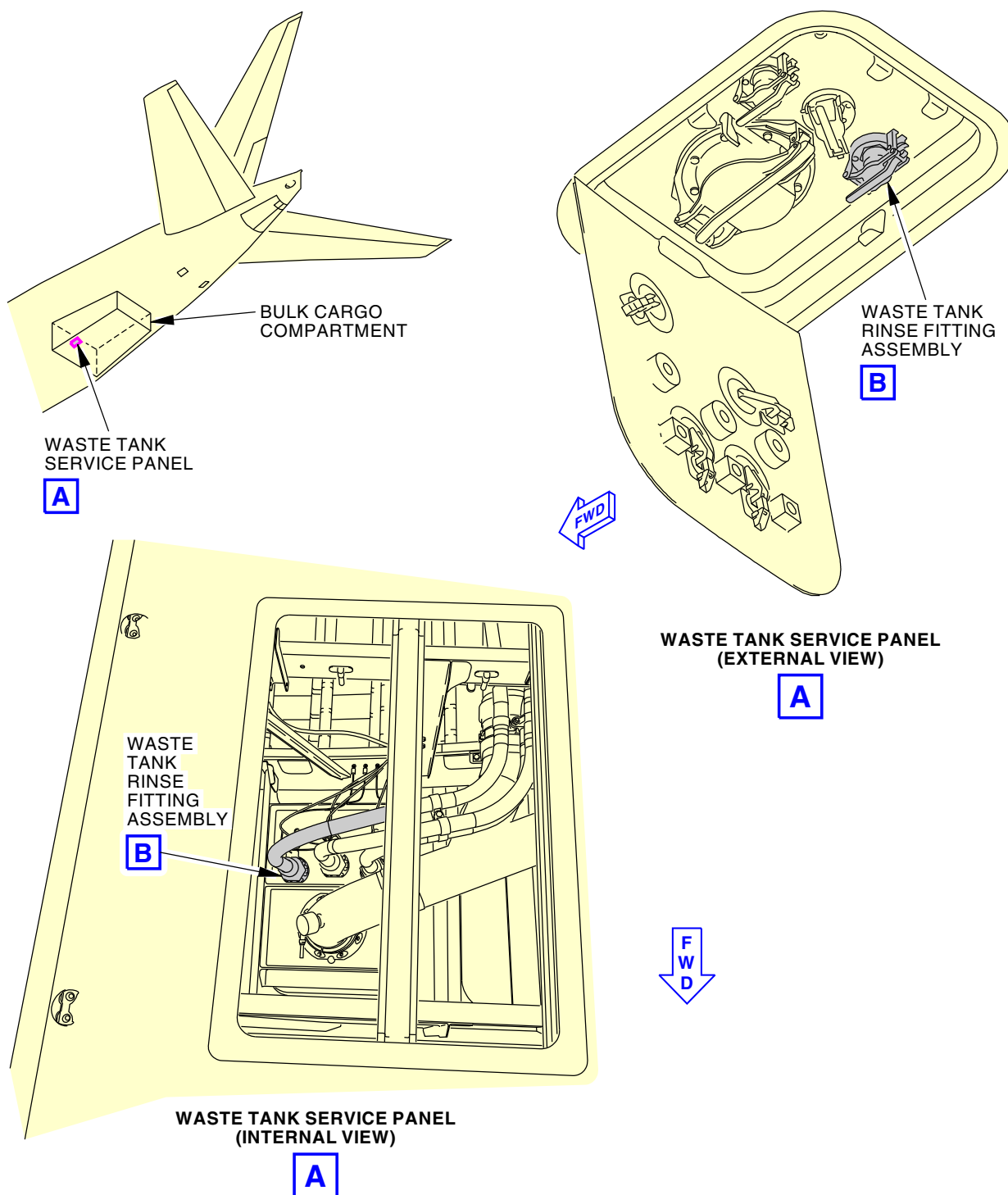
————— END OF TASK —————

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D18439 S0006423062_V2

**Waste Tank Rinse Fitting Assembly Installation
Figure 401/38-32-14-990-801 (Sheet 1 of 2)**

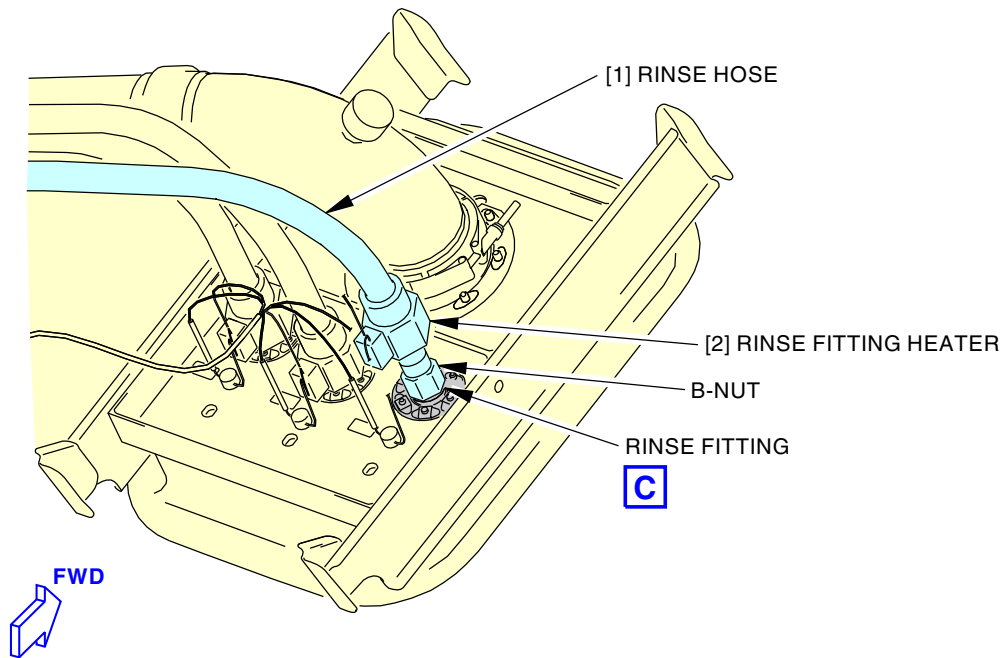
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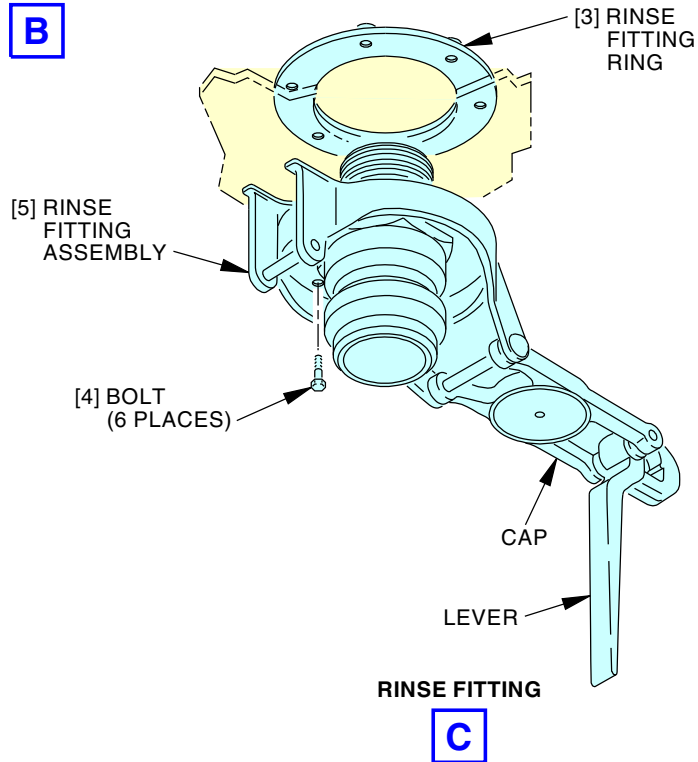
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BOEING
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AIRCRAFT MAINTENANCE MANUAL



WASTE TANK RINSE FITTING ASSEMBLY



D20565 S0006423063_V2

Waste Tank Rinse Fitting Assembly Installation
Figure 401/38-32-14-990-801 (Sheet 2 of 2)

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WASTE TANK RINSE NOZZLE - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

- (1) A removal of the waste tank rinse nozzle.
- (2) An installation of the waste tank rinse nozzle.
- (3) A cleaning of the waste tank rinse nozzle.

B. The Waste Tank Rinse Nozzle is referred to as the Rinse Nozzle in this procedure.

TASK 38-32-17-000-801

2. Waste Tank Rinse Nozzle Removal

(Figure 201)

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

C. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

D. **Prepare for the Removal**

SUBTASK 38-32-17-610-001



WARNING

FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES WHEN WORKING ON THE TOILET SYSTEM OR WHEN HANDLING PARTS WHICH HAVE BEEN IN CONTACT WITH WASTE MATERIAL. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER COMPLETION OF PROCEDURE. PER UNITED STATES PUBLIC HEALTH SERVICE REGULATIONS, PERSONNEL WHO SERVICE OR MAINTAIN WASTE WATER SYSTEMS MAY NOT, UNDER ANY CIRCUMSTANCES, SERVICE POTABLE WATER SYSTEMS CONCURRENTLY.

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-17-010-001

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-32-17-010-002

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

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SUBTASK 38-32-17-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-17-910-001

- (5) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

E. Rinse Nozzle Removal

SUBTASK 38-32-17-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Disconnect the rinse hose [3] from the rinse nozzle assembly [2].

SUBTASK 38-32-17-020-002

- (2) Remove the V-band coupling [1].

SUBTASK 38-32-17-020-003

- (3) Remove the rinse nozzle assembly [2] and packing [4] from the mounting flange of the waste tank.

- (a) Discard the packing [4].

SUBTASK 38-32-17-160-001

- (4) Clean all the waste material from the hole in the waste tank for the rinse nozzle.

————— END OF TASK —————

TASK 38-32-17-400-801

3. Waste Tank Rinse Nozzle Installation

(Figure 201)

A. References

<u>Reference</u>	<u>Title</u>
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)

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(Continued)

Reference	Title
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Packing	38-32-17-01-085	ARO ALL

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. Rinse Nozzle Installation

SUBTASK 38-32-17-420-001



CAUTION

USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

(1) Install the packing [4] on the rinse nozzle assembly [2].

SUBTASK 38-32-17-420-002

(2) Put the rinse nozzle assembly [2] in its position.

SUBTASK 38-32-17-420-003

(3) Install the V-band coupling [1] that attaches the rinse nozzle assembly [2].

SUBTASK 38-32-17-420-004

(4) Tighten the V-band coupling [1] to 40-50 pound-inches.

SUBTASK 38-32-17-420-005

(5) Connect the rinse hose [3] to the rinse nozzle assembly [2].

F. Rinse Nozzle Installation Test

SUBTASK 38-32-17-860-001

(1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-17-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-17-610-002

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-17-790-001

- (4) Check the rinse nozzle at the rinse line fitting connection and at the waste tank connection to make sure no leaks occur during the servicing step.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-17-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-17-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-32-17-100-801

4. Waste Tank Rinse Nozzle Cleaning

(Figure 202)

A. Expendables/Parts

<u>AMM Item</u>	<u>Description</u>	<u>AIPC Reference</u>	<u>AIPC Effectivity</u>
22	Nozzle	38-32-17-01-080	ARO ALL
23	Gasket	38-32-17-01-070	ARO ALL

B. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left

C. Procedure

SUBTASK 38-32-17-020-004

- (1) Do this task: Waste Tank Rinse Nozzle Removal, TASK 38-32-17-000-801.

SUBTASK 38-32-17-100-001

- (2) Clean the rinse nozzle assembly using soap and brushes.

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SUBTASK 38-32-17-020-005

- (3) If the rinse nozzle can not be cleaned as an assembly, do the steps that follow to disassemble the rinse nozzle assembly:

NOTE: It is optional to disassemble the rinse nozzle.

- (a) Remove the nut [25] and washer [24] from the housing [26].
- (b) Remove the housing [26] and gasket [23] from the rinse mounting flange [21].
- (c) Remove the rotating rinse nozzle [22] from the housing [26].

SUBTASK 38-32-17-160-002

- (4) Clean the rotating rinse nozzle [22].

SUBTASK 38-32-17-420-007

- (5) Do these steps to assemble the rinse nozzle assembly:

- (a) Install the rotating rinse nozzle [22] on the housing [26].
- (b) Install the housing [26] and gasket [23] in the rinse mounting flange [21].
- (c) Install the nut [25] and washer [24] to attach the rinse mounting flange [21] to the housing [26].

SUBTASK 38-32-17-710-001

- (6) Make sure the rotating rinse nozzle [22] turns freely.

SUBTASK 38-32-17-210-001

- (7) Make sure the holes in the rotating rinse nozzle [22] are clean.

SUBTASK 38-32-17-420-006

- (8) Do this task: Waste Tank Rinse Nozzle Installation, TASK 38-32-17-400-801.

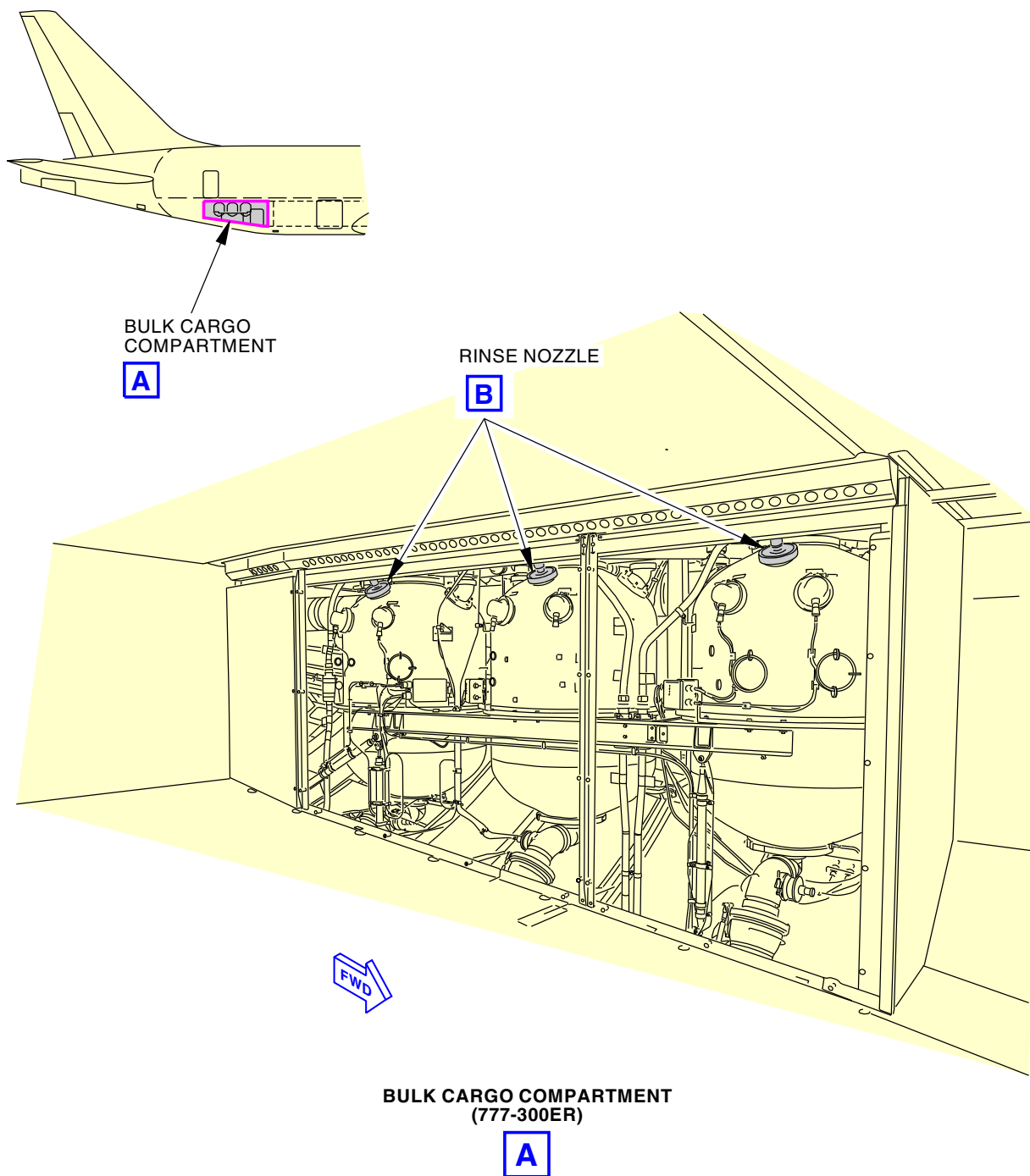
————— **END OF TASK** —————

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ARO ALL

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**Waste Tank Rinse Nozzle Installation
Figure 201/38-32-17-990-801 (Sheet 1 of 2)**

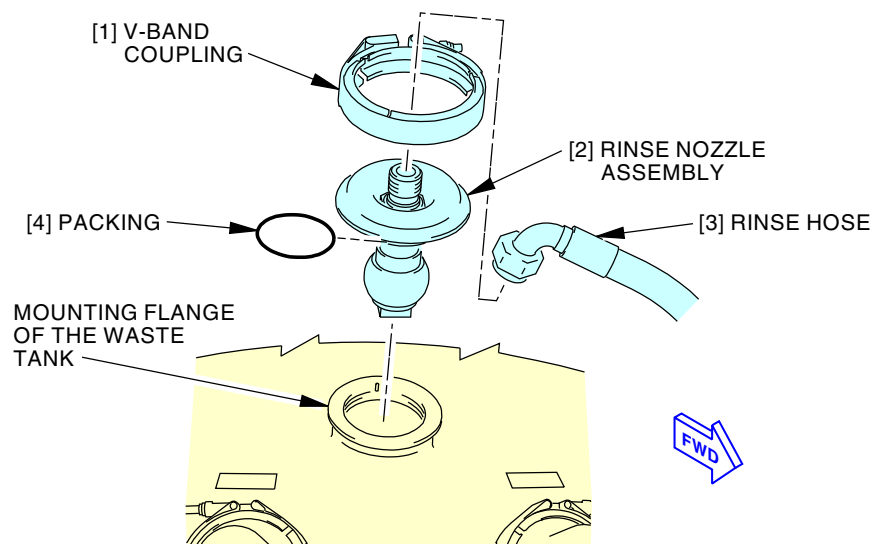
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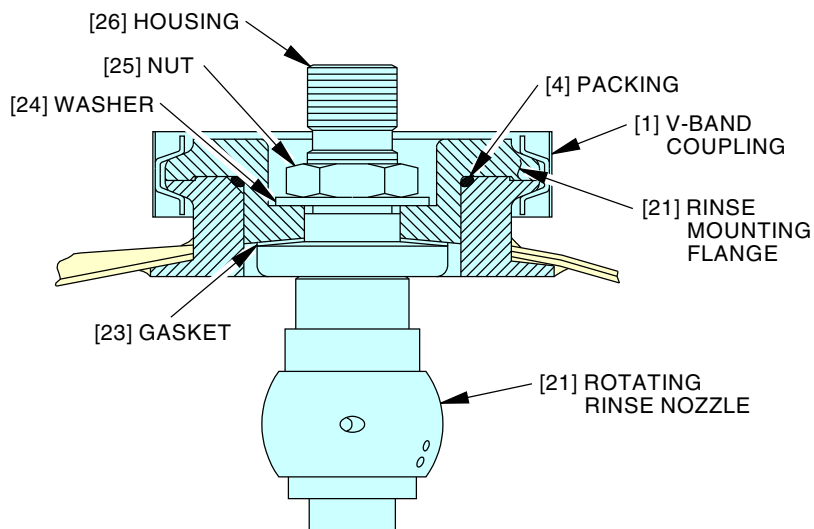
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**RINSE NOZZLE
(EXAMPLE)**

B



**RINSE NOZZLE ASSEMBLY
(EXAMPLE)**

B

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**Waste Tank Rinse Nozzle Installation
Figure 201/38-32-17-990-801 (Sheet 2 of 2)**

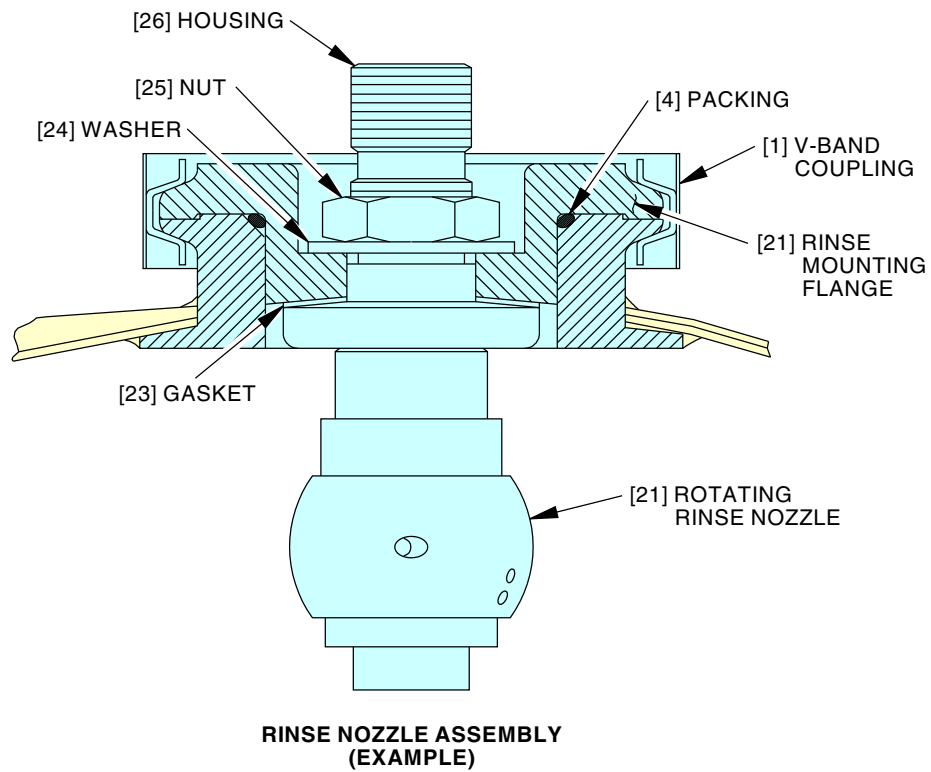
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Rinse Nozzle Cleaning
Figure 202/38-32-17-990-802

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WASTE TANK RINSE FILTER - MAINTENANCE PRACTICES

1. General

- A. This procedure has these tasks:
- (1) A removal of the waste tank rinse filter
 - (2) An installation of the waste tank rinse filter.
 - (3) A cleaning of the waste tank rinse filter element.

TASK 38-32-18-000-801

2. Waste Tank Rinse Filter Removal

(Figure 201)

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)

B. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-32-18-610-001

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-32-18-010-001

- (2) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-32-18-010-002

- (3) To remove the enclosure panels for the waste tanks, do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

E. Waste Tank Rinse Filter Removal

SUBTASK 38-32-18-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Loosen the B-nuts of the rinse hoses [1], [4] to disconnect the rinse filter assembly [3].

SUBTASK 38-32-18-020-002

- (2) Loosen the two clamps [2].

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SUBTASK 38-32-18-020-003

- (3) Remove the union [5] and packing [6] from the rinse filter assembly [3].
 - (a) Discard the packing [6].

————— END OF TASK —————

TASK 38-32-18-400-801

3. Waste Tank Rinse Filter Installation

(Figure 201)

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

B. Tools/Equipment

Reference	Description
STD-1142	Equipment - Waste System Servicing

C. Consumable Materials

Reference	Description	Specification
D00504	Grease - Petrolatum	VV-P-236

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Filter assembly	38-32-18-01-090	ARO ALL
6	Packing	38-32-18-01-060	ARO ALL

E. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

F. Access Panels

Number	Name/Location
825	Bulk Cargo Door

G. Waste Tank Rinse Filter Installation

SUBTASK 38-32-18-640-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Apply the grease, D00504 to the packing [6] and the threads of the union [5].

SUBTASK 38-32-18-420-001

- (2) Install the union [5] and packing [6] in the rinse filter assembly [3].

SUBTASK 38-32-18-420-002

- (3) Install the rinse filter assembly [3] in its position.

SUBTASK 38-32-18-420-003

- (4) Tighten the clamps [2] for the rinse filter assembly [3].

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SUBTASK 38-32-18-420-004

- (5) Install the rinse hoses [1], [4].

H. Waste Tank Rinse Filter Installation Test

SUBTASK 38-32-18-610-002

- (1) Open the cap on the rinse fitting assembly.

SUBTASK 38-32-18-610-003

- (2) Connect a rinse water hose from the service waste system servicing equipment, STD-1142 to the rinse fitting assembly.

SUBTASK 38-32-18-170-001

- (3) Fill the waste tank with 30 gallons to 50 gallons of water.

SUBTASK 38-32-18-790-001

- (4) Examine the rinse filter and the connections for leakage.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-18-610-004

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-32-18-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-32-18-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-32-18-100-801

4. Waste Tank Rinse Filter Element Cleaning

(Figure 201)

A. References

<u>Reference</u>	<u>Title</u>
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. Tools/Equipment

<u>Reference</u>	<u>Description</u>
STD-419	Gloves - Rubber, Elbow Length
STD-1136	Facepiece (Mask) - Particulate Filtering, Disposable (NIOSH N95 approved)
STD-1137	Glasses - Safety

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C. Consumable Materials

Reference	Description	Specification
B00541	Cleaner - General Purpose Household Detergent	
B50099	Detergent - Concentrated, Anionic	
D00504	Grease - Petrolatum	VV-P-236
G02315	Clothing - Disposable Gown, Gloves For Sewage Handling	
G50321	Air - Clean, Dry	BAC5402 Table I

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Element	38-32-18-01-110	ARO ALL
10	Packing	38-32-18-01-100	ARO ALL
12	Packing	38-32-18-01-113	ARO ALL

E. Waste Tank Rinse Filter Element Cleaning

SUBTASK 38-32-18-160-001

- (1) Prepare for the Task:

Make sure you use the protective clothing (Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801)

NOTE: These are items that you can wear to give you protection when it is necessary.

- (a) Elbow length elbow length rubber gloves, STD-419
- (b) Face filtering facepiece, STD-1136
- (c) Safety safety glasses, STD-1137
- (d) Disposable clothing, G02315

SUBTASK 38-32-18-020-004

- (2) Do this task: Waste Tank Rinse Filter Removal, TASK 38-32-18-000-801.

SUBTASK 38-32-18-010-004

- (3) Remove the inlet connector [11] and the packing [10] from the filter housing [7].
- (a) Discard the packing [10].

SUBTASK 38-32-18-020-005

- (4) Remove the filter element [8], packing [12] and the spring [9] from the filter housing [7].
- (a) Discard the packing [12].

SUBTASK 38-32-18-110-001

- (5) Clean the filter element [8] using Cleaning Method I.
- (a) Soak the filter element [8] in a weak detergent solution. Use the general purpose household detergent cleaner, B00541, or a liquid dishwashing detergent. Mix four fluid ounces (118 CC) detergent per one gallon (4 Liters) warm water.
 - (b) Brush each pleat of the filter element [8] with a soft bristle brush.
 - (c) Reverse flow flush with warm tap water.
 - (d) Blow dry with low pressure air.
 - (e) Make sure that the filter element [8] is in a serviceable condition.

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SUBTASK 38-32-18-130-002

- (6) Clean the filter element [8] using the alternate (ultrasonic) Cleaning Method II.
- (a) Flush the filter element with a reverse flow of warm water (the opposite direction of normal fluid flow).
Remove as much contamination off the outside of the filter element as possible
 - (b) Ultrasonic clean the filter element for 15 minutes in the anionic detergent cleaning solution. Use a solution of 1 fl-oz (30 cc) concentrated, anionic detergent, B50099 per 1 gal (3.8 l) warm water.
 - (c) Flush the filter element with a reverse flow of hot water.
 - (d) Remove the entrapped water from the filter element with a reverse flow of clean dry air, G50321.
 - (e) Dry the filter element in an oven at 250°F (121°C) for 1/2 hour, or air dry the filter element until moisture is not detectable.
 - (f) Make sure that the filter element [8] is in a serviceable condition.

SUBTASK 38-32-18-960-001

- (7) If the contamination is not removed, or if the filter element is damaged, use a new filter element [8].

SUBTASK 38-32-18-420-005

- (8) Put the filter element [8], new packing [12] and the spring [9] in the filter housing [7].

SUBTASK 38-32-18-640-002

- (9) Apply the grease, D00504 to the new packing [10] and the threads of the connector [11].

SUBTASK 38-32-18-420-006

- (10) Install the inlet connector [11], packing [10] and filter housing [7].

SUBTASK 38-32-18-420-007

- (11) Do this task: Waste Tank Rinse Filter Installation, TASK 38-32-18-400-801.

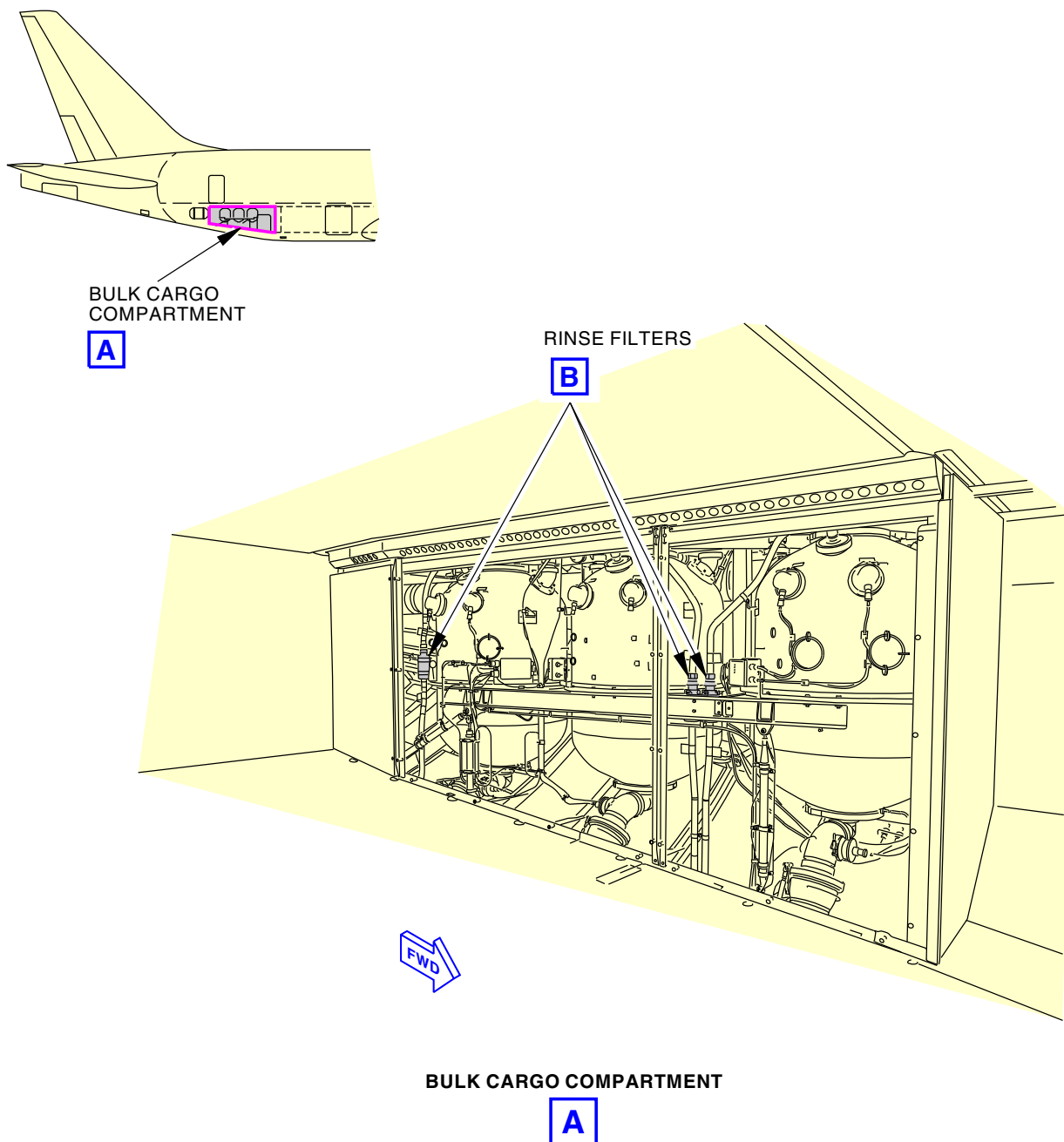
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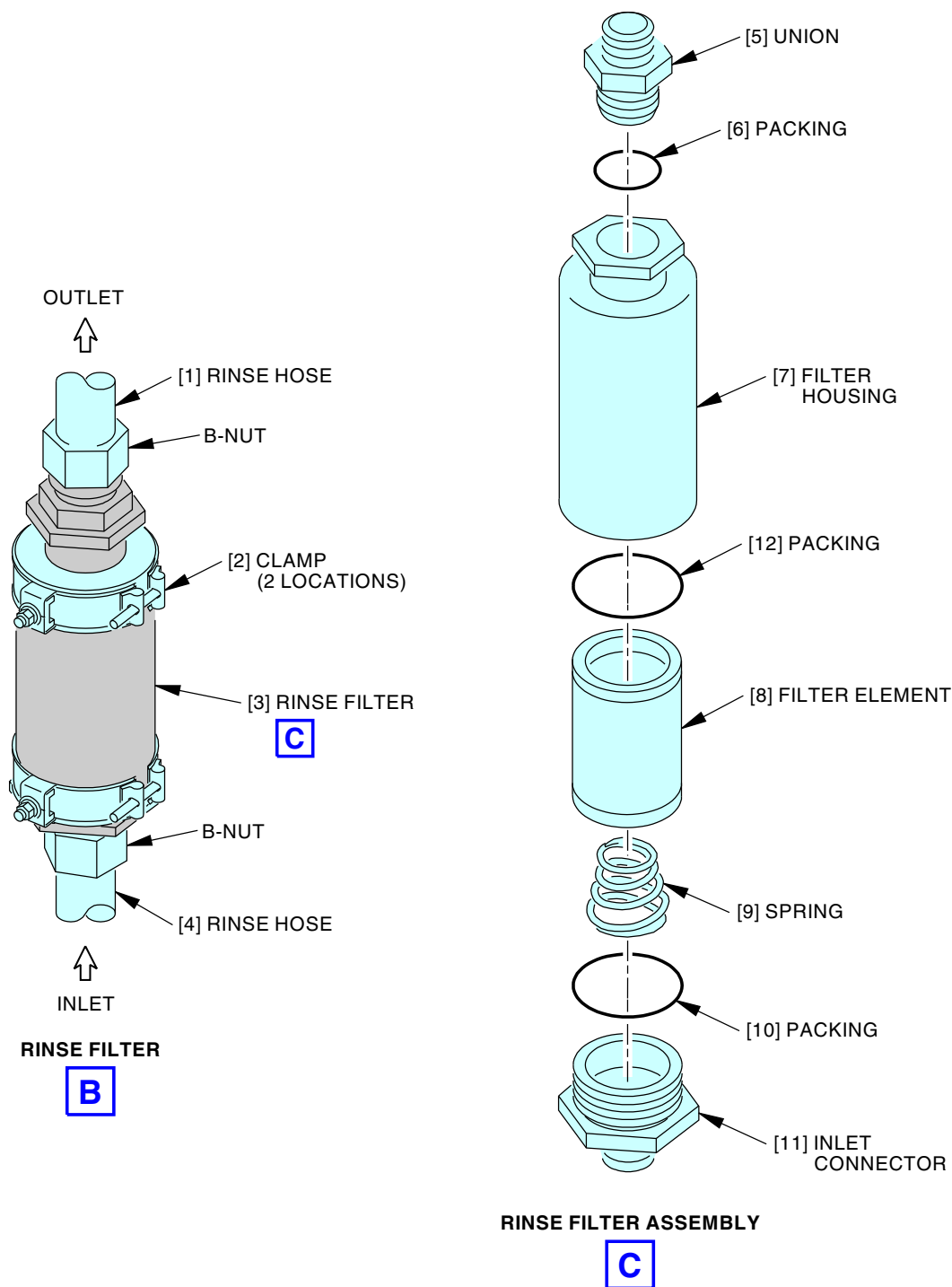
Waste Tank Rinse Filter Installation
Figure 201/38-32-18-990-802 (Sheet 1 of 2)

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**Waste Tank Rinse Filter Installation
Figure 201/38-32-18-990-802 (Sheet 2 of 2)**

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VACUUM BLOWER BAROMETRIC SWITCH - REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:
- (1) A removal of the vacuum blower barometric switch.
 - (2) An installation of the vacuum blower barometric switch.
- B. The Vacuum Blower Barometric Switch is referred to as the Altitude Switch in this procedure.

TASK 38-32-51-000-801

2. Vacuum Blower Barometric Switch Removal

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
06-42-00-800-801	Finding an Access Door or Panel in the Empennage (P/B 201)

B. Location Zones

<u>Zone</u>	<u>Area</u>
312	Area Aft of Bulkhead, Right

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
311BL	Service Access Door

D. Prepare for the Removal

SUBTASK 38-32-51-010-001

- (1) Get access to the forward stabilizer compartment (TASK 06-42-00-800-801).

SUBTASK 38-32-51-010-002

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Service Access Door

for the forward stabilizer.

SUBTASK 38-32-51-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	7	C38612	FL CTRL LAV SYS 3 FLT

E. Altitude Switch Removal

SUBTASK 38-32-51-020-001

- (1) Disconnect the DS38005 (DS38006) electrical connector [1] from the altitude switch [2].

SUBTASK 38-32-51-020-002

- (2) Remove the bolts [3], nuts [5] and washers [4] to remove the altitude switch [2].

————— END OF TASK —————

TASK 38-32-51-400-801

3. Vacuum Blower Barometric Switch Installation

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
06-42-00-800-801	Finding an Access Door or Panel in the Empennage (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Expendables/Parts

<u>AMM Item</u>	<u>Description</u>	<u>AIPC Reference</u>	<u>AIPC Effectivity</u>
2	Switch	38-32-51-01-015	ARO ALL

C. Location Zones

<u>Zone</u>	<u>Area</u>
312	Area Aft of Bulkhead, Right

D. Access Panels

<u>Number</u>	<u>Name/Location</u>
311BL	Service Access Door

E. Altitude Switch Installation

SUBTASK 38-32-51-420-001

- (1) Put the altitude switch [2] in its position.

SUBTASK 38-32-51-420-002

- (2) Install the bolts [3], nuts [5] and washers [4].

SUBTASK 38-32-51-420-003

- (3) Connect the DS38005 (DS38006) electrical connector [1] to the altitude switch [2].

F. Altitude Switch Installation Test

SUBTASK 38-32-51-860-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-32-51-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-32-51-710-001

- (3) Flush a toilet connected to the applicable waste system to make sure the vacuum blower operates.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-32-51-010-003

- (1) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Service Access Door

for the forward stabilizer.

SUBTASK 38-32-51-410-001

- (2) Close the access to the forward stabilizer compartment (TASK 06-42-00-800-801).

————— **END OF TASK** —————

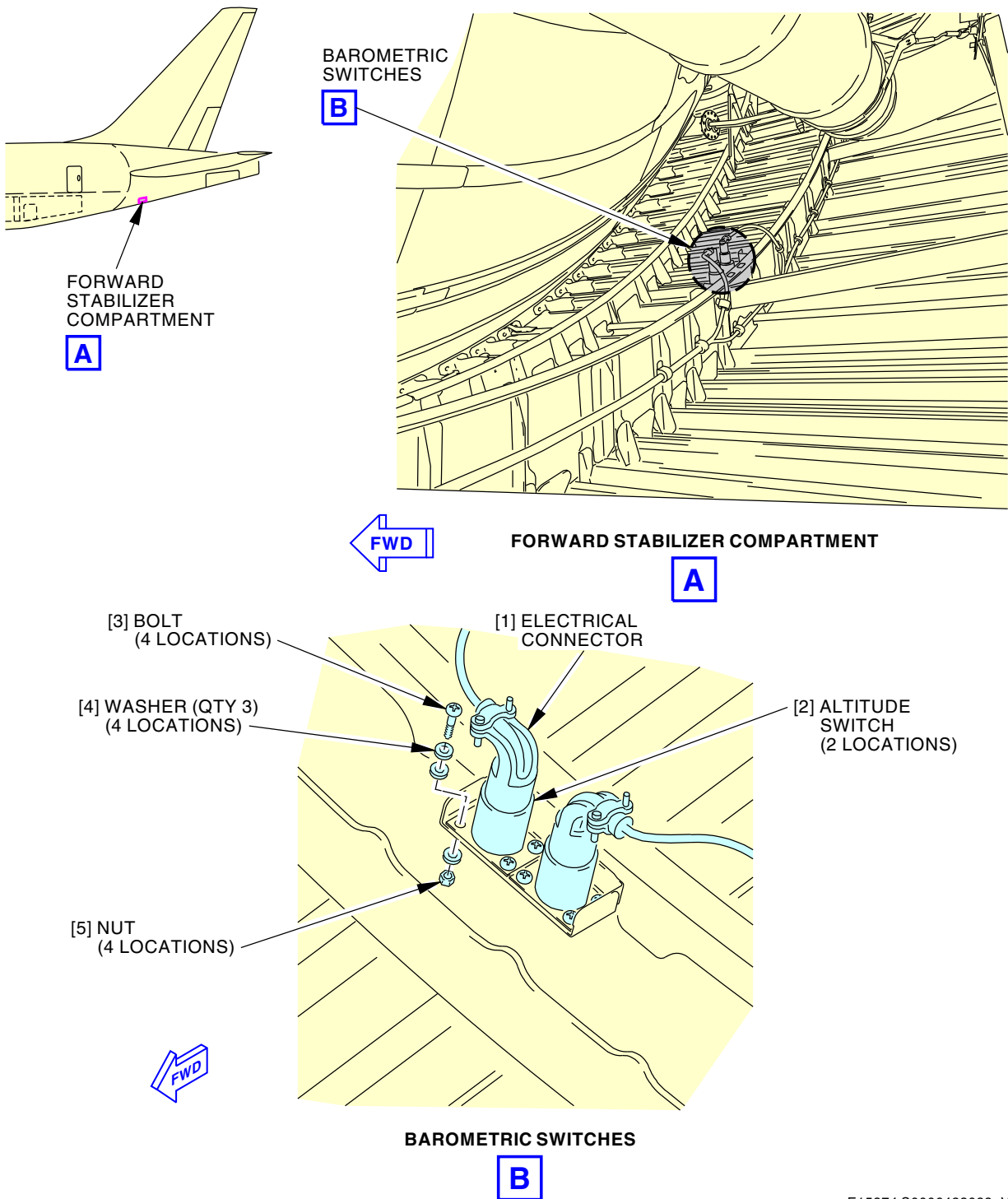
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**Vacuum Blower Barometric Switch Installation
Figure 401/38-32-51-990-801**

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WASTE TANK QUANTITY INDICATION - ADJUSTMENT/TEST

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) A LCM BITE Operational Test of the quantity indication system for the waste tanks.
 - (2) An Auto Zero Adjustment of the continuous level sensor (CLS) for the waste tanks.
 - (a) Use the Auto Zero procedure to calibrate the continuous level sensor (CLS). The CLS measures the quantity of waste in the waste tank. When you replace the CLS, you must do the Auto Zero Adjustment. You must also do the Auto Zero Adjustment when you move the CLS diaphragm, the CLS sensor, or the waste tank. The procedure will calibrate the CLS with the LCM to give a more accurate value for the waste quantity indicator.
 - (3) An operational test of the waste quantity indication at the CMS.

TASK 38-33-00-740-801

2. LCM BITE Operational Test

NOTE: This procedure is a scheduled maintenance task.

A. **References**

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

C. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

D. **Prepare for the test:**

SUBTASK 38-33-00-860-001

- (1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-33-00-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-33-00-010-001

- (3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-00-010-002

- (4) To get access to the waste tanks, do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

E. LCM BITE Operational Test

SUBTASK 38-33-00-860-003



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Make sure the POWER ON (green) light for the LCM is on.
(a) Make sure the J1, J2, J3, and TANK FULL (red) lights are off.

SUBTASK 38-33-00-760-001

- (2) Move and then hold the switch to the TEST SENSOR position.

SUBTASK 38-33-00-740-001

- (3) Make sure the POWER ON (green), J1, J2, J3, and TANK FULL (red) lights are on for approximately 3 seconds.

NOTE: The lights on the LCM can flash irregularly. If you find a system error, the TANK FULL light will flash at 8 Hz, then go off. You will see this cycle again after 1.6 seconds until you correct the problem.

SUBTASK 38-33-00-760-002

- (4) Release the switch from the TEST SENSOR position.

SUBTASK 38-33-00-740-002

- (5) Make sure the J1, J2, J3, and TANK FULL (red) lights are off.

SUBTASK 38-33-00-740-003

- (6) Do the LCM BITE Operational Test again for the other waste tanks in the vacuum waste system.

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F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-00-410-001



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-00-410-002

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

TASK 38-33-00-710-801

3. Auto Zero - Adjustment

A. References

<u>Reference</u>	<u>Title</u>
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)

B. Location Zones

<u>Zone</u>	<u>Area</u>
161	Bulk Cargo Compartment, Left

C. Access Panels

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

D. Prepare for the test:

SUBTASK 38-33-00-610-001

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and then flush the waste tanks.

SUBTASK 38-33-00-860-005

- (2) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-33-00-860-006

- (3) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-33-00-010-003

- (4) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-00-010-004

- (5) To get access to the waste tanks, do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

E. Auto Zero Adjustment

SUBTASK 38-33-00-860-007



MAKE SURE YOU DRAIN THE WASTE TANK FULLY BEFORE THE AUTO ZERO ADJUSTMENT. IF YOU DO NOT DRAIN THE WASTE TANK FULLY, AN ERROR IN THE QUANTITY INDICATOR CAN OCCUR.



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Make sure the waste tanks are fully drained.

SUBTASK 38-33-00-860-008

- (2) On the LCM, make sure the lights are as follows:
- (a) Make sure the POWER ON (green) light is on.
 - (b) Make sure the J1 and J2 (red) lights are off.
 - (c) Make sure the J3 and TANK FULL (red) lights are off or flash.

SUBTASK 38-33-00-760-003

- (3) Move and then hold the switch to the TEST LAMPS position.
- (a) Make sure the POWER ON (green), the J1 and J2, and the J3 and TANK FULL (red) lights are on.

SUBTASK 38-33-00-760-004

- (4) Release the switch from the TEST LAMPS position.
- (a) Make sure the J1, J2, J3, and TANK FULL (red) lights are off.

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SUBTASK 38-33-00-020-001

- (5) Disconnect the electrical connectors from the SENSOR J1 and SENSOR J2 positions on the LCM.
 - (a) After 30 seconds, make sure the J1, J2, and TANK FULL (red) lights are on.

SUBTASK 38-33-00-710-001

- (6) Move and then hold the switch to the TEST LAMPS position.
 - (a) After 10 seconds, make sure the J1, J2, J3, and TANK FULL (red) lights are off for 3 seconds.
 - (b) Make sure the POWER ON (green) light is on.

SUBTASK 38-33-00-760-005

- (7) Release the switch from the TEST LAMPS position.
 - (a) Make sure the POWER ON (green), J1, J2, and TANK FULL (red) lights are on.

SUBTASK 38-33-00-420-001

- (8) Connect the electrical connector for the SENSOR J1 to the LCM.
 - (a) Make sure the J1 and TANK FULL (red) lights are off.
 - (b) Make sure the POWER ON (green) and J2 (red) lights are on.

SUBTASK 38-33-00-420-002

- (9) Connect the electrical connector for the SENSOR J2 to the LCM.
 - (a) Make sure the J1, J2, J3, and TANK FULL (red) lights are off.
 - (b) Make sure the POWER ON (green) light is on.

SUBTASK 38-33-00-710-002

- (10) Do the Auto Zero Adjustment again for the other waste tanks in the vacuum waste system.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-00-410-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-00-410-004

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-00-610-002

- (3) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

————— **END OF TASK** —————

TASK 38-33-00-710-802

4. CMS Waste Tank Quantity Indication - Operational Test

NOTE: This procedure is a scheduled maintenance task.

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A. References

Reference	Title
06-46-00-800-801	Finding an Access Door or Panel in the Cargo Compartment Doors or Passenger Compartment Doors (P/B 201)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the test:

SUBTASK 38-33-00-610-003

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks. Do not disconnect the rinse water connection from the rinse fitting assembly. Do not disconnect the waste connection from the waste drain valve assembly.

SUBTASK 38-33-00-860-010

- (2) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT
Z	1	C38306	VAC BLO LAV SYS 1

Right Power Management Panel, P210

Row	Col	Number	Name
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT
Z	1	C38307	VAC BLO LAV SYS 2 & 3

SUBTASK 38-33-00-860-011

- (3) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-33-00-010-005

- (4) Get access to the passenger compartment (TASK 06-46-00-800-801).

D. CMS Waste Tank Quantity Indication - Operational Test

SUBTASK 38-33-00-860-012

- (1) Make sure the waste drain ball valve is closed.

SUBTASK 38-33-00-710-003

- (2) Read the waste tank quantity from the Lavatory/Waste Tank Status on the CMS screen.
(a) Make sure the CMS indicator reads E.

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SUBTASK 38-33-00-710-007

- (3) Perform an ALL TEST test.
 - (a) If the CMS shows a SENSOR FAILED message perform the specified procedure in the Fault Isolation Manual.

SUBTASK 38-33-00-710-006

- (4) Do the CMS Waste Tank Quantity Indication - Operational Test again for the other waste tanks in the vacuum waste system.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-00-410-005

- (1) Close the access to the passenger compartment (TASK 06-46-00-800-801).

SUBTASK 38-33-00-610-006

- (2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

————— **END OF TASK** —————

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WASTE TANK POINT LEVEL SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the point level sensor for the waste tank.
- (2) An installation of the point level sensor for the waste tank.

TASK 38-33-01-000-801

2. Waste Tank Point Level Sensor Removal

(Figure 401)

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

C. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

D. **Prepare for the Removal**

SUBTASK 38-33-01-610-001

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-33-01-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-01-010-002

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-33-01-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-01-910-001

- (5) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

E. Point Level Sensor Removal

SUBTASK 38-33-01-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Disconnect the electrical connector [4] from the point level sensor assembly [2].

SUBTASK 38-33-01-020-002

- (2) Remove the V-band clamp [3].

SUBTASK 38-33-01-020-003

- (3) Remove the point level sensor assembly [2] and the gask-O- seal [1] from the mounting flange of the waste tank.
- (a) Discard the gasket.

SUBTASK 38-33-01-020-004

- (4) Remove the packing [5] from the point level sensor assembly [2].
- (a) Discard the packing [5].

SUBTASK 38-33-01-160-001

- (5) Clean all the waste material from the hole in the waste tank for the point level sensor.

————— END OF TASK —————

TASK 38-33-01-400-801

3. Waste Tank Point Level Sensor Installation

(Figure 401)

A. References

<u>Reference</u>	<u>Title</u>
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-33-00-740-801	LCM BITE Operational Test (P/B 501)

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B. Consumable Materials

Reference	Description	Specification
D00128	Grease - Silicone	A-A-59173
D00189	Compound - Molykote 111 (Formerly Dow Corning 111, Valve Sealant and Lubricant)	

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Seal	38-33-01-01-025	ARO ALL
2	Sensor assembly	38-33-01-01-015	ARO ALL
5	Packing	38-33-01-01-020	ARO ALL

D. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left
825	Bulk Cargo Door

E. Access Panels

Number	Name/Location
825	Bulk Cargo Door

F. Point Level Sensor Installation

SUBTASK 38-33-01-640-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Apply grease, D00128 or Molykote 111 Compound, D00189, to the gask-O- seal [1], packing [5], and the mounting flange of the waste tank.

SUBTASK 38-33-01-420-005

- (2) Install the packing [5] on the point level sensor assembly [2].

SUBTASK 38-33-01-420-001

- (3) Install the gask-O- seal [1] on the mounting flange of the waste tank.

SUBTASK 38-33-01-420-002

- (4) Install the point level sensor assembly [2] and V-band clamp [3].

SUBTASK 38-33-01-420-003

- (5) Tighten the V-band clamp [3] to 40-50 pound-inches.

SUBTASK 38-33-01-420-004

- (6) Connect the electrical connector [4] to the point level sensor assembly [2].

G. Point Level Sensor Installation Test

SUBTASK 38-33-01-860-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-01-860-003

- (2) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.

SUBTASK 38-33-01-760-001

- (3) Make sure the Power On light on the LCM is on.

SUBTASK 38-33-01-740-001

- (4) Set and then hold the switch on the LCM to Test Sensors.

SUBTASK 38-33-01-740-002

- (5) Make sure the J1 Sensor, J2 Sensor, J3 Sensor, Tank Full and Power On lights come on.

SUBTASK 38-33-01-740-003

- (6) Release the switch on the LCM.

SUBTASK 38-33-01-740-004

- (7) Make sure the J1 Sensor, J2 Sensor, J3 Sensor, and Tank Full lights are off.

- (a) If the J1 Sensor light or J2 Sensor light is on, do this task: LCM BITE Operational Test, TASK 38-33-00-740-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-01-610-002

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-33-01-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-01-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

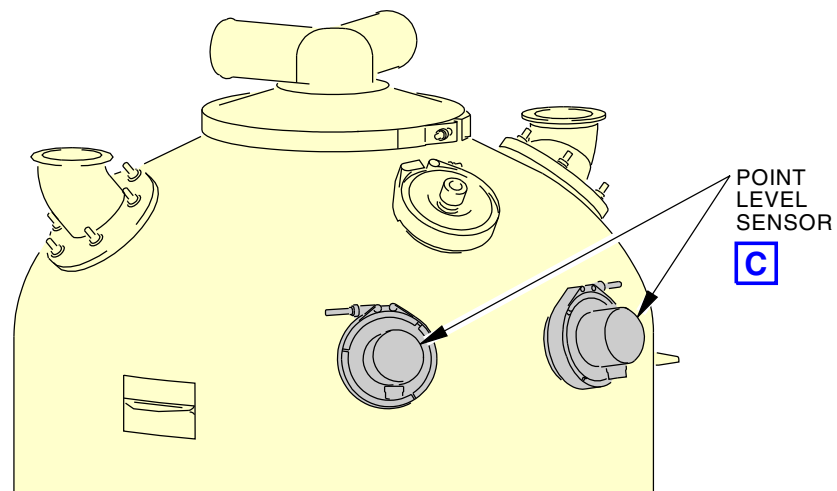
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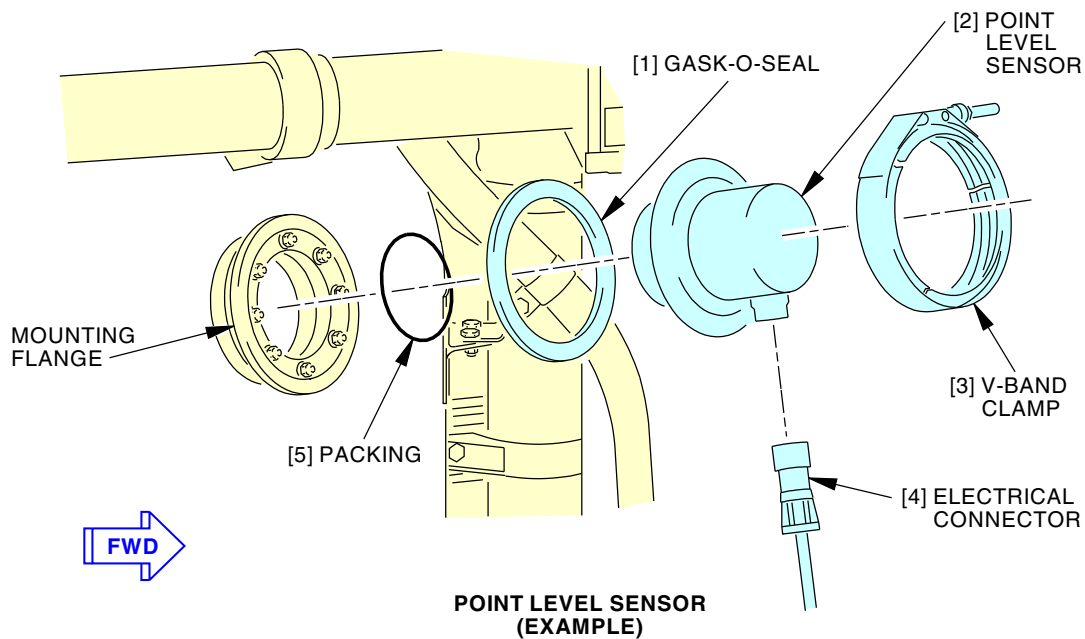
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**WASTE TANK
(EXAMPLE)**

B



**POINT LEVEL SENSOR
(EXAMPLE)**

C

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**Waste Tank Point Level Sensor Installation
Figure 401/38-33-01-990-801**

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WASTE TANK POINT LEVEL SENSOR - CLEANING/PAINTING

1. General

A. This procedure has this task:

- (1) A cleaning of the point level sensor for the waste tank.

TASK 38-33-01-100-801

2. Waste Tank Point Level Sensor Cleaning

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-33-01-000-801	Waste Tank Point Level Sensor Removal (P/B 401)
38-33-01-400-801	Waste Tank Point Level Sensor Installation (P/B 401)

B. **Tools/Equipment**

Reference	Description
STD-123	Brush - Soft Bristle

C. **Consumable Materials**

Reference	Description	Specification
G00016	Acid, Hydrochloric	MIL-H-13528

D. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

E. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

F. **Prepare for the Removal**

SUBTASK 38-33-01-610-003

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-33-01-010-004

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-01-010-005

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

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SUBTASK 38-33-01-040-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-01-910-002

- (5) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

G. Point Level Sensor Cleaning

SUBTASK 38-33-01-020-005

- (1) Do this task: Waste Tank Point Level Sensor Removal, TASK 38-33-01-000-801.

SUBTASK 38-33-01-140-001

- (2) Use a rag to clean the loose material from the face of the point level sensor.

SUBTASK 38-33-01-140-002



USE EXTREME CARE TO AVOID DAMAGE TO THE FACE OF THE POINT LEVEL SENSOR. SCRATCHES OR DAMAGE CAN CAUSE A FAILURE OF THE POINT LEVEL SENSOR.

- (3) Use a soft bristle soft bristle brush, STD-123 and soap to clean the face of the point level sensor.

SUBTASK 38-33-01-140-004

- (4) If necessary, use hydrochloric acid, G00016 to clean the face of the point level sensor.

NOTE: A neutral or alkali cleaning solution will not be effective in cleaning the material build-up on the sensor assembly after it has dried. Use an acidic-based solution to remove material deposit.

- (a) Apply the hydrochloric acid, G00016 with a brush to the face of the point level sensor.
- (b) Keep the hydrochloric acid, G00016 on the face of the point level sensor.
- (c) Rinse with water.

SUBTASK 38-33-01-140-003

- (5) Dry the point level sensor.

SUBTASK 38-33-01-160-002

- (6) Clean all the waste material from the hole in the waste tank for the point level sensor.

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SUBTASK 38-33-01-020-006

(7) Do this task: Waste Tank Point Level Sensor Installation, TASK 38-33-01-400-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-01-440-001

(1) Make sure that these circuit breakers are closed:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-01-610-004

(2) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-33-01-010-006



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

(3) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-01-410-002

(4) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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WASTE TANK CONTINUOUS LEVEL SENSOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

- (1) A removal of the continuous level sensor for the waste tank.
- (2) An installation of the continuous level sensor for the waste tank.

TASK 38-33-02-000-801

2. Waste Tank Continuous Level Sensor Removal

(Figure 401)

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)

B. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

C. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

D. **Prepare for the Removal**

SUBTASK 38-33-02-610-001

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-33-02-010-001

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-02-010-002

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-33-02-040-001

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

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Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-02-910-001

- (5) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

E. Continuous Level Sensor Removal

SUBTASK 38-33-02-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Disconnect the electrical connector [8] from the continuous level sensor [7].

SUBTASK 38-33-02-020-002

- (2) Remove the clamp [6] and clamp [11] below the waste tank attached with screw [13], nut [4] and washer [5] to disconnect the capillary tube.

SUBTASK 38-33-02-020-003

- (3) Remove the clamp [6] and clamp [12] adjacent to the waste tank, with screw [3], nut [4] and washer [5] to disconnect the capillary tube.

SUBTASK 38-33-02-020-004

- (4) Remove the V-band clamp [9].

SUBTASK 38-33-02-020-005



DO NOT BEND THE CAPILLARY TUBE OF THE CONTINUOUS LEVEL SENSOR TO LESS THAN A 3-INCH RADIUS. SHARP BENDS CAN CAUSE DAMAGE TO THE CAPILLARY TUBE.

- (5) Remove the continuous level sensor [7] and the gask-O- seal [10] from the waste line.
(a) Discard the gask-O- seal [10].

SUBTASK 38-33-02-020-006

- (6) Remove the clamp [2].

SUBTASK 38-33-02-020-007

- (7) Remove the diaphragm half of the continuous level sensor [7] and the gask-O- seal [1].
(a) Discard the gask-O- seal [1].

SUBTASK 38-33-02-160-001

- (8) Clean all the waste material from the holes in the waste lines and waste tank for the continuous level sensor [7].

————— END OF TASK —————

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TASK 38-33-02-400-801

3. Waste Tank Continuous Level Sensor Installation

(Figure 401)

A. References

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-33-00-710-801	Auto Zero - Adjustment (P/B 501)

B. Tools/Equipment

Reference	Description
STD-1142	Equipment - Waste System Servicing

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Seal	38-33-02-06A-090	ARO ALL
7	Sensor	38-33-02-06A-100	ARO ALL
10	Seal	38-33-02-06A-095	ARO ALL

D. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

E. Access Panels

Number	Name/Location
163AL	Waste Tank Service Door
825	Bulk Cargo Door

F. Continuous Level Sensor Installation

SUBTASK 38-33-02-420-001



DO NOT BEND THE CAPILLARY TUBE OF THE CONTINUOUS LEVEL SENSOR TO LESS THAN A 3-INCH RADIUS. SHARP BENDS CAN CAUSE DAMAGE TO THE CAPILLARY TUBE.



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Install the diaphragm half of the continuous level sensor [7], clamp [2] and gask-O- seal [1].

SUBTASK 38-33-02-420-002

- (2) Tighten the clamp [2] to 40 pound-inches.

SUBTASK 38-33-02-420-003

- (3) Install the V-band clamp [9] and gask-O- seal [10] to connect the continuous level sensor [7] in the waste line.

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SUBTASK 38-33-02-420-004

- (4) Tighten the V-band clamp [9] to 45 pound-inches.

SUBTASK 38-33-02-420-005

- (5) Install the clamp [6], clamp [11], screw [13], nut [4] and washer [5] for the capillary tube below the waste tank.

SUBTASK 38-33-02-420-006

- (6) Install the clamp [6], clamp [12], screw [3], nut [4] and washer [5] to connect the capillary tube adjacent to the waste tank.

SUBTASK 38-33-02-420-007

- (7) Connect the electrical connector [8] to the continuous level sensor [7].

SUBTASK 38-33-02-790-001

- (8) Make sure the sensor module does not have a leak.

G. Continuous Level Sensor Installation Test

SUBTASK 38-33-02-860-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-02-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-33-02-790-003

- (3) To do a leak check of the of the continuous level sensor connection, do these steps:
- Open this access panel:

<u>Number</u>	<u>Name/Location</u>
163AL	Waste Tank Service Door
 - At the service panel, make sure that the control handles for the drain ball valves are in the closed position.
 - Make sure that the cap for the waste drain fitting outlet is closed.
 - Connect the water hose from the waste system servicing equipment, STD-1142, to the applicable rinse fitting on the service panel.
 - Use the pump on the service cart to put about 80 gal (303 l) of water into the waste tank.

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- (f) Make sure that the pressure sensor connection does not have a leak.

NOTE: You must wait for not less than 30 minutes after you put the water in the tanks before you do this step.

SUBTASK 38-33-02-760-001

- (4) Do this task: Auto Zero - Adjustment, TASK 38-33-00-710-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-02-610-002

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

SUBTASK 38-33-02-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-02-410-001

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— **END OF TASK** —————

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ARO ALL

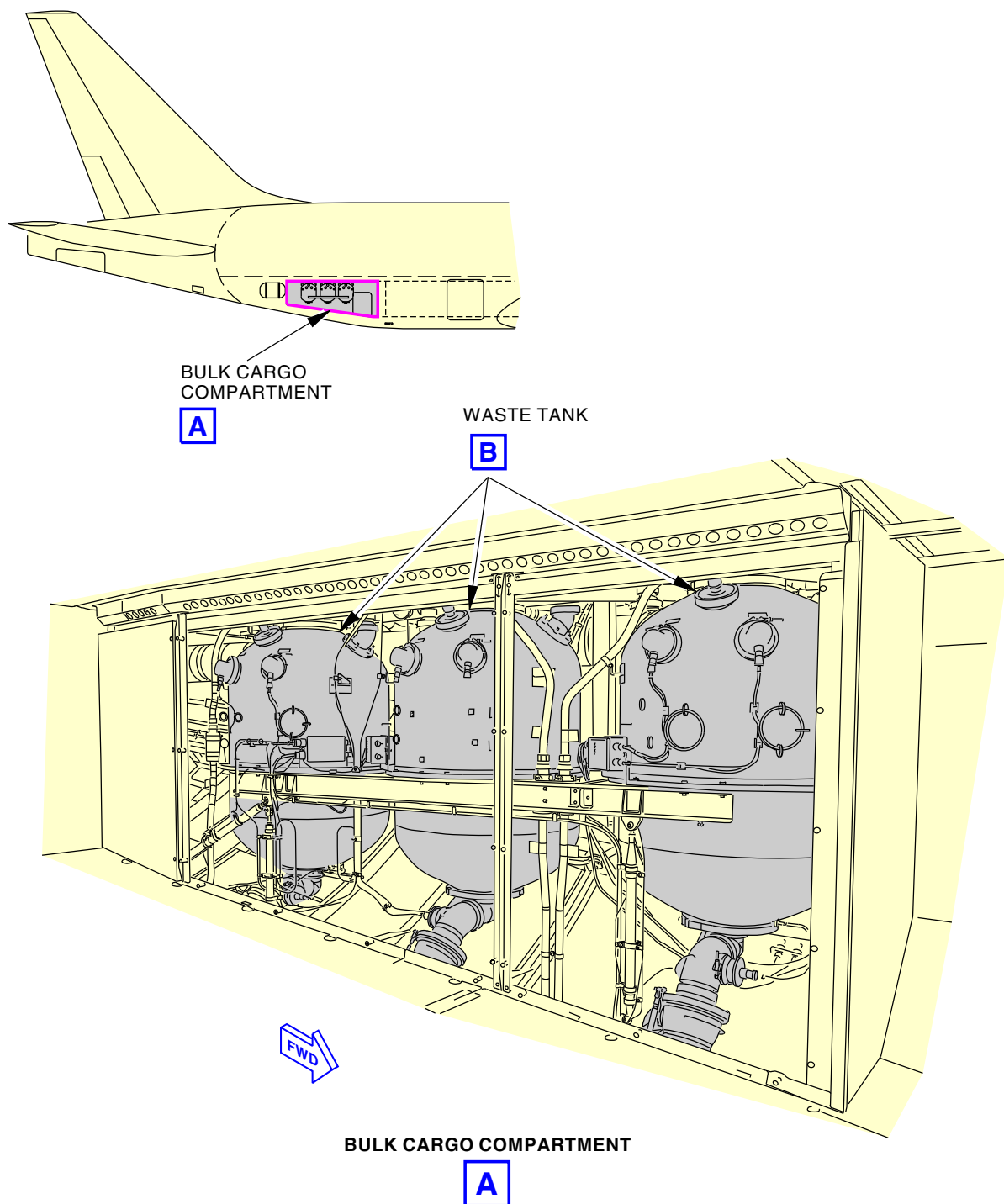
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Waste Tank Continuous Level Sensor Installation
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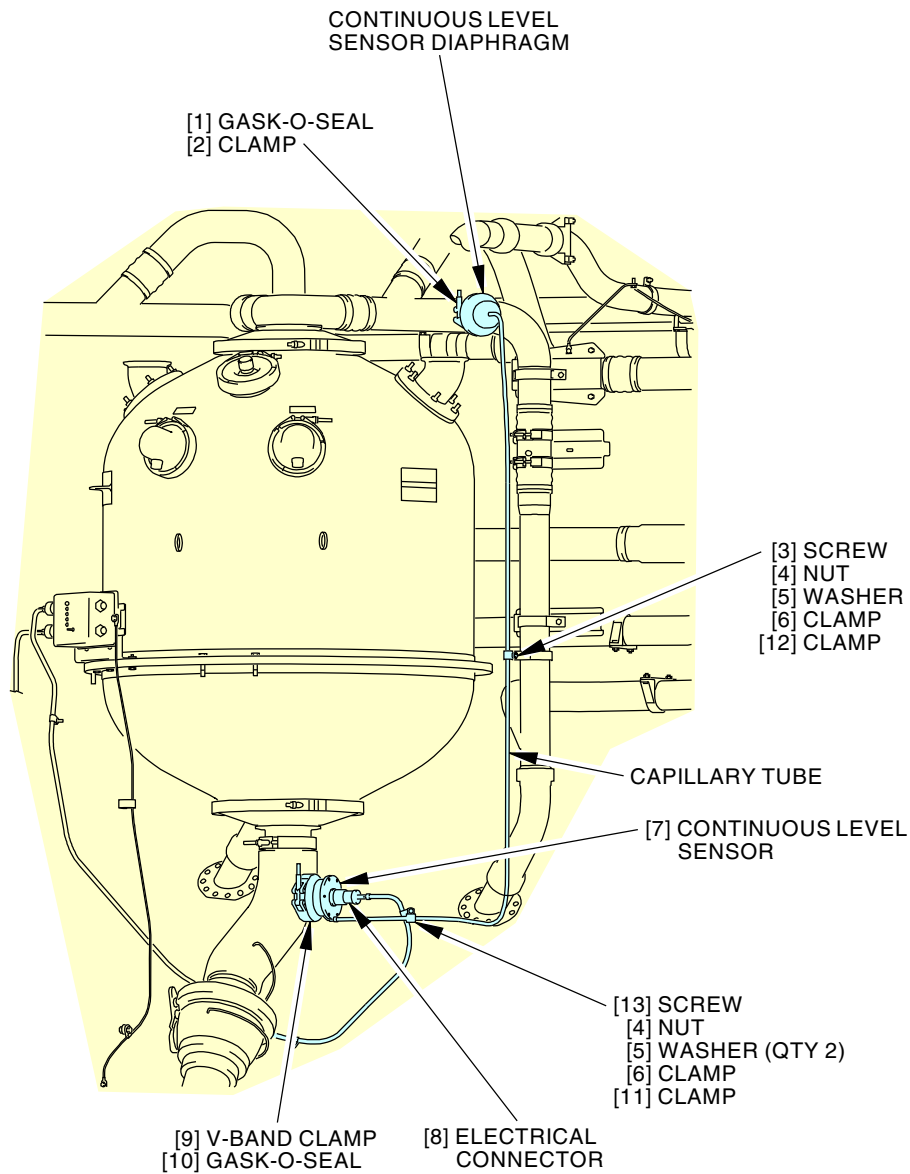
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WASTE TANK
(EXAMPLE)

B

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Waste Tank Continuous Level Sensor Installation
Figure 401/38-33-02-990-801 (Sheet 2 of 2)

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WASTE TANK CONTINUOUS LEVEL SENSOR - CLEANING/PAINTING

1. General

A. This procedure has this task:

- (1) A cleaning of the continuous level sensor for the waste tank.

TASK 38-33-02-100-801

2. Waste Tank Continuous Level Sensor Cleaning

A. **References**

Reference	Title
12-17-01-610-801	Waste Tank Servicing (P/B 301)
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-32-00-910-801	Standard Practices for Work with the Toilet Waste and Equipment (P/B 201)
38-33-02-000-801	Waste Tank Continuous Level Sensor Removal (P/B 401)
38-33-02-400-801	Waste Tank Continuous Level Sensor Installation (P/B 401)

B. **Tools/Equipment**

Reference	Description
STD-123	Brush - Soft Bristle

C. **Location Zones**

Zone	Area
161	Bulk Cargo Compartment, Left

D. **Access Panels**

Number	Name/Location
825	Bulk Cargo Door

E. **Prepare for the Removal**

SUBTASK 38-33-02-610-003

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

NOTE: Do not add the chemical precharge after you do the task to drain and flush the waste tanks.

SUBTASK 38-33-02-010-004

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-02-010-005

- (3) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-33-02-040-002

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

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND

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(Continued)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-02-910-002

- (5) Do this task: Standard Practices for Work with the Toilet Waste and Equipment, TASK 38-32-00-910-801.

F. Continuous Level Sensor Cleaning

SUBTASK 38-33-02-020-008

- (1) Do this task: Waste Tank Continuous Level Sensor Removal, TASK 38-33-02-000-801.

SUBTASK 38-33-02-140-001

- (2) Use a rag to clean the loose material from the face of the continuous level sensor.

SUBTASK 38-33-02-140-002



USE EXTREME CARE TO AVOID DAMAGE TO THE CONTINUOUS LEVEL SENSOR DIAPHRAGMS (WETTED AREAS OF SENSOR LOCATED INSIDE O-RINGS). THE DIAPHRAGMS ARE VERY THIN (.001 INCH (.025 MM)) AND CAN EASILY BE DAMAGED. DAMAGE CAN CAUSE A FAILURE OF THE CONTINUOUS LEVEL SENSOR.

- (3) Use a soft bristle soft bristle brush, STD-123 and soap to clean the face of the continuous level sensor.

SUBTASK 38-33-02-140-003

- (4) Dry the continuous level sensor.

SUBTASK 38-33-02-160-002

- (5) Clean all the waste material from the hole in the waste tank for the continuous level sensor.

SUBTASK 38-33-02-020-009

- (6) Do this task: Waste Tank Continuous Level Sensor Installation, TASK 38-33-02-400-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-02-610-004

- (1) Do this task: Waste Tank Servicing, TASK 12-17-01-610-801.

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SUBTASK 38-33-02-010-006



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (2) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-02-410-002

- (3) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

SUBTASK 38-33-02-440-001

- (4) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

————— END OF TASK —————

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LOGIC CONTROL MODULE - MAINTENANCE PRACTICES

1. General

- A. This procedure contains scheduled maintenance task data.
- B. This procedure has these tasks:
 - (1) A removal of the logic control module for the waste tank.
 - (2) An installation of the logic control module for the waste tank.
- C. The Logic Control Module is referred to as the LCM in this procedure.
- D. The LCM has four electrical connectors. J1 and J2 are connected to the point level sensors. J3 is connected to the continuous level sensor. J4 is connected to the power and control circuits for the airplane.

TASK 38-33-03-000-801

2. Logic Control Module Removal

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
25-52-20-000-801	Waste Tank Enclosure Panels Removal (P/B 401)

B. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

C. Access Panels

Number	Name/Location
825	Bulk Cargo Door

D. Prepare for the Removal

SUBTASK 38-33-03-010-001

- (1) Open this access panel:

Number	Name/Location
825	Bulk Cargo Door

SUBTASK 38-33-03-010-002

- (2) Do this task: Waste Tank Enclosure Panels Removal, TASK 25-52-20-000-801.

SUBTASK 38-33-03-040-001

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

Ground Service/Handling Power Panel, P320

Row	Col	Number	Name
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

Row	Col	Number	Name
N	17	C38608	FL CTRL LAV SYS 1 FLT

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

NOTE: Although the power-on light will stay dimly lit, the LCM will not operate while the circuit breakers are open.

E. LCM Removal

SUBTASK 38-33-03-020-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Disconnect the J4 electrical connector [7] from the LCM unit assembly [4].

SUBTASK 38-33-03-020-002

- (2) Disconnect the J3 electrical connector [1] from the LCM unit assembly [4].

SUBTASK 38-33-03-020-003

- (3) Remove the J1 and J2 electrical connectors [5], [6] from the LCM unit assembly [4].

SUBTASK 38-33-03-020-004

- (4) Remove the bolts [2] and washers [3] to disconnect the jumper assembly [8] and to remove the LCM unit assembly [4].

————— END OF TASK —————

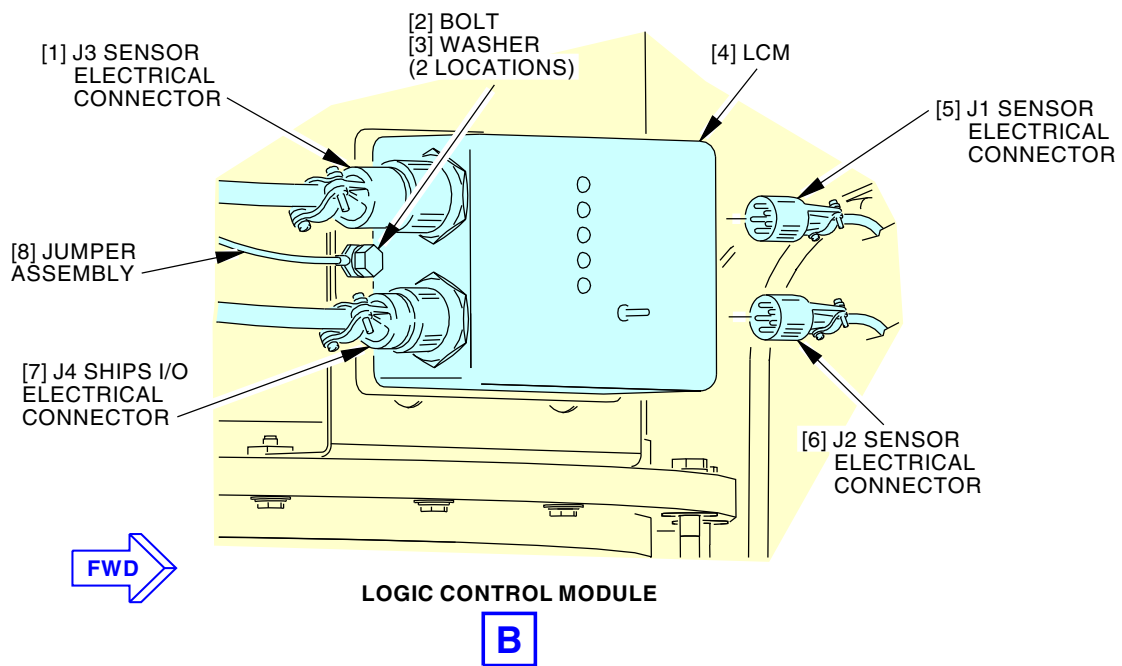
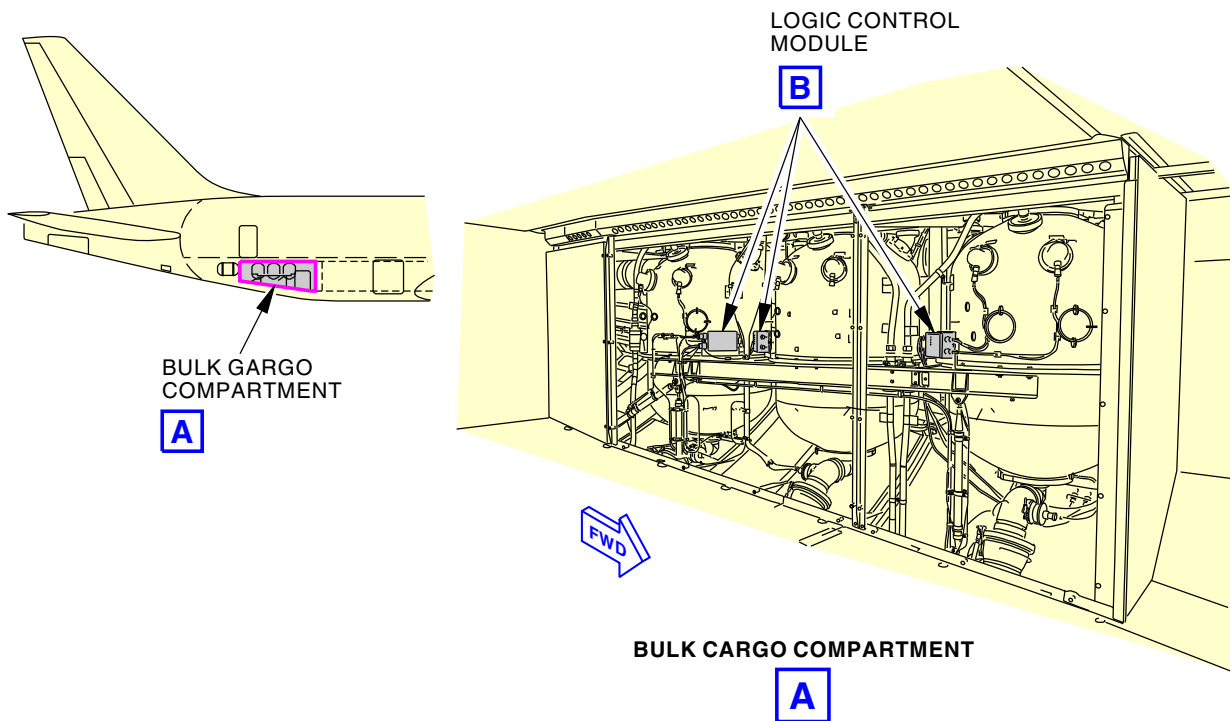
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**Logic Control Module Installation
Figure 201/38-33-03-990-802**

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TASK 38-33-03-400-801

3. Logic Control Module Installation

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
24-22-00-860-805	Supply Electrical Power (P/B 201)
25-52-20-400-801	Waste Tank Enclosure Panels Installation (P/B 401)
38-33-00-710-801	Auto Zero - Adjustment (P/B 501)
38-33-00-740-801	LCM BITE Operational Test (P/B 501)

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Unit assembly	38-33-03-06A-250	ARO ALL

C. Location Zones

Zone	Area
161	Bulk Cargo Compartment, Left

D. Access Panels

Number	Name/Location
825	Bulk Cargo Door

E. LCM Installation

SUBTASK 38-33-03-420-001



USE TOOLS CAREFULLY BECAUSE THE WASTE TANKS ARE A HONEYCOMB CORE WITH A GRAPHITE COMPOSITE SKIN, WHICH IS EASILY DAMAGED. IF YOU HIT THE TANK WITH LOW ENERGY, THIS CAN CAUSE DAMAGE THAT YOU CANNOT SEE BEFORE A TANK FAILS. IF YOU HIT THE WASTE TANK DAMAGE TO THE TANK CAN OCCUR.

- (1) Install the bolts [2] and washers [3] to connect the jumper assembly [8] and install the LCM unit assembly [4].

SUBTASK 38-33-03-420-002

- (2) Connect the J1 and J2 electrical connectors [5], [6] to the LCM unit assembly [4].

NOTE: You can connect the J1 connector to the J2 receptacle or the J2 connector to the J1 receptacle. Make sure you install the J1 and J2 electrical connectors in the correct location on the LCM.

SUBTASK 38-33-03-420-003

- (3) Connect the J3 electrical connector [1] to the LCM unit assembly [4].

SUBTASK 38-33-03-420-004

- (4) Install the J4 electrical connector [7] to the LCM unit assembly [4].

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F. LCM Installation Test

SUBTASK 38-33-03-860-001

- (1) Close these circuit breakers:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C38604	FL CTRL LAV SYS 1 GND
D	10	C38605	FL CTRL LAV SYS 2 GND
D	11	C38606	FL CTRL LAV SYS 3 GND

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	17	C38608	FL CTRL LAV SYS 1 FLT

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
N	6	C38610	FL CTRL LAV SYS 2 FLT
N	7	C38612	FL CTRL LAV SYS 3 FLT

SUBTASK 38-33-03-860-002

- (2) do this task: Supply Electrical Power, TASK 24-22-00-860-805

SUBTASK 38-33-03-760-001

- (3) Do this task: LCM BITE Operational Test, TASK 38-33-00-740-801.

SUBTASK 38-33-03-760-002

- (4) Do this task: Auto Zero - Adjustment, TASK 38-33-00-710-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 38-33-03-010-003



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE FIRE EXTINGUISHING AGENT OR SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

- (1) Do this task: Waste Tank Enclosure Panels Installation, TASK 25-52-20-400-801.

SUBTASK 38-33-03-410-001

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
825	Bulk Cargo Door

————— END OF TASK —————

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