



AIRCRAFT MAINTENANCE MANUAL

HIGHLIGHTS

REVISION NO. 75 Jun 01/15

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY
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CHAPTER 38

L.E.P. 1- 4	Revised to Reflect this revision indicating new, revised, and/or deleted pages	
T. OF C. 2	Revised to reflect this revision	
38-10-00 301- 325, 327- 344	Effectivity updated at the bottom of the page Minor additions and amplification REVISED SERVICING PROCEDURE TASK TITLE TO HAVE A CLEAR INFORMATION ABOUT FLUSHING OF THE POTABLE WATER SYSTEM WITH HOT WATER.	
38-12-00 501	Minor additions and amplification REVISED PROCEDURE TO CORRECT THE TITLE FUNCTIONAL TEST WITH OPERATIONAL TEST.	
38-14-11 401- 403	Minor additions and amplification REVISED PROCEDURE TO ADD STEPS REGARDING REMOVAL/INSTALLATION OF MOUNTING BRACKETS OF THE VALVE. REVISED FIG. "FILL/OVERFLOW AND DRAIN VALVE" TO SHOW ITEM NUMBER FOR MOUNTING BRACKETS.	
38-31-00 601- 605	Effectivity updated at the bottom of the page	



AIRCRAFT MAINTENANCE MANUAL

CHAPTER 38

WATER/WASTE

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively
Remove and insert the affected pages and complete the Record of Revisions and
the Record of Temporary Revisions as necessary

CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE
RECORD				38-10-00	R	325	Jun01/15	38-11-11	02	402	Jun01/13
OF TEMP.				38-10-00		326	Jun01/09	38-11-11	02	403	Jun01/13
REVISION				38-10-00	R	327	Jun01/15	38-11-11	02	404	Jun01/13
				38-10-00	R	328	Jun01/15	38-11-11	02	405	Jun01/13
L.E.P.	R	1- 4	Jun01/15	38-10-00	R	329	Jun01/15	38-11-11	02	406	Jun01/13
T. of C.		1	Jun01/13	38-10-00	R	330	Jun01/15	38-11-11	02	407	Jun01/13
T. of C.	R	2	Jun01/15	38-10-00	R	331	Jun01/15	38-11-11	02	408	Jun01/13
T. of C.		3	Jun01/14	38-10-00	R	332	Jun01/15	38-11-11	02	409	Jun01/13
T. of C.		4	Jun01/14	38-10-00	R	333	Jun01/15				
T. of C.		5	Jun01/14	38-10-00	R	334	Jun01/15	38-12-00		1	Jun01/13
				38-10-00	R	335	Jun01/15	38-12-00		2	Jun01/13
38-00-00		1	Jun01/13	38-10-00	R	336	Jun01/15	38-12-00		3	Jun01/13
38-00-00		2	Jun01/07	38-10-00	R	337	Jun01/15	38-12-00		4	Jun01/13
38-00-00		3	Jun01/13	38-10-00	R	338	Jun01/15	38-12-00		5	Jun01/13
38-00-00		4	Dec01/95	38-10-00	R	339	Jun01/15	38-12-00		6	Jun01/13
				38-10-00	R	340	Jun01/15	38-12-00		7	Jun01/13
38-10-00		1	Jun01/13	38-10-00	R	341	Jun01/15	38-12-00		8	Jun01/13
38-10-00		2	Dec01/95	38-10-00	R	342	Jun01/15	38-12-00		9	Jun01/13
38-10-00	R	301	Jun01/15	38-10-00	R	343	Jun01/15	38-12-00		10	Jun01/13
38-10-00	R	302	Jun01/15	38-10-00	R	344	Jun01/15	38-12-00		11	Jun01/13
38-10-00	R	303	Jun01/15					38-12-00		12	Jun01/13
38-10-00	R	304	Jun01/15	38-11-00		1	Jun01/14	38-12-00		13	Jun01/13
38-10-00	R	305	Jun01/15	38-11-00		2	Jun01/14	38-12-00		14	Jun01/13
38-10-00	R	306	Jun01/15	38-11-00		3	Jun01/14	38-12-00		15	Jun01/13
38-10-00	R	307	Jun01/15	38-11-00		4	Jun01/14	38-12-00		16	Jun01/13
38-10-00	R	308	Jun01/15	38-11-00		5	Jun01/98	38-12-00	R	501	Jun01/15
38-10-00	R	309	Jun01/15	38-11-00		6	Dec01/95	38-12-00		502	Jun01/13
38-10-00	R	310	Jun01/15	38-11-00		7	Dec01/95	38-12-00		503	Jun01/02
38-10-00	R	311	Jun01/15	38-11-11	01	401	Jun01/13	38-12-00		504	Jun01/01
38-10-00	R	312	Jun01/15	38-11-11	01	402	Jun01/07	38-12-11		401	Jun01/05
38-10-00	R	313	Jun01/15	38-11-11	01	403	Jun01/13	38-12-11		402	Dec01/95
38-10-00	R	314	Jun01/15	38-11-11	01	404	Jun01/13	38-12-11		403	Jun01/05
38-10-00	R	315	Jun01/15	38-11-11	01	405	Jun01/13	38-12-11		404	Jun01/05
38-10-00	R	316	Jun01/15	38-11-11	01	406	Jun01/13	38-12-11		405	Jun01/05
38-10-00	R	317	Jun01/15	38-11-11	01	407	Jun01/07	38-12-12		401	Dec01/95
38-10-00	R	318	Jun01/15	38-11-11	01	408	Jun01/07	38-12-12		402	Dec01/95
38-10-00	R	319	Jun01/15	38-11-11	01	409	Jun01/07	38-12-13		401	Dec01/95
38-10-00	R	320	Jun01/15	38-11-11	01	410	Jun01/07	38-12-13		402	Dec01/95
38-10-00	R	321	Jun01/15	38-11-11	01	411	Jun01/07	38-12-13		403	Dec01/95
38-10-00	R	322	Jun01/15	38-11-11	01	412	Jun01/07	38-12-15		301	Mar01/03
38-10-00	R	323	Jun01/15	38-11-11	01	413	Jun01/07	38-12-15		302	Mar01/03
38-10-00	R	324	Jun01/15	38-11-11	02	401	Jun01/13	38-12-15		303	Mar01/03



AIRCRAFT MAINTENANCE MANUAL

CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE
38-12-15		401	Jun01/10	38-14-13		402	Jun01/02	38-31-11	01	406	Jun01/07
38-12-15		402	Dec01/89	38-14-13		403	Jun01/02	38-31-12		401	Jun01/07
38-12-15		403	Dec01/89	38-14-14		401	Jun01/13	38-31-12		402	Jun01/07
38-12-15		404	Jun01/10	38-14-14		402	Jun01/13	38-31-12		403	Jun01/07
38-12-16		401	Jun01/13	38-14-14		403	Jun01/02	38-31-12		404	Jun01/07
38-12-16		402	Jun01/13	38-14-14		404	Jun01/13	38-31-13		401	Jun01/07
38-12-16		403	Jun01/02					38-31-13		402	Jun01/07
38-12-16		404	Jun01/13	38-30-00		1	Jun01/13	38-31-13		403	Jun01/07
38-12-21		401	Jun01/10	38-30-00		2	Jun01/07	38-31-14		401	Jun01/07
38-12-21		402	Dec01/95	38-30-00		3	Jun01/13	38-31-14		402	Jun01/07
				38-30-00		4	Jun01/13	38-31-15		401	Jun01/07
38-13-00		1	Dec01/95					38-31-15		402	Jun01/07
38-13-00		2	Dec01/95	38-31-00		1	Jun01/07	38-31-15		403	Jun01/07
38-13-00		3	Dec01/95	38-31-00		2	Jun01/07	38-31-15		404	Jun01/07
38-13-00		4	Dec01/95	38-31-00		3	Jun01/07	38-31-16		401	Jun01/07
38-13-00		501	Dec01/95	38-31-00		4	Jun01/07	38-31-16		402	Jun01/07
38-13-00		502	Dec01/95	38-31-00		5	Jun01/07	38-31-16		403	Jun01/07
38-13-00		503	Dec01/95	38-31-00		6	Jun01/07	38-31-16		404	Jun01/07
38-13-11		401	Jun01/10	38-31-00		7	Jun01/07	38-31-17		401	Jun01/07
38-13-11		402	Jun01/10	38-31-00		8	Jun01/07	38-31-17		402	Jun01/07
38-13-11		403	Mar01/92	38-31-00		9	Jun01/07	38-31-17		403	Jun01/07
38-13-12		401	Dec01/95	38-31-00		10	Jun01/07	38-31-17		404	Jun01/07
38-13-12		402	Dec01/95	38-31-00		11	Jun01/07	38-31-18		401	Jun01/07
38-13-12		403	Dec01/95	38-31-00		12	Jun01/07	38-31-18		402	Jun01/07
38-13-12		404	Dec01/95	38-31-00		13	Jun01/07	38-31-18		403	Jun01/07
38-13-12		405	Dec01/95	38-31-00		501	Jun01/07	38-31-18		404	Jun01/06
38-13-14		401	Dec01/95	38-31-00		502	Jun01/07	38-31-18		405	Jun01/07
38-13-14		402	Dec01/95	38-31-00		503	Jun01/07	38-31-23		401	Jun01/07
38-13-14		403	Dec01/95	38-31-00	R	601	Jun01/15	38-31-23		402	Jun01/07
38-13-14		404	Dec01/95	38-31-00	R	602	Jun01/15	38-31-23		403	Jun01/07
38-13-14		405	Dec01/95	38-31-00	R	603	Jun01/15	38-31-23		404	Jun01/06
				38-31-00	R	604	Jun01/15	38-31-23		601	Jun01/07
38-14-00		1	Jun01/14	38-31-00	R	605	Jun01/15	38-31-24		401	Jun01/07
38-14-00		2	Jun01/90	38-31-00		701	Jun01/14	38-31-24		402	Jun01/07
38-14-00		3	Dec01/89	38-31-00		702	Jun01/14	38-31-24		403	Jun01/07
38-14-00		4	Jun01/90	38-31-00		703	Jun01/14	38-31-24		404	Jun01/07
38-14-00		5	Jun01/90	38-31-00		704	Jun01/14	38-31-25		401	Jun01/07
38-14-00		501	Dec01/95	38-31-00		705	Jun01/14	38-31-25		402	Jun01/07
38-14-00		502	Dec01/95	38-31-00		706	Jun01/14	38-31-25		403	Jun01/07
38-14-00		503	Dec01/95	38-31-00		707	Jun01/14	38-31-26		401	Jun01/06
38-14-11	R	401	Jun01/15	38-31-00		708	Jun01/14	38-31-26		402	Jun01/06
38-14-11	R	402	Jun01/15	38-31-00		709	Jun01/14				
38-14-11	R	403	Jun01/15	38-31-00		710	Jun01/14	38-32-00		1	Jun01/13
38-14-12		401	Jun01/13	38-31-00		711	Jun01/14	38-32-00		2	Jun01/13
38-14-12		402	Jun01/13	38-31-00		712	Jun01/14	38-32-00		3	Jun01/07
38-14-12		403	Jun01/13	38-31-00		713	Jun01/14	38-32-00		4	Jun01/13
38-14-12		404	Jun01/13	38-31-11	01	401	Jun01/07	38-32-00		5	Jun01/13
38-14-12		405	Jun01/02	38-31-11	01	402	Jun01/07	38-32-00		601	Jun01/10
38-14-12		406	Jun01/13	38-31-11	01	403	Jun01/07	38-32-00		602	Jun01/10
38-14-12		407	Jun01/02	38-31-11	01	404	Jun01/07	38-32-00		701	Jun01/12
38-14-13		401	Jun01/02	38-31-11	01	405	Jun01/05	38-32-00		702	Jun01/12



AIRCRAFT MAINTENANCE MANUAL

CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE
38-32-11		401	Dec01/95	38-35-00		710	Jun01/13	38-35-29		401	Jun01/13
38-32-11		402	Dec01/89	38-35-00		711	Jun01/13	38-35-29		402	Jun01/13
38-32-15		401	Jun01/01	38-35-00		712	Jun01/13	38-35-29		403	Jun01/13
38-32-15		402	Jun01/90	38-35-00		713	Jun01/13	38-35-31		401	Jun01/13
38-32-15		403	Jun01/94	38-35-00		714	Jun01/13	38-35-31		402	Jun01/13
				38-35-00		715	Jun01/13	38-35-31		501	Jun01/13
38-33-00		1	Jun01/07	38-35-11		401	Jun01/13	38-35-31		502	Jun01/13
38-33-00		2	Jun01/07	38-35-11		402	Jun01/13	38-35-31		503	Jun01/13
38-33-00		3	Jun01/07	38-35-11		403	Jun01/13	38-35-31		504	Jun01/13
38-33-00		4	Jun01/07	38-35-11		404	Jun01/13	38-35-31		505	Jun01/13
38-33-00		5	Jun01/07	38-35-13		401	Jun01/13	38-35-31		506	Jun01/13
38-33-00		6	Jun01/07	38-35-13		402	Jun01/13	38-35-31		507	Jun01/13
38-33-00		7	Jun01/07	38-35-13		403	Jun01/13	38-35-32		401	Jun01/13
38-33-00		8	Jun01/07	38-35-14		401	Jun01/13	38-35-32		402	Jun01/13
38-33-11		401	Jun01/07	38-35-14		402	Jun01/13	38-35-32		403	Jun01/13
38-33-11		402	Jun01/07	38-35-14		403	Jun01/13	38-35-33		401	Jun01/13
38-33-11		403	Jun01/07	38-35-14		404	Jun01/13	38-35-33		402	Jun01/13
				38-35-15		301	Jun01/13	38-35-33		403	Jun01/13
38-35-00		1	Jun01/13	38-35-15		302	Jun01/13	38-35-35		401	Jun01/13
38-35-00		2	Jun01/13	38-35-15		401	Jun01/13	38-35-35		402	Jun01/13
38-35-00		3	Jun01/13	38-35-15		402	Jun01/13	38-35-37		401	Jun01/13
38-35-00		4	Jun01/13	38-35-15		403	Jun01/13	38-35-37		402	Jun01/13
38-35-00		5	Jun01/13	38-35-17		401	Jun01/13	38-35-37		403	Jun01/13
38-35-00		6	Jun01/13	38-35-17		402	Jun01/13	38-35-37		404	Jun01/13
38-35-00		7	Jun01/13	38-35-17		403	Jun01/13	38-35-39		401	Jun01/13
38-35-00		8	Jun01/13	38-35-17		404	Jun01/13	38-35-39		402	Jun01/13
38-35-00		9	Jun01/13	38-35-18		401	Jun01/13	38-35-39		403	Jun01/13
38-35-00		10	Jun01/13	38-35-18		402	Jun01/13				
38-35-00		11	Jun01/13	38-35-18		403	Jun01/13	38-40-00		1	Jun01/13
38-35-00		12	Jun01/13	38-35-19		401	Jun01/13	38-40-00		2	Jun01/13
38-35-00		13	Jun01/13	38-35-19		402	Jun01/13	38-40-00		3	Jun01/06
38-35-00		14	Jun01/13	38-35-19		403	Jun01/13	38-40-00		4	Jun01/13
38-35-00		15	Jun01/13	38-35-21		401	Jun01/13	38-40-00		5	Jun01/13
38-35-00		16	Jun01/13	38-35-21		402	Jun01/13	38-40-00		6	Jun01/07
38-35-00		501	Jun01/14	38-35-21		403	Jun01/13	38-40-00		7	Jun01/07
38-35-00		502	Jun01/14	38-35-21		404	Jun01/13	38-40-00		8	Jun01/13
38-35-00		503	Jun01/14	38-35-23		401	Jun01/13	38-40-00		301	Jun01/01
38-35-00		504	Jun01/14	38-35-23		402	Jun01/13	38-40-00		302	Jun01/01
38-35-00		505	Jun01/14	38-35-23		403	Jun01/13	38-40-00		303	Jun01/01
38-35-00		506	Jun01/14	38-35-23		404	Jun01/13	38-40-00		501	Jun01/13
38-35-00		507	Jun01/14	38-35-25		401	Jun01/13	38-40-00		502	Dec01/95
38-35-00		508	Jun01/13	38-35-25		402	Jun01/13	38-40-00		503	Jun01/13
38-35-00		701	Jun01/13	38-35-25		403	Jun01/13	38-40-00		504	Jun01/13
38-35-00		702	Jun01/13	38-35-25		404	Jun01/13				
38-35-00		703	Jun01/13	38-35-27		401	Jun01/13	38-41-11		401	Jun01/13
38-35-00		704	Jun01/13	38-35-27		402	Jun01/13	38-41-11		402	Jun01/13
38-35-00		705	Jun01/13	38-35-27		403	Jun01/13	38-41-11		403	Jun01/13
38-35-00		706	Jun01/13	38-35-28		201	Jun01/13	38-41-12		401	Jun01/14
38-35-00		707	Jun01/13	38-35-28		202	Jun01/13	38-41-12		402	Jun01/14
38-35-00		708	Jun01/13	38-35-28		203	Jun01/13	38-41-12		403	Jun01/06
38-35-00		709	Jun01/13	38-35-28		204	Jun01/13	38-41-12		404	Jun01/13



AIRCRAFT MAINTENANCE MANUAL

CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE
38-41-12		405	Jun01/14								
38-41-12		406	Jun01/07								
38-41-13		401	Jun01/13								
38-41-13		402	Jun01/06								
38-41-13		403	Jun01/13								
38-41-13		404	Dec01/89								
38-41-13		501	Jun01/02								
38-41-13		502	Jun01/01								
38-41-14		401	Jun01/13								
38-41-14		402	Jun01/06								
38-41-14		403	Jun01/13								
38-41-14		404	Jun01/13								
38-41-15		401	Jun01/14								
38-41-15		402	Jun01/14								
38-41-15		403	Jun01/07								
38-41-15		404	Jun01/14								
38-41-15		405	Jun01/14								
38-41-17		401	Dec01/95								
38-41-17		402	Jun01/13								
38-41-17		403	Jun01/90								
38-41-17		404	Jun01/07								
38-41-17		405	Jun01/13								
38-41-17		406	Dec01/95								
38-42-11		401	Dec01/95								
38-42-11		402	Jun01/01								
38-42-11		403	Jun01/01								
38-42-12		401	Dec01/95								
38-42-12		402	Dec01/95								
38-42-12		403	Dec01/95								
38-42-13		401	Dec01/95								
38-42-13		402	Dec01/89								
38-42-13		403	Dec01/95								
38-42-13		404	Dec01/95								



AIRCRAFT MAINTENANCE MANUAL

CHAPTER 38

WATER/WASTE

TABLE OF CONTENTS

<u>SUBJECT</u>	<u>CH/SE/SU</u>	<u>C</u>	<u>PAGE</u>	<u>EFFECTIVITY</u>
<u>WATER/WASTE - GENERAL</u>	38-00-00			
Description and Operation			1	ALL
<u>POTABLE WATER SYSTEM</u>	38-10-00			
Description and Operation			1	ALL
Servicing			301	ALL
Potable Water Disinfection			301	ALL
Sampling of the Potable Water			301	ALL
WATER STORAGE	38-11-00			
Description and Operation			1	ALL
Component Location			1	ALL
WATER TANK	38-11-11 01			
Removal/Installation			401	226-226,229-249,401-401,
WATER TANK	38-11-11 02			
Removal/Installation			401	404-500,
DISTRIBUTION	38-12-00			
Description and Operation			1	ALL
Component Location			1	ALL
Adjustment/Test			501	ALL
MOTORIZED SYSTEM SHUTOFF VALVES	38-12-11			
Removal/Installation			401	ALL
MANUAL SHUTOFF VALVE	38-12-12			
Removal/Installation			401	ALL
PRESSURE CONTROL VALVE	38-12-13			
Removal/Installation			401	ALL
Wash Basin Faucet	38-12-15			
Servicing			301	ALL
Replacement of Tap Packings			301	ALL
Removal/Installation			401	ALL
WATER HEATER	38-12-16			
Removal/Installation			401	ALL
NON-RETURN VALVE - SUPPLY LINE	38-12-21			
Removal/Installation			401	ALL
QUANTITY INDICATING	38-13-00			
Description and Operation			1	ALL
Component Location			1	ALL
Adjustment/Test			501	ALL
WATER QUANTITY TRANSMITTER	38-13-11			
Removal/Installation			401	ALL
WATER QUANTITY GAGE	38-13-12			
Removal/Installation			401	ALL
WATER QUANTITY PRESELECTION	38-13-14			
Removal/Installation			401	ALL



AIRCRAFT MAINTENANCE MANUAL

<u>SUBJECT</u>	<u>CH/SE/SU</u>	<u>C</u>	<u>PAGE</u>	<u>EFFECTIVITY</u>
WATER DRAINING (DUMP)	38-14-00			
Description and Operation		1	ALL	
Component Location		1	ALL	
Adjustment/Test		501	ALL	
FILL/OVERFLOW AND DRAIN VALVE	38-14-11			
Removal/Installation		401	ALL	
MOTORIZED DRAIN VALVE	38-14-12			
Removal/Installation		401	ALL	
CONTROL CABLE -	38-14-13			
FILL/OVERFLOW AND DRAIN VALVE				
Removal/Installation		401	ALL	
CONTROL CABLE - MOTORIZED DRAIN VALVE	38-14-14			
Removal/Installation		401	ALL	
WASTE DISPOSAL	38-30-00			
Description and Operation		1	ALL	
TOILET SYSTEM	38-31-00			
Description and Operation		1	226-226,229-249,401-401,	
Component Location		1	226-226,229-249,401-401,	
Component Description		5	226-226,229-249,401-401,	
Adjustment/Test		501	226-226,229-249,401-401,	
Inspection/Check		601	ALL	
Cleaning/Painting		701	226-226,229-249,401-401,	
Toilet System		701	226-226,229-249,401-401,	
Cleaning/Painting		701	404-500,	
Cleaning of the Toilet Waste Lines		702	404-500,	
with CELESTE Recirculation				
Cleaning Tool				
WASTE TANK	38-31-11	01		
Removal/Installation		401	226-226,229-249,401-401,	
TOILET BOWL	38-31-12			
Removal/Installation		401	226-226,229-249,401-401,	
TOILET TIMER	38-31-13			
Removal/Installation		401	226-226,229-249,401-401,	
TOILET DRAIN VALVE	38-31-14			
Removal/Installation		401	226-226,229-249,401-401,	
FLUSHING MOTORS	38-31-15			
Removal/Installation		401	226-226,229-249,401-401,	
CONTROL CABLE - TOILET DRAIN VALVE	38-31-16			
Removal/Installation		401	226-226,229-249,401-401,	
TOILET DRAIN LINE	38-31-17			
Removal/Installation		401	226-226,229-249,401-401,	
TOILET FLUSH LINE	38-31-18			
Removal/Installation		401	226-226,229-249,401-401,	
WASTE DUMP VALVE	38-31-23			
Removal/Installation		401	226-226,229-249,401-401,	
Inspection Check		601	226-226,229-249,401-401,	
FLUSH LINE CHECK VALVE	38-31-24			
Removal/Installation		401	226-226,229-249,401-401,	



AIRCRAFT MAINTENANCE MANUAL

<u>SUBJECT</u>	<u>CH/SE/SU</u>	<u>C</u>	<u>PAGE</u>	<u>EFFECTIVITY</u>
CONTROL CABLE - WASTE DUMP VALVE	38-31-25			
Removal/Installation		401	226-226,229-249,401-401,	
CONTROL HANDLE - WASTE DUMP VALVE	38-31-26			
Removal Installation		401	226-226,229-249,401-401,	
WASTE WATER DRAIN	38-32-00			
Description and Operation		1	ALL	
Component Location		1	ALL	
Inspection/Check		601	ALL	
Cleaning/Painting		701	ALL	
Waste water drain line		701	ALL	
Drain Mast Tube		701	ALL	
FLOAT VALVE	38-32-11			
Removal/Installation		401	ALL	
WASTE WATER DRAIN LINE	38-32-15			
Removal/Installation		401	ALL	
WASTE/PRIME LEVEL INDICATION	38-33-00			
Description and Operation		1	226-226,229-249,401-401,	
General		1	226-226,229-249,401-401,	
Component Location		1	226-226,229-249,401-401,	
System Description		4	226-226,229-249,401-401,	
System Operation		8	226-226,229-249,401-401,	
LEVEL TRANSMITTER	38-33-11			
Removal/Installation		401	226-226,229-249,401-401,	
VACUUM TOILET SYSTEM	38-35-00			
Description and Operation		1	404-500,	
Component Location		1	404-500,	
Adjustment/Test		501	404-500,	
Leakage Test		504	404-500,	
Cleaning/Painting		701	404-500,	
WASTE TANK	38-35-11			
Removal/Installation		401	404-500,	
TOILET ASSY	38-35-13			
Removal/Installation		401	404-500,	
VACUUM TOILET BOWL	38-35-14			
Removal/Installation		401	404-500,	
FILTER ASSEMBLY	38-35-15			
Servicing		301	404-500,	
Removal/Installation		401	404-500,	
WASTE SYSTEM DUMP VALVE	38-35-17			
Removal/Installation		401	404-500,	
CONTROL CABLE - WASTE SYSTEM DUMP VALVE	38-35-18			
Removal/Installation		401	404-500,	
CHECK VALVE - VENT LINE	38-35-19			
Removal/Installation		401	404-500,	
FLUSH LINE CHECK VALVE	38-35-21			
Removal/Installation		401	404-500,	
SHUTOFF VALVE	38-35-23			
Removal/Installation		401	404-500,	
ANTISYPHON VALVE	38-35-25			



AIRCRAFT MAINTENANCE MANUAL

<u>SUBJECT</u>	<u>CH/SE/SU</u>	<u>C</u>	<u>PAGE</u>	<u>EFFECTIVITY</u>
Removal/Installation			401	404-500,
FLUSH VALVE	38-35-27			
Removal/Installation			401	404-500,
NOZZLE-RINSE	38-35-28			
Maintenance Practices			201	404-500,
Cleaning of Rinse Nozzle			201	404-500,
WATER SEPARATOR	38-35-29			
Removal/Installation			401	404-500,
LOGIC CONTROL UNIT	38-35-31			
Removal/Installation			401	404-500,
Adjustment/Test			501	404-500,
Logic Control Unit Functional Test			501	404-500,
Waste Level Sensor Functional Test				
WASTE LEVEL SENSOR	38-35-32			
Removal/Installation			401	404-500,
FLUSH CONTROL UNIT	38-35-33			
Removal/Installation			401	404-500,
ALTITUDE PRESSURE SWITCH	38-35-35			
Removal/Installation			401	404-500,
WATER VALVE	38-35-37			
Removal/Installation			401	404-500,
DRAIN AND CAP ASSY	38-35-39			
Removal/Installation			401	404-500,
AIR SUPPLY	38-40-00			
Description and Operation			1	ALL
Component Location			1	ALL
Servicing			301	ALL
System Pressurization			301	ALL
Checking Pressure			302	ALL
Depressurize Air Supply System			302	ALL
Adjustment/Test			501	ALL
SHUTTLE VALVE	38-41-11			
Removal/Installation			401	401-401,404-500,
AIR FILTER	38-41-12			
Removal/Installation			401	ALL
PRESSURE REDUCING VALVE	38-41-13			
Removal/Installation			401	ALL
Adjustment/Test			501	ALL
CHECK VALVE	38-41-14			
Removal/Installation			401	ALL
AIR COMPRESSOR	38-41-15			
Removal /Installation			401	ALL
PRESSURE SWITCH	38-41-17			
Removal/Installation			401	ALL
AIR PRESSURE TRANSMITTER	38-42-11			
Removal/Installation			401	ALL
AIR PRESSURE INDICATOR	38-42-12			
Removal/installation			401	ALL
Pressure gage 21MA			401	ALL
MICROSWITCH	38-42-13			



AIRCRAFT MAINTENANCE MANUAL

SUBJECT

Removal/Installation

CH/SE/SU

C

PAGE

EFFECTIVITY

401 ALL



AIRCRAFT MAINTENANCE MANUAL

WATER/WASTE - GENERAL - DESCRIPTION AND OPERATION

1. General

The water/waste system consists of a pressurized fresh water system and a waste disposal system.

2. Description

**0N A/C 226-226, 229-249, 401-401,

(Ref. Fig. 001)

R **0N A/C 404-500,

(Ref. Fig. 002)

**0N A/C ALL

A. Potable Water System (Ref. 38-10-00)

The potable water system supplies the galleys and lavatories with potable water from water tanks. The maximum storage capacity of each water tank is 200 l (52 US gal.).

**0N A/C 226-226, 229-249, 401-401,

B. Waste Disposal

(1) Toilet system (Ref. 38-30-00)

The toilet units are equipped with individual waste tanks and flushing installations. The waste from the waste tanks is conveyed through pipes, under the cabin floor, to the service panels.

(2) Waste water system

The waste water installation conveys waste water from the lavatory wash basins and the galleys overboard via heated drain masts.

R **0N A/C 404-500,

B. Water Waste System (Ref. 38-35-00)

(1) Toilet System

The toilet system carries waste matter and liquids from all the toilets into two waste tanks. The vacuum drain type toilet units consist of the toilet bowl assemblies and a rinse/flush/drain installation.

(2) Waste Water Drain System

The waste water drain system carries waste water from lavatory washbasins and galley sinks to heated drain masts for discharge overboard.

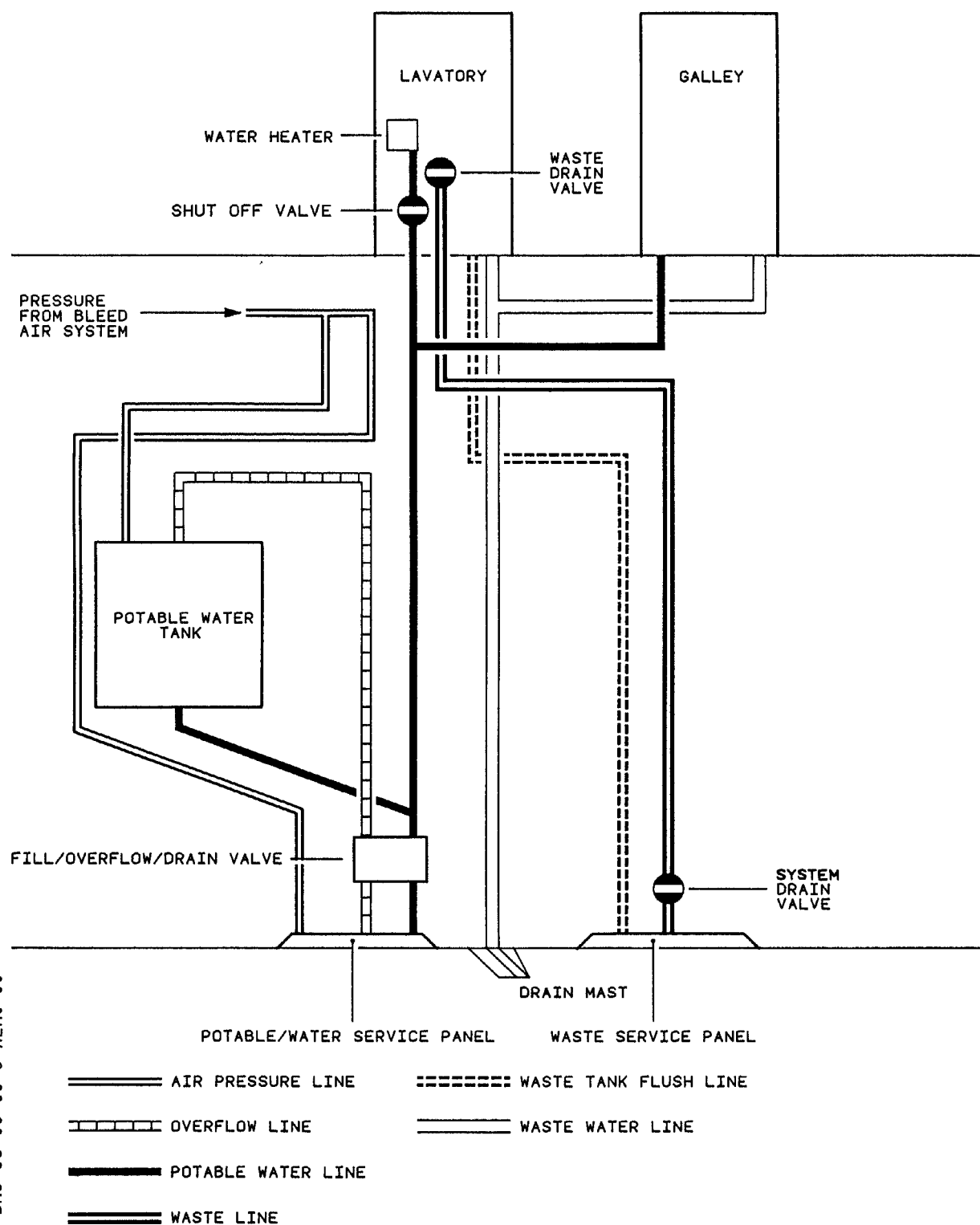
**0N A/C ALL

EFFECTIVITY: ALL

KSSU

38-00-00

Page 1
Jun 01/13



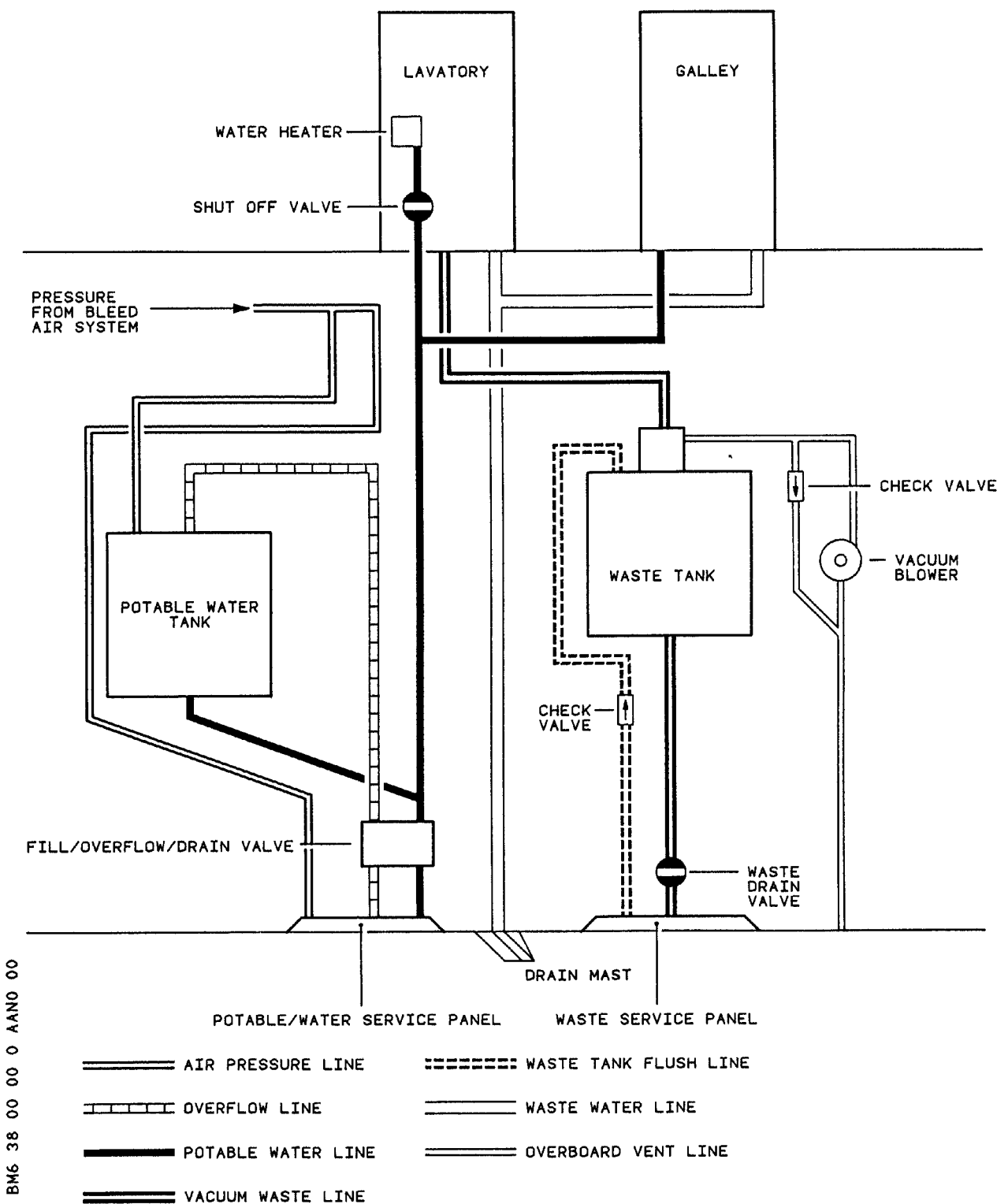
System Diagram
Figure 001

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-00-00

Page 2
Jun 01/07



System Diagram
Figure 002

R EFFECTIVITY: 404-500,

KSSU

38-00-00

Page 3
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

C. Air Supply System (Ref. 38-40-00)

A compressed air pressurization system distributes the potable water. The compressed air can be supplied by bleed air from the engines, the Auxiliary Power Unit (APU) or, if fitted, an onboard compressor. When parked, with the engines and APU shut down, compressed air can be obtained from a ground supply unit.

R EFFECTIVITY: ALL

KSSU

38-00-00

Page 4
Dec 01/95

Printed in France



AIRCRAFT MAINTENANCE MANUAL

POTABLE WATER SYSTEM - DESCRIPTION AND OPERATION

****0N A/C 226-226, 229-249, 401-401,**

1. General

The potable water system transfers water from two water tanks, through a distribution system, to the water faucets in the lavatory compartments and to the galleys.

The max. amount of water available is 400 l (105 US gal.).

The system comprises the following subsystems:

- Water Storage (38-11-00)
- Distribution (38-12-00)
- Quantity Indicating (38-13-00)
- Water Draining (38-14-00)

R **0N A/C 404-500,

1. General

The potable water system transfers water from three water tanks, through a distribution system, to the water faucets in the lavatory compartments, to the galleys and to the vacuum toilets.

The max. amount of water available is 600 l (156 US gal.).

The system comprises the following subsystems:

- Water Storage (38-11-00)
- Distribution (38-12-00)
- Quantity Indicating (38-13-00)
- Water Draining (38-14-00)

****0N A/C 226-226, 229-249, 401-401,**

2. Description

A. Water Storage

The water storage system comprises two water tanks, one fill/overflow and drain valve (18MA) and a potable water service panel located on RH lower fuselage near the wing box. A preselection system is installed.

R **0N A/C 404-500,

2. Description

A. Water Storage

The water storage system comprises three water tanks, one fill/overflow and drain valve (18MA) and a potable water service panel located on RH lower fuselage near the wing box. A preselection system is installed.

EFFECTIVITY: ALL

KSSU

38-10-00

Page 1
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

****ON A/C ALL**

B. Distribution

The water distribution system comprises piping, two motorized system shut-off valves (17MD, 18MD), water faucets in the lavatories and galleys, water heaters and manual shutoff valves in the sanitary unit cabinets.

R

C. Quantity Indicating

The quantity indication system consists of a transmitter and indicators, one located on a combi gage at the purser's panel and one at the potable water service panel.

R

D. Water Draining

Water draining is achieved through the fill/overflow and drain valve (18MA) and the motorized system drain valve (6MP).

EFFECTIVITY: ALL

KSSU

38-10-00

Page 2
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

POTABLE WATER SYSTEM - SERVICING

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU DO THIS PROCEDURE.

WARNING : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THESE SPECIAL MATERIALS. THESE MATERIALS ARE DANGEROUS.

CAUTION : DO NOT GET THE FLUID ON YOUR SKIN OR IN YOUR EYES. IF YOU DO:

- FLUSH IT AWAY WITH CLEAN WATER
- GET MEDICAL AID.

1. Reason for the Job

A. Potable Water Disinfection.

B. Sampling of the Potable Water.

NOTE : Four procedures are given here that you can use for disinfection of the potable water system:

- Disinfection with Calcium Hypochlorite or Sodium Hypochlorite
- Disinfection with Hydrogen Peroxide (H₂O₂) HERISIL or H BIO T50
- Disinfection with Sodium Hypochlorite mixed with a Water Disinfection Doser to the potable water
- Disinfection with Hydrogen Peroxide (H₂O₂) HERISIL or H BIO T50 mixed with a Water Disinfection Doser to the potable water.

NOTE : The airline can make the decision which of the four procedures they will use.

2. Disinfection of the Potable Water Tank and Distribution System with Calcium Hypochlorite (Material No. 14-003E) or Sodium Hypochlorite (Material No. 14-003F)

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Hand Pump Equipment
	Suction-Force Pump, delivery pressure not exceeding 50 psi.
(6)	Water Service Vehicle.
(7)	Hose-Vinyl
(8)	Test Strip for free Chlorine
(9)	Container 50 l (13 US gal.)
10)Material No. 14-003E	Disinfectants (Ref. 20-31-00)
11)Material No. 14-003F	Disinfectants (Ref. 20-31-00)

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 301
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

ITEM	DESIGNATION
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- Position access platform 1 m (3 ft.) and open potable water service panel access door 136BR.
- Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make sure that the electronics racks ventilation is correct.
- Open the tank fill connection on the water service panel.
- Position a container below the access door.
- Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- Connect the hose-vinyl to the waste-water drain masts.
- Position a container 50 l (13 US gal.) under each drain mast.
- Drain the potable water system (Ref. 12-24-38, P. Block 1).

****0N A/C 226-226, 229-249,**

- Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	C10
800VU	WATER SYSTEM	2MA	C12
800VU	WATER SYSTEM	1MD	C11
800VU	WATER COMPRESSOR	19MD	E18/19
800VU	WATER SYSTEM	1MP	C13

****0N A/C 401-401, 404-500,**

- Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

****0N A/C ALL**

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 302
Jun 01/15

(2) Preparation of the disinfectant solution

(a) Before you start the disinfection procedure:

- Do an analysis of the potable water that you will use to fill the potable water system.
- Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

****ON A/C 226-226, 229-249, 401-401,**

(b) Mix Material No. 14-003E or Material No. 14-003F with water in a 8 l (2.11 US gal.) container as given in the following table. The water should have a temperature of 20 deg C (68 deg F).

NOTE : When this solution is mixed with 520 l (137 US gal.) of water, it will produce a solution with a concentration of 100 ppm.

Number of Tanks	Usable tank volume in l (US gal)	Volume of water needed for disinfection solution in l (US gal)	Calcium Hypochlorite (70%) (CML 14-003E) in g (ounces)	Sodium Hypochlorite (13%) (CML 14-003F) in g (ounces)	Sodium Hypochlorite (13%) (CML 14-003F) in ml
2	400 (106)	520 (137)	76 (2.68)	332 (11.71)	408.4

(c) Let the solution dissolve for 1 hour.

(d) Pour the solution through a filter into a clean container.

(e) Mix the solution with 520 l (137 US gal.) of water to make the final disinfectant solution.

****ON A/C 404-500,**

(b) Mix Material No. 14-003E or Material No. 14-003F with water in a 12 l (3.17 US gal.) container as given in the following table. The water should have a temperature of 20 deg C (68 deg F).

NOTE : When this solution is mixed with 720 l (85 US gal.) of water, it will produce a solution with a concentration of 100 ppm.

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 303
Jun 01/15

Number of Tanks	Usable tank volume in l (US gal)	Volume of water needed for disinfection solution in l (US gal)	Calcium Hypochlorite (70%) (CML 14-003E) in g (ounces)	Sodium Hypochlorite (13%) (CML 14-003F) in l (US gal)	Sodium Hypochlorite (13%) (CML 14-003F) in ml
3	600 (159)	720 (190)	106 (3.74)	460 (16.23)	565.8

- (c) Let the solution dissolve for 1 hour.
- (d) Pour the solution through a filter into a clean container.
- (e) Mix the solution with 720 l (190 US gal.) of water to make the final disinfectant solution.

****ON A/C ALL**

(3) Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

- (a) Make sure that all potable water shutoff valves are open.
- (b) Make sure that the switch on each water heater is set to the OFF position.
- (c) Put a warning notice in position to tell persons not to use the potable water system.
- (d) Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

****ON A/C 226-226, 229-249, 401-401,**

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

- (e) Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).
- (f) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (g) Bleed the potable water system:
 - 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (h) Close the potable water shutoff valve in the lavatories and galleys.
- (j) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (k) Top up the potable water system with disinfectant solution, using the

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 304
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

- (l) Leave the solution for 1 hour (100 ppm concentration) in the potable water system.
- (m) Open the potable water shutoff valve in the lavatories and galleys.
- (n) Repeat the steps (f) to (k).
- (p) Leave the disinfection solution in the potable water system for a further 0.5 hour.
- (q) Open the potable water shutoff valve in the lavatories and galleys.
- (r) Disconnect the hand pump or the water service vehicle and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (s) Remove safety clips and tags and close circuit breakers that were opened in Para. 1.B.(1)(k).
- (t) Flush the potable water system with clean water after the disinfection:
 - 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 Operate the water faucets in the lavatories and galleys to flush them:
 - a In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - b In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - c In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (u) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

- (v) If the number of colony forming units found are out of limits given by local authorities, repeat steps (3)(e) thru (v).

****ON A/C 404-500,**

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

- (e) Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).

EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

R

KSSU

38-10-00

Page 305
Jun 01/15

- (f) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (g) Bleed the potable water system:
 - 1 In each lavatory, flush the toilet 15 times.
 - 2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (h) Close the potable water shutoff valve in the lavatories and galleys.
- (j) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (k) Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

- (l) Leave the solution for 1 hour (100 ppm concentration) in the potable water system.
- (m) Open the potable water shutoff valve in the lavatories and galleys.
- (n) Repeat the steps (f) to (k).
- (p) Leave the disinfection solution in the potable water system for a further 0.5 hour.
- (q) Open the potable water shutoff valve in the lavatories and galleys.
- (r) Disconnect the hand pump or the water service vehicle and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (s) Remove safety clips and tags and close circuit breakers that were opened in Para. 1.B.(1)(k).
- (t) Flush the potable water system with clean water after the disinfection:
 - 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 Operate the toilets, the water faucets in the lavatories and galleys to flush them:
 - a Operate each toilet and flush 15 times.
 - b In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - c In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - d In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (u) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:

R EFFECTIVITY: 404-500,

KSSU

38-10-00

Page 306
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

Refer to national or local authority regulations for valid limits.

- (v) If the number of colony forming units found are out of limits given by local authorities, repeat steps (3)(e) thru (v).

****ON A/C ALL**

(4) Test for any remaining disinfectant

- (a) Use a test strip for free chlorine to test the potable water.

1 Let the water flow over the test strip from the water faucets in the galleys and lavatories.

NOTE : Obey the manufacturer's instructions when you use the test strip.

- (b) If the test shows that there is remaining disinfectant in the water, flush the system again.

NOTE : The remaining disinfectant (chlorine) in the system must not be more than the required amount given by the national health authority for drinking water.

(5) Close-Up

- (a) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
- (b) Remove the warning notices.
- (c) Disconnect the hoses-vinyl from the waste-water drain masts.
- (d) Remove all containers.
- (e) Remove the hose-vinyl from the drain connection on the potable water service panel.
- (f) Close the tank fill connection on the water service panel.
- (g) Close the potable water service panel access door 136BR and remove the access platform.
- (h) Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.
- (j) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (k) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

3. Disinfection of the Potable Water Tank and Distribution System with Hydrogen Peroxide (Material No. 14-003H or 14-003J)

A. Equipment and Materials

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 307
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Hand Pump Equipment
	Suction-Force Pump, delivery pressure not exceeding 50 psi
(6)	Water Service Vehicle
(7)	Hose-Vinyl
(8)	Container 50 l (13 US gal.)
(9)Material No. 14-003H	Disinfectants (Ref. 20-31-00)
10)Material No. 14-003J	Disinfectants (Ref. 20-31-00)

ITEM	DESIGNATION
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

- Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
- Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make sure that the electronics racks ventilation is correct.
- Open the tank fill connection on the water service panel.
- Position a container below the access door.
- Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- Connect the hose-vinyl to the waste-water drain masts.
- Position a container 50 l (13 US gal.) under each drain mast.
- Drain the potable water system (Ref. 12-24-38, P. Block 1).

****0N A/C 226-226, 229-249,**

- Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	C10
800VU	WATER SYSTEM	2MA	C12

EFFECTIVITY: ALL

KSSU

38-10-00

Page 308
Jun 01/15

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MD	C11
800VU	WATER COMPRESSOR	19MD	E18/19
800VU	WATER SYSTEM	1MP	C13

****ON A/C 401-401, 404-500,**

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

****ON A/C ALL**

(2)Preparation of the disinfectant solution

(a)Before you start the disinfection procedure:

- Do an analysis of the potable water that you will use to fill the potable water system
- Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Mix Material No. 14-003H or Material No. 14-003J with water at a temperature of 20 deg. C (68 deg. F) as given in the following table:

****ON A/C 226-226, 229-249, 401-401,**

Number of Tanks	Usable tank volume in l (US gal)	Volume of water needed for disinfection solution in l (US gal) *	Pure H2O2 in g (oz) **	Disinfectant For 50% H2O2 Concentration in l (US gal) ***
2	400 (106)	520 (137.3)	260 (9.2)	0.44 (0.12)

****ON A/C 404-500,**

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 309
Jun 01/15

Number of Tanks	Usable tank volume in l (US gal)	Volume of water needed for disinfection solution in l (US gal) *	Pure H2O2 in g (oz) **	Disinfectant For 50% H2O2 Concentration in l (US gal) ***
3	600 (159)	740 (195.4)	370 (13.1)	0.62 (0.16)

****ON A/C ALL**

NOTE : * The given volume includes the volume of the potable water tank and the distribution system.

** The mass is calculated for pure hydrogen peroxide (H2O2).

*** The value given in the table is for disinfectant which contains approximately 50% active hydrogen peroxide. You must obey the manufacturer's instructions when you use this product.

NOTE : If you have remaining disinfectant solution after the disinfection procedure, do not use this disinfectant solution again.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

- (a)Make sure that all potable water shutoff valves are open.
- (b)Make sure that the switch on each water heater is set to the OFF position.
- (c)Put a warning notice in position to tell persons not to use the potable water system.
- (d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

****ON A/C 226-226, 229-249, 401-401,**

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

- (e)Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).
- (f)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (g)Bleed the potable water system:
 - 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 310
Jun 01/15

3 l (0.8 US gal.) flow out.

3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(h) Close the potable water shutoff valve in the lavatories and galleys.

(j) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).

(k) Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l) Leave the disinfectant solution in the potable water system for 1 hour.

(m) Open the potable water shutoff valve in the lavatories and galleys.

(n) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(p) Flush the potable water system with the disinfection solution:

1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.

2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(q) Leave the disinfectant in the potable water system for a further 0.5 hour.

(r) Disconnect the water service vehicle or hand pump with the disinfectant solution from the water service panel.

(s) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 2.B.(1)(k).

(t) Drain the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(u) Flush the potable water system with clean water (without disinfectant):

1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).

2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

5 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(v) Do steps (t) and (u) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.

(w) Get a sample of the potable water for microbiological analysis.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-10-00

Page 311
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

NOTE : Recommended max. levels:

Refer to national or local authority regulations for valid limits.

(x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

(4) Close-Up

****ON A/C 404-500,**

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

(e) Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).

(f) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(g) Bleed the potable water system:

1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

4 Flush the toilets 15 times.

(h) Close the potable water shutoff valve in the lavatories and galleys.

(j) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).

(k) Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l) Leave the disinfectant solution in the potable water system for 1 hour.

(m) Open the potable water shutoff valve in the lavatories and galleys.

(n) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(p) Flush the potable water system:

1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.

2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

5 Flush the toilets 15 times.

R EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

KSSU

38-10-00

Page 312
Jun 01/15

Printed in France



AIRCRAFT MAINTENANCE MANUAL

- (q) Leave the disinfectant in the potable water system for a further 0.5 hour.
- (r) Disconnect the water service vehicle or hand pump with the disinfectant solution from the water service panel.
- (s) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 2.B.(1)(k).
- (t) Drain the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (u) Flush the potable water system with clean water (without disinfectant):
 - 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 5 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
 - 6 Flush the toilets 15 times.
- (v) Do steps (t) and (u) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
- (w) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

- (x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

(4) Close-Up

****ON A/C ALL**

- (a) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
- (b) Remove the warning notices.
- (c) Disconnect the hoses-vinyl from the waste-water drain masts.
- (d) Remove all containers.
- (e) Remove the hose-vinyl from the drain connection on the potable water service panel.
- (f) Close the tank fill connection on the water service panel.
- (g) Close the potable water service panel access door 136BR and remove the access platform.
- (h) Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 313
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

- (j) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (k) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

4. Disinfection of the Potable Water Tank and Distribution System with Elsil (Material No. 14-003K)

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Hand Pump Equipment
	Suction-Force Pump, delivery pressure not exceeding 50 psi
(6)	Water Service Vehicle
(7)	Hose-Vinyl
(8)	Container 50 l (13 US gal.)
(9)	Material No. 14-003K Disinfectants (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- (a) Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
- (b) Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (c) Make sure that the electronics racks ventilation is correct.
- (d) Open the tank fill connection on the water service panel.
- (e) Position a container below the access door.
- (f) Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- (g) Connect the hose-vinyl to the waste-water drain masts.
- (h) Position a container 50 l (13 US gal.) under each drain mast.
- (j) Drain the potable water system (Ref. 12-24-38, P. Block 1).

****ON A/C 226-226, 229-249,**

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 314
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	C10
800VU	WATER SYSTEM	2MA	C12
800VU	WATER SYSTEM	1MD	C11
800VU	WATER COMPRESSOR	19MD	E18/19
800VU	WATER SYSTEM	1MP	C13

**ON A/C 401-401, 404-500,

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

**ON A/C ALL

(2)Preparation of the disinfectant solution

(a)Before you start the disinfection procedure:

- Do an analysis of the potable water that you will use to fill the potable water system
- Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Mix Material No. 14-003K with water at a temperature of 20 deg. C (68 deg. F) as given in the following table:

**ON A/C 226-226, 229-249, 401-401,

Number of Tanks	Usable tank volume in l (US gal)	Volume water needed for disinfection in l (US gal)	Pure H2O2 in g (oz)	Disinfectant in l (US gal) (for 3% H2O2 concentration)
2	400 (106)	520 (137,3)	260 (9.2)	7,222 (1,909)

**ON A/C 404-500,

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 315
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

Number of Tanks	Usable tank volume in l (US gal)	Volume water needed for disinfection in l (US gal) *	Pure H2O2 in g (oz)	Disinfectant in l (US gal) (for 3% H2O2 concentration)
3	600 (159)	740 (195,4)	370 (13.1)	10,2777 (2,72)

****ON A/C ALL**

NOTE : * The given volume includes the volume of the potable water tank and the distribution system.
** The mass is calculated for pure hydrogen peroxide (H2O2).
*** The value given in the table is for disinfectant which contains approximately 3% active hydrogen peroxide.
You must obey the manufacturer's instructions when you use this product.

NOTE : If you have remaining disinfectant solution after the disinfection procedure, do not use this disinfectant solution again.

(3) Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

- (a) Make sure that all potable water shutoff valves are open.
- (b) Make sure that the switch on each water heater is set to the OFF position.
- (c) Put a warning notice in position to tell persons not to use the potable water system.
- (d) Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

****ON A/C 226-226, 229-249, 401-401,**

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

- (e) Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).
- (f) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (g) Bleed the potable water system:
 - 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 316
Jun 01/15

3 l (0.8 US gal.) flow out.

- 3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(h) Close the potable water shutoff valve in the lavatories and galleys.

(j) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).

(k) Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l) Leave the disinfectant solution in the potable water system for 1 hour.

(m) Open the potable water shutoff valve in the lavatories and galleys.

(n) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(p) Flush the potable water system with the disinfection solution:

1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.

2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(q) Leave the disinfectant in the potable water system for a further 0.5 hour.

(r) Disconnect the water service vehicle or hand pump with the disinfectant solution from the water service panel.

(s) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 2.B.(1)(k).

(t) Drain the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(u) Flush the potable water system with clean water (without disinfectant):

1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).

2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

5 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(v) Do steps (t) and (u) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.

(w) Get a sample of the potable water for microbiological analysis.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-10-00

Page 317
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

NOTE : Recommended max. levels:

Refer to national or local authority regulations for valid limits.

(x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

(4) Close-Up

****ON A/C 404-500,**

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

(e) Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).

(f) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(g) Bleed the potable water system:

1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

4 Flush the toilets 15 times.

(h) Close the potable water shutoff valve in the lavatories and galleys.

(j) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).

(k) Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l) Leave the disinfectant solution in the potable water system for 1 hour.

(m) Open the potable water shutoff valve in the lavatories and galleys.

(n) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(p) Flush the potable water system:

1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.

2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

5 Flush the toilets 15 times.

R EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

KSSU

38-10-00

Page 318
Jun 01/15

Printed in France



AIRCRAFT MAINTENANCE MANUAL

- (q) Leave the disinfectant in the potable water system for a further 0.5 hour.
- (r) Disconnect the water service vehicle or hand pump with the disinfectant solution from the water service panel.
- (s) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 2.B.(1)(k).
- (t) Drain the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (u) Flush the potable water system with clean water (without disinfectant):
 - 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 5 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
 - 6 Flush the toilets 15 times.
- (v) Do steps (t) and (u) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
- (w) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

- (x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

(4) Close-Up

****ON A/C ALL**

- (a) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
- (b) Remove the warning notices.
- (c) Disconnect the hoses-vinyl from the waste-water drain masts.
- (d) Remove all containers.
- (e) Remove the hose-vinyl from the drain connection on the potable water service panel.
- (f) Close the tank fill connection on the water service panel.
- (g) Close the potable water service panel access door 136BR and remove the access platform.
- (h) Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 319
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

- (j) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (k) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

5. Disinfection of the Water Tank and Distribution System with Sodium Hypochlorite (Material No. 14-003F) using the Water Disinfection Doser

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Water Service Vehicle
(5)	Hose-Vinyl
(6)	Test Strip for free Chlorine
(7)	Container 50 l (13 US gal.)
(8)	Container 30 l (8 US gal.)
(9) 98F38108656000	Water Disinfection Doser
10) Material No. 14-003F	Disinfectants (Ref. 20-31-00)

ITEM	DESIGNATION
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- (a) Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
- (b) Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (c) Make sure that the electronics racks ventilation is correct.
- (d) Open the tank fill connection on the water service panel.
- (e) Position a container below the access door.
- (f) Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- (g) Connect the hose-vinyl to the waste-water drain masts.
- (h) Position a container 50 l (13 US gal.) under each drain mast.
- (j) Drain the potable water system (Ref. 12-24-38, P. Block 1).

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 320
Jun 01/15

****ON A/C 226-226, 229-249,**

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	C10
800VU	WATER SYSTEM	2MA	C12
800VU	WATER SYSTEM	1MD	C11
800VU	WATER COMPRESSOR	19MD	E18/19
800VU	WATER SYSTEM	1MP	C13

****ON A/C 401-401, 404-500,**

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

****ON A/C ALL**

(2)Preparation of the Water Disinfectant Doser (Ref. Fig. 301)

(a)Before you start the disinfection procedure:

- 1 Do an analysis of the potable water that you will use to fill the potable water system.
- 2 Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Before you use the Water Disinfection Doser, make sure that it is correctly calibrated, clean and disinfected (refer to the manufacturer's instructions).

(c)Put the Water Disinfection Doser in position at the potable water service panel 136BR.

(d)Connect the water supply hose to the water inlet of the Water Disinfection Doser.

(e)Put the water outlet hose of the Water Disinfection Doser into a container 30 l (8 US gal.).

(f)Put the small chemical hose with filter into the container with the disinfection solution.

(g)At the Water Disinfection Doser:

CAUTION : THE WATER PRESSURE MUST NOT BE MORE THAN 3.45 BARS (50.0 PSI). A WATER PRESSURE MORE THAN 3.45 BARS (50.0 PSI) CAN CAUSE DAMAGE.

- 1 Adjust the water pressure to between 3.0 bar (43.5 psi) and 3.45 bar (50.0 psi).

EFFECTIVITY: ALL

KSSU

38-10-00

Page 321
Jun 01/15

- 2 For a sodium hypochlorite solution with 13 percent free chlorine, adjust the proportional doser to a value of 0.07 percent.
 - 3 Turn the inlet valve (membrane valve) slightly to open it, but do not fully open it at this time.
- (h)Bleed the Water Disinfection Doser:
- 1 Press the bleed button on top of the doser unit to bleed the system.
 - 2 Keep the bleed button pushed until only water and no air comes from the bleed button.
 - 3 Release the bleed button.
- (j)Open the outlet valve of the Water Disinfection Doser.
- (k)Slowly open the inlet valve (membrane valve) until it is fully open (the Water Disinfection Doser is self-priming).
- (l)Operate the Water Disinfection Doser until the disinfectant starts to flow into the doser unit without air bubbles in the plastic tube.

NOTE : You can see the disinfectant flow through the plastic tube.
A "clickclack" noise is typical for the DOSATRON unit when it is in operation.

- (m)Operate the Water Disinfection Doser for 2-3 min. and let approximately 20 l (5.28 US gal.) of disinfection solution flow into the container 30 l (8 US gal.).
- (n)Close the outlet valve of the Water Disinfection Doser.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

- (a)Make sure that all potable water shutoff valves are open.
- (b)Make sure that the switch on each water heater is set to the OFF position.
- (c)Put a warning notice in position to tell persons not to use the potable water system.
- (d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

****0N A/C** 226-226, 229-249, 401-401,

- (e)Connect the outlet hose of the Water Disinfection Doser to the fill/drain port of the potable water service panel.
- (f)Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
- (g)Stop the Water Disinfection Doser.
- (h)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (j)Bleed the potable water system:
- 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 322
Jun 01/15

3 l (0.8 US gal.) flow out.

3 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(k)Close the potable water shutoff valve in the lavatories and galleys.

(l)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).

(m)Top up the potable water system:

1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

(n)Leave the solution in the potable water system for 1 hour.

(p)Open the potable water shutoff valve in the lavatories and galleys.

(q)Repeat the steps (h) to (m).

(r)Leave the disinfection solution in the potable water system for a further 0.5 hour.

(s)Open the potable water shutoff valve in the lavatories and galleys.

(t)Disconnect the Water Disinfection Doser and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(u)Remove the safety clips and tags and close the circuit breakers that were opened in Para. 3.B,(1)(k).

(v)Flush the potable water system after disinfection:

1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).

2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

3 Operate the water faucets in the lavatories and galleys to flush them:

a In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.

b In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.

c In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(w)Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:

Refer to national or local authority regulations for valid limits.

(x)If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

****ON A/C 404-500,**

(e)Connect the outlet hose of the Water Disinfection Doser to the

EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

R

KSSU

38-10-00

Page 323
Jun 01/15

- fill/drain port on the potable water service panel.
- (f) Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
- (g) Stop the Water Disinfection Doser.
- (h) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (j) Bleed the potable water system:
- 1 In each lavatory, flush the toilet 15 times.
 - 2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (k) Close the potable water shutoff valve in the lavatories and galleys.
- (l) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (m) Top up the potable water system:
- 1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
- NOTE** : This step replaces the solution lost through the water faucets.
- (n) Leave the disinfection solution in the potable water system for 1 hour.
- (p) Open the potable water shutoff valve in the lavatories and galleys.
- (q) Repeat the steps (h) to (m).
- (r) Leave the disinfection solution in the potable water system for a further 0.5 hour.
- (s) Open the potable water shutoff valve in the lavatories and galleys.
- (t) Disconnect the Water Disinfection Doser and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).
- NOTE** : For disposal of used disinfection solution, refer to national or local authority regulations.
- (u) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 3.B.(1)(k).
- (v) Flush the potable water system after disinfection:
- 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 Operate the toilets and the water faucets in the lavatories and galleys to flush them:
 - a Operate each toilet and flush 15 times.
 - b In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - c In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - d In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (w) Get a sample of the potable water for microbiological analysis.



AIRCRAFT MAINTENANCE MANUAL

NOTE : Recommended max. levels:

Refer to national or local authority regulations for valid limits.

(x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (x).

****ON A/C ALL**

(4) Test for any remaining disinfectant

(a) Use a test strip for free chlorine to test the potable water:

1 Let the water flow over the test strip from the water faucets in the galleys and lavatories.

NOTE : Obey the manufacturer's instructions when you use the test strip.

(b) If the test shows that there is remaining disinfectant in the water, flush the system again.

NOTE : The remaining disinfectant (chlorine) in the system must not be more than the required amount given by the national health authority for drinking water.

(5) Close-Up

(a) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

(b) Remove the warning notices.

(c) Disconnect the hoses-vinyl from the waste-water drain masts.

(d) Remove all containers.

(e) Remove the hose-vinyl from the drain connection on the potable water service panel.

(f) Close the tank fill connection on the water service panel.

(g) Close the potable water service panel access door 136BR and remove the access platform.

(h) Make sure that the switches on the water heaters in the lavatories are set to the ON position.

(j) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).

(k) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

6. Disinfection of the Water Tank and Distribution System with Hydrogen Peroxide (Material No. 14-003H or 14003J) using the Water Disinfection Doser

A. Equipment and Materials

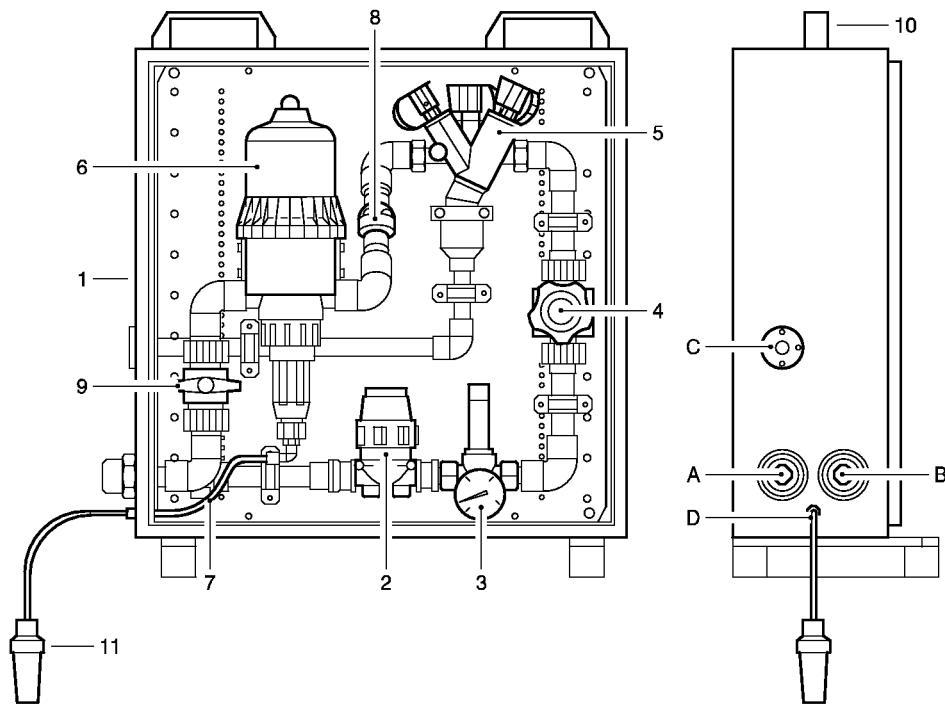
EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 325
Jun 01/15



THE WATER DISINFECTION DOSER IS AN ASSEMBLY OF OFFICIAL AVAILABLE PARTS AND COMPRISES:

- TUBES, HOSES MADE OF DISINFECTIONS WATER RESISTANCE MATERIAL (RESISTANT AGAINST H_2O_2 , 500ppm AND CHLORINE, 100ppm)
- MANIFOLDS

1	BOX
2	FILTER ELEMENT
3	PRESSURE REDUCER WITH MANOMETER
4	MEMBRANE VALVE
5	SYSTEM CUTTER
6	PROPORTIONAL DOSER (DOSATRON)
7	CHEMICAL SUCTION KIT
8	CHECK VALVE
9	VALVE
10	HANDLES
11	CHEMICAL HOSE WITH FILTER
A	WATER INLET (3/4" FEMALE THREAD)
B	WATER OUTLET (3/4" FEMALE THREAD)
C	PRESSURELESS WATER OUTLET
D	CHEMICAL INLET

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Water Disinfection Doser
Figure 301

R

EFFECTIVITY: ALL

KSSU

38-10-00

Page 326
Jun 01/09

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AIRCRAFT MAINTENANCE MANUAL

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Water Service Vehicle
(5)	Hose-Vinyl
(6)	Container 50 l (13 US gal.)
(7)	Container 30 l (8 US gal.)
(8)98F38108656000	Water Disinfection Doser
(9)Material No. 14-004H	Disinfectants (Ref. 20-31-00)
10)Material No. 14-003J	Disinfectants (Ref. 20-31-00)

ITEM	DESIGNATION
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

- Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
- Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make sure that the electronics racks ventilation is correct.
- Open the tank fill connection on the water service panel.
- Position a container below the access door.
- Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- Connect the hose-vinyl to the waste-water drain masts.
- Position a container 50 l (13 US gal.) under each drain mast.
- Drain the potable water system (Ref. 12-24-38, P. Block 1).

****ON A/C 226-226, 229-249,**

- Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	C10
800VU	WATER SYSTEM	2MA	C12
800VU	WATER SYSTEM	1MD	C11
800VU	WATER COMPRESSOR	19MD	E18/19

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 327
Jun 01/15

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MP	C13

**ON A/C 401-401, 404-500,

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

**ON A/C ALL

(2)Preparation of the Water Disinfectant Doser (Ref. Fig. 301)

(a)Before you start the disinfection procedure:

- 1 Do an analysis of the potable water that you will use to fill the potable water system
- 2 Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Before you use the Water Disinfection Doser, make sure that it is correctly calibrated, clean and disinfected (refer to the manufacturer's instructions).

(c)Put the Water Disinfection Doser in position at the potable water service panel 136BR.

(d)Connect the water supply hose to the water inlet of the Water Disinfection Doser.

(e)Put the water outlet hose of the Water Disinfection Doser into a container 30 l (8 US gal.).

(f)Put the small chemical hose with filter into the container with the disinfection solution.

(g)At the Water Disinfection Doser:

CAUTION : THE WATER PRESSURE MUST NOT BE MORE THAN 3.45 BARS (50.0 PSI). A WATER PRESSURE MORE THAN 3.45 BARS (50.0 PSI) CAN CAUSE DAMAGE.

- 1 Adjust the water pressure to between 3.0 bar (43.5 psi) and 3.45 bar (50.00 psi).
- 2 For a hydrogen peroxide solution with 50 percent Hydrogen Peroxide, adjust the proportional doser to a value of 0.09 percent.
- 3 Turn the inlet valve (membrane valve) slightly to open it, but do not fully open it at this time.

(h)Bleed the Water Disinfection Doser:

- 1 Press the bleed button on top of the doser unit to bleed the system.
- 2 Keep the bleed button pushed until only water (no air) comes from the bleed button.

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 328
Jun 01/15

- 3 Release the bleed button.
- (j) Open the outlet valve of the Water Disinfection Doser.
- (k) Slowly open the inlet valve (membrane valve) until it is fully open (the Water Disinfection Doser is self-priming).
- (l) Operate the Water Disinfection Doser until the disinfectant starts to flow into the doser unit without air bubbles in the plastic tube.

NOTE : You can see the disinfectant flow through the plastic tube.
A "clickclack" noise is typical for the DOSATRON unit when it is in operation.

- (m) Operate the Water Disinfection Doser for 2-3 min. and let approximately 20 l (5.28 US gal.) of disinfection solution flow into the container 30 l (8 US gal.).
- (n) Close the outlet valve of the Water Disinfection Doser.

(3) Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

- (a) Make sure that all potable water shutoff valves are open.
- (b) Make sure that the switch on each water heater is set to the OFF position.
- (c) Put a warning notice in position to tell persons not to use the potable water system.
- (d) Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

****0N A/C 226-226, 229-249, 401-401,**

- (e) Connect the outlet hose of the Water Disinfection Doser to the fill/drain port of the potable water service panel.
- (f) Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
- (g) Stop the Water Disinfection Doser.
- (h) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (j) Bleed the potable water system:
- 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (k) Close the potable water shutoff valve in the lavatories and galleys.
- (l) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (m) Top up the potable water system:
- 1 Start the Water Disinfection Doser and fill the potable water

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 329
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

- (n) Leave the solution in the potable water system for 1 hour.
- (p) Open the potable water shutoff valve in the lavatories and galleys.
- (q) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (r) Flush the potable water system with the disinfection solution:
 - 1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.
 - 2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (s) Leave the disinfectant in the potable water system for a further 0.5 hour.
- (t) Disconnect the Water Service Disinfection Doser from the water service panel.
- (u) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 4.B.(1)(k).
- (v) Drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (w) Flush the potable water system with clean water (without disinfectant):
 - 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 5 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (x) Do steps (v) and (w) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
- (y) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

- (z) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(z).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-10-00

Page 330
Jun 01/15

(4) Close-Up

**ON A/C 404-500,

- (e) Connect the outlet hose of the Water Disinfection Doser to the fill/drain port of potable water service panel.
- (f) Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
- (g) Stop the Water Disinfection Doser.
- (h) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (j) Bleed the potable water system:
 - 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.38 US gal.) flow out.
 - 4 Flush the toilets 15 times.
- (k) Close the potable water shutoff valve in the lavatories and galleys.
- (l) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (m) Top up the potable water system:
 - 1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

- (n) Leave the solution in the potable water system for 1 hour.
- (p) Open the potable water shutoff valve in the lavatories and galleys.
- (q) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (r) Flush the potable water system with the disinfection solution:
 - 1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.
 - 2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
 - 5 Flush the toilets 15 times.
- (s) Leave the disinfectant in the potable water system for a further 0.5 hour.
- (t) Disconnect the Water Service Disinfection Doser from the water service panel.
- (u) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 4.B.(1)(k).
- (v) Drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

R EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

KSSU

38-10-00Page 331
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (w) Flush the potable water system with clean water (without disinfectant):
- 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 5 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
 - 6 Flush the toilets 15 times.
- (x) Do steps (v) and (w) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
- (y) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

- (z) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(z).

(4) Close-Up

****ON A/C ALL**

- (a) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
- (b) Remove the warning notices.
- (c) Disconnect the hoses-vinyl from the waste-water drain masts.
- (d) Remove all containers.
- (e) Remove the hose-vinyl from the drain connection on the potable water service panel.
- (f) Close the tank fill connection on the water service panel.
- (g) Close potable water service panel access door 136BR and remove the access platform.
- (h) Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.
- (j) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (k) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

7. Disinfection of the Water Tank and Distribution System with Elsil (Material No. 14-003K) using the Water Disinfection Doser

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 332
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Water Service Vehicle
(5)	Hose-Vinyl
(6)	Test Strip for hydrogen peroxide
(7)	Container 50 l (13 US gal.)
(8)	Container 30 l (8 US gal.)
(9)98F38108656000	Water Disinfection Doser
10)Material No. 14-003F	Disinfectants (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

- Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
- Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make sure that the electronics racks ventilation is correct.
- Open the tank fill connection on the water service panel.
- Position a container below the access door.
- Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- Connect the hose-vinyl to the waste-water drain masts.
- Position a container 50 l (13 US gal.) under each drain mast.
- Drain the potable water system (Ref. 12-24-38, P. Block 1).

****ON A/C 226-226, 229-249,**

- Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	C10
800VU	WATER SYSTEM	2MA	C12
800VU	WATER SYSTEM	1MD	C11
800VU	WATER COMPRESSOR	19MD	E18/19
800VU	WATER SYSTEM	1MP	C13

****ON A/C ALL**

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 333
Jun 01/15

(2) Preparation of the Water Disinfectant Doser (Ref. Fig. 301)

(a) Before you start the disinfection procedure:

- 1 Do an analysis of the potable water that you will use to fill the potable water system
- 2 Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b) Before you use the Water Disinfection Doser, make sure that it is correctly calibrated, clean and disinfected (refer to the manufacturer's instructions).

(c) Put the Water Disinfection Doser in position at the potable water service panel 136BR.

(d) Connect the water supply hose to the water inlet of the Water Disinfection Doser.

(e) Put the water outlet hose of the Water Disinfection Doser into a container 30 l (8 US gal.).

(f) Put the small chemical hose with filter into the container with the disinfection solution.

(g) At the Water Disinfection Doser:

CAUTION : THE WATER PRESSURE MUST NOT BE MORE THAN 3.45 BARS (50.0 PSI). A WATER PRESSURE MORE THAN 3.45 BARS (50.0 PSI) CAN CAUSE DAMAGE.

- 1 Adjust the water pressure to between 3.0 bar (43.5 psi) and 3.45 bar (50.0 psi).

- 2 For a sodium hypochlorite solution with 13 percent free chlorine, adjust the proportional doser to a value of 0.07 percent.

- 3 Turn the inlet valve (membrane valve) slightly to open it, but do not fully open it at this time.

(h) Bleed the Water Disinfection Doser:

- 1 Press the bleed button on top of the doser unit to bleed the system.

- 2 Keep the bleed button pushed until only water and no air comes from the bleed button.

- 3 Release the bleed button.

(j) Open the outlet valve of the Water Disinfection Doser.

(k) Slowly open the inlet valve (membrane valve) until it is fully open (the Water Disinfection Doser is self-priming).

(l) Operate the Water Disinfection Doser until the disinfectant starts to flow into the doser unit without air bubbles in the plastic tube.

NOTE : You can see the disinfectant flow through the plastic tube. A "clickclack" noise is typical for the DOSATRON unit when it is in operation.

(m) Operate the Water Disinfection Doser for 2-3 min. and let approximately 20 l (5.28 US gal.) of disinfection solution flow into the container 30 l (8 US gal.).

(n) Close the outlet valve of the Water Disinfection Doser.

(3) Disinfection of the potable water system

EFFECTIVITY: ALL

R

KSSU

38-10-00Page 334
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

- (a) Make sure that all potable water shutoff valves are open.
- (b) Make sure that the switch on each water heater is set to the OFF position.
- (c) Put a warning notice in position to tell persons not to use the potable water system.
- (d) Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

****ON A/C 226-226, 229-249, 401-401,**

- (e) Connect the outlet hose of the Water Disinfection Doser to the fill/drain port of the potable water service panel.
- (f) Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
- (g) Stop the Water Disinfection Doser.
- (h) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (j) Bleed the potable water system:
 - 1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - 3 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (k) Close the potable water shutoff valve in the lavatories and galleys.
- (l) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (m) Top up the potable water system:
 - 1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

- (n) Leave the solution in the potable water system for 1 hour.
- (p) Open the potable water shutoff valve in the lavatories and galleys.
- (q) Repeat the steps (h) to (m).
- (r) Leave the disinfection solution in the potable water system for a further 0.5 hour.
- (s) Open the potable water shutoff valve in the lavatories and galleys.
- (t) Disconnect the Water Disinfection Doser and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (u) Remove the safety clips and tags and close the circuit breakers that

R EFFECTIVITY: ALL

KSSU

38-10-00

Page 335
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

were opened in Para. 3.B,(1)(k).

(v) Flush the potable water system after disinfection:

- 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
- 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- 3 Operate the water faucets in the lavatories and galleys to flush them:
 - a In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - b In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - c In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(w) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:

Refer to national or local authority regulations for valid limits.

(x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

****ON A/C 404-500,**

(e) Connect the outlet hose of the Water Disinfection Doser to the fill/drain port on the potable water service panel.

(f) Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

(g) Stop the Water Disinfection Doser.

(h) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(j) Bleed the potable water system:

- 1 In each lavatory, flush the toilet 15 times.
- 2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
- 3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
- 4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(k) Close the potable water shutoff valve in the lavatories and galleys.

(l) Depressurize the potable water system (Ref. 38-40-00, P. Block 301).

(m) Top up the potable water system:

- 1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

(n) Leave the disinfection solution in the potable water system for 1 hour.

(p) Open the potable water shutoff valve in the lavatories and galleys.

(q) Repeat the steps (h) to (m).

R EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

KSSU

38-10-00

Page 336
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

- (r) Leave the disinfection solution in the potable water system for a further 0.5 hour.
- (s) Open the potable water shutoff valve in the lavatories and galleys.
- (t) Disconnect the Water Disinfection Doser and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

- (u) Remove the safety clips and tags and close the circuit breakers that were opened in Para. 3.B.(1)(k).
- (v) Flush the potable water system after disinfection:
 - 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
 - 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
 - 3 Operate the toilets and the water faucets in the lavatories and galleys to flush them:
 - a Operate each toilet and flush 15 times.
 - b In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - c In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
 - d In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
- (w) Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

- (x) If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (x).

****ON A/C ALL**

- (4) Test for any remaining disinfectant
 - (a) Use a test strip for hydrogen peroxide to test the potable water:
 - 1 Let the water flow over the test strip from the water faucets in the galleys and lavatories.

NOTE : Obey the manufacturer's instructions when you use the test strip.

- (b) If the test shows that there is remaining disinfectant in the water, flush the system again.

- (5) Close-Up
 - (a) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
 - (b) Remove the warning notices.

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 337
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

- (c) Disconnect the hoses-vinyl from the waste-water drain masts.
- (d) Remove all containers.
- (e) Remove the hose-vinyl from the drain connection on the potable water service panel.
- (f) Close the tank fill connection on the water service panel.
- (g) Close the potable water service panel access door 136BR and remove the access platform.
- (h) Make sure that the switches on the water heaters in the lavatories are set to the ON position.
- (j) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (k) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

8. Sampling of the Potable Water

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

Note : You must make sure that the source from which the potable water is filled (for the use of servicing the potable water system) has drinking water quality. Refer to the national authority regulations.

A. Reason for the Job

To measure the quality of the potable water.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Sterile glass sample bottles.
(2)	1 GLOVES - RUBBER
(3)	1 GUN - SPRAY
(4) Material No. 14-006	DISINFECTANT (SPRAY) (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

C. Procedure

(1) Job Set-up

- (a) Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (b) Get access to the galleys and lavatories.
- (c) Make sure that there is water in the potable water system, if necessary fill the system (Ref. 12-15-38, P. Block 1).

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS

EFFECTIVITY: ALL

KSSU

38-10-00

Page 338
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

1 If you have to fill the potable water system:

- a Take a sample of the water before you fill the system.
- b Put a tag on the sterile glass sample bottle, write the location, the date and the time on the tag.

(d) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(2) Get a Sample of the Potable Water

WARNING : MAKE SURE THAT YOU PUT ALL WATER SAMPLES IN SAMPLING CONTAINERS WHICH THE LABORATORY SUPPLIES. THESE SAMPLING CONTAINERS ARE SPECIALLY PREPARED TO DO MICROBIOLOGICAL TESTS. IF YOU DO NOT USE THE CORRECT CONTAINERS, THIS CAN CAUSE INCORRECT LABORATORY RESULTS. THUS IT WILL NOT BE POSSIBLE TO KNOW THE LEVEL OF CONTAMINATION IN THE POTABLE WATER SYSTEM.

NOTE : Only qualified persons are permitted to take samples.
Use sterile GLOVES - RUBBER.

(a) Get samples from the water faucet at these locations:

- At a galley,
- At a lavatory.

NOTE : You must get the two samples at the farthest point from the potable-water tank.

(b) Apply disinfectant to the nozzle assemblies of the water faucet.

WARNING : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THIS/THESE MATERIAL/S.
USE PROTECTIVE CLOTHING, RUBBER GLOVES, GOGGLES AND A MASK.

1 Apply DISINFECTANTS (Material No. 14-006) to the nozzle assemblies with a GUN - SPRAY and wait 3 minutes.

(c) Before you operate the faucet, put the sterile glass sample bottle in front of the water faucet.

(d) Carefully operate the water faucet for 3 min, then fill the sterile glass sample bottles with water.

(e) Seal the glass sample bottles and make sure that no contamination goes into the bottles.

(f) Put a tag on the glass sample bottles.

(g) Write down the aircraft registration, the system, the location, the date and the time on the tag.

(h) Send the water sample bottles to the hygienic institute for analysis.

(3) Water Quality Analysis

(a) General germ rate

1 The standards for drinking water given by the national authority

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 339
Jun 01/15

Printed in France



AIRCRAFT MAINTENANCE MANUAL

are mandatory.

- 2 AIRBUS recommends the concentration of germs that follows:
Table 1

germs	max. allowed concentration
No. of germs increase at 22 deg.C (68 deg.F) for 44 hours	1000 / 1ml 1000 / 0.034 USfl.oz.
No. of germs increase at 36 deg.C (96.8 deg.F) for 44 hours	100 / 1ml 100 / 0.034 USfl.oz.

NOTE : Table 1 shows the standards for drinking water which are recommended by AIRBUS INDUSTRIE.

(b)Echerichia Coli and Coliform Bacteria

- 1 The standards for drinking water given by the national authority are mandatory.

- 2 AIRBUS recommends the concentration of the Echerichia Coli and Coliform Bacteria that follows:

- There must be no germ of the type Echerichia Coli or Coliform Bacteria in 1000ml (3.38 USfl.oz.).

- (c)If the sample analysis shows values that are higher than the values given in step (1) and (2), do the disinfection of the potable water system.

(4)Close-up

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

- (b)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).

R 9. Flushing of the Potable Water System with Hot Water

WARNING : DO NOT WORK ON THE TOILET WASTE SYSTEM AND THE POTABLE WATER SYSTEM AT THE SAME TIME. THIS WILL PREVENT CONTAMINATION OF THE POTABLE WATER SYSTEM. SUCH CONTAMINATION CAN BE DANGEROUS TO HEALTH.

WARNING : BEFORE YOU DO WORK ON THE POTABLE WATER SYSTEM, CLEAN YOUR HANDS WITH SOAP AND WATER. THIS WILL PREVENT INFECTION. (CONTAMINATION FROM TOILET WASTE IS DANGEROUS TO HEALTH).

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

WARNING : BEFORE YOU FLUSH THE POTABLE WATER SYSTEM WITH HOT WATER, PUT ON PROTECTIVE CLOTHES, GOGGLES AND GLOVES. HOT WATER CAN BURN YOUR

EFFECTIVITY: ALL

KSSU

38-10-00

Page 340
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

EYES AND SKIN. IF YOU GET HOT WATER IN YOUR EYES OR ON YOUR SKIN,
GET IMMEDIATE MEDICAL AID.

NOTE : Before you do the flushing procedure, do an analysis of the water
you will use. Make sure that the result is within the limits
which the national authority has specified for.

A. Reason for the Job
Self Explanatory

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Water Heating Device
(6)	Hose-Vinyl
(7)	GLOVES - RUBBER
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-16-38, P. Block 1	Replenishing Toilets
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet Galley
- 38-10-00, P. Block 301	Potable Water System - Draining
- 38-40-00, P. Block 301	Air Supply

C. Procedure

(1) Job Set-Up

- Position access platform 1 m (3 ft.) and open potable water service panel access door 136BR.
- Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make sure that the electronics racks ventilation is correct.
- Put the Warning Notice in position at the lavatories and the galleys to tell persons not to use the potable water system.
- Open the tank fill connection on the water service panel.
- Position a container below the access door.
- Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
- Connect the hose-vinyl to the waste-water drain masts.
- Position a container 50 l (13 US gal.) under each drain mast.
- Drain the potable water system (Ref. 12-24-38, P. Block 1).

****ON A/C 226-226, 229-249,**

(l) Open, safety and tag the following circuit breakers:

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 341
Jun 01/15

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

****ON A/C 401-401, 404-500,**

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

****ON A/C ALL**

(2)Preparation for Flushing with Hot Water

- (a)Make sure that the water faucets in the lavatories and, if installed, in the wet galleys are in cold position.
- (b)Make sure that the switches on all of the water heaters are set to OFF position.
- (c)If installed, remove the galley water filter element in the wet galley (Ref. 25-30-00, P. Block 301).
 - 1 Remove the caps and the filter elements from the galley filter housings. Do not install new filter elements at this time.
 - 2 Install the caps on the galley filter housing and tighten the clamps.

(3)Flushing of the Potable Water System (PWS) with Hot Water

WARNING : BEFORE YOU FLUSH THE POTABLE WATER SYSTEM WITH HOT WATER, PUT ON PROTECTIVE CLOTHES, GOGGLES AND GLOVES. HOT WATER CAN BURN YOUR EYES AND SKIN. IF YOU GET HOT WATER IN YOUR EYES OR ON YOUR SKIN, GET IMMEDIATE MEDICAL AID.

- (a)Connect the water-heating device to the fill/drain nipple at the potable water service panel.
- (b)Adjust the water-heating device until the filling water is at the correct temperature of 70.0 deg.C (158.00 deg.F) (Refer to manual of the water-heating device).
- (c)Fill the potable water system with 70.0 deg.C (158.00 deg.F) hot water at a pressure of (50.7631 psi) up to the overflow as described (Ref. 12-51-38, P. Block 1).

NOTE : The filling pressure during the filling process must not exceed 6.0 bar (87.0226 psi).

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 342
Jun 01/15

AIRCRAFT MAINTENANCE MANUAL

- (d) Make sure that the potable water system is filled until water comes out of the overflow nipple. Let it flow for 10 seconds.
- (e) Close the fill drain valve 18MA manually.
- (f) Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
- (g) Open the forward drain valve (6MP) manually until approximately 100 l water is discharged, then close the forward drain valve (6MP).

NOTE : The filling pressure during the filling process must not exceed 6.0 bar (87.0226 psi).

- (h) Perform the flushing of the potable water system as described (Ref. 38-10-00, P. Block 301).

WARNING : BE CAREFUL WITH THE 70.0 DEG.C (158.00 DEG.F) HOT WATER, WHICH IS DISCHARGED. IT CAN CAUSE BURNS.

- (j) Make sure that the shut off valves of all lavatories and galleys are open after system flushing.
- (k) If installed, operate the vent valves on the top of water filter housings of the lavatories and the galleys to remove the remaining air in the housings.
- (l) For system flushing operate each faucet in all lavatories and galleys and flush each toilet. Do as follows:

NOTE : Start this procedure at the farthest aft potable water supplied equipment and continue to the forward equipment.

- 1 For a standard warm and cold water supply faucet:

NOTE : An activation of an infrared controlled water faucet for longer than 15 seconds deactivates the faucet. It can be reactivated by putting the hands again into the IR beam.

- a Adjust the faucet to maximum hot water supply.
- b Operate the faucet to let approximately 30.0 l (7.9250 US gal.) of water flow:
 - Fill a container 1 l (1/4 US gal.) 30 times by appropriate operation of each faucet.
 - The unwanted water from the container can be discarded into a washbasin.
- c Adjust the faucet to cold water supply.
- d Operate the faucet to let approximately 5.0 l (1.3208 US gal.) of water flow:
 - Fill a container 1 l (1/4 US gal.) 5 times by appropriate operation of each faucet.
 - The unwanted water from the container can be discarded into a washbasin.

- 2 For the toilets:

- a Flush each toilet a minimum of 10 times.

- (m) Depressurize the potable water system (Ref. 38-10-00, P. Block 301).
- (n) Drain the potable water system (Ref. 12-24-38, P. Block 1).

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 343
Jun 01/15

- (p) Make sure that the potable water system is completely drained.
- (q) Do the steps (c) to (n) three times.
- (r) Make sure that the water which flows out of each faucet during the third flushing cycle will be examined for:
 - Unusual smells
 - Water clarity
 - General contamination
- (s) If the water quality is not satisfactory, do the steps (c) to (n) again until the water quality is satisfactory.
- (t) Disconnect the water-heating device from the fill/drain nipple at the potable water service panel.

(4) Close-Up

- (a) Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
- (b) Do the servicing of the toilet system (Ref. 12-16-38, P. Block 1).
- (c) Do a sampling of the potable water system (Ref. 38-10-00, P. Block 301).
- (d) Remove all containers.
- (e) Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
- (f) Remove the warning notices.
- (g) Disconnect the hose-vinyl from the waste-water drain masts.
- (h) Remove the hose-vinyl from the drain connection on the potable water service panel.
- (j) Close the tank fill connection on the water service panel.
- (k) Close the potable water service panel access door 136BR and remove the access platform.
- (l) Make sure that switches on the water heaters in the lavatories (if installed) are set to the ON position.
- (m) De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (n) Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

R

KSSU

38-10-00

Page 344
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

WATER STORAGE - DESCRIPTION AND OPERATION

****ON A/C 226-226, 229-249, 401-401,**

1. General

Water is stored in two tanks, each having a capacity of 200 l (52 US gal.). They are filled through the fill/drain port at potable water service panel via fill/overflow and drain valve. Water quantity to be stored can be selected using the preselection system which is installed. For distribution, the tanks are pressurized by the air supply system.

****ON A/C 404-500,**

1. General

Water is stored in three tanks, each having a capacity of 200 l (52 US gal.). They are filled through the fill/drain port at potable water service panel via fill/overflow and drain valve. Water quantity to be stored can be selected using the preselection system which is installed. For distribution, the tanks are pressurized by the air supply system.

****ON A/C ALL**

2. Component Location

****ON A/C 226-226, 229-249, 401-401,**

(Ref. Fig. 001)

****ON A/C 404-500,**

(Ref. Fig. 002)

****ON A/C ALL**

FIN		FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
**ON A/C 226-226, 229-249, 401-401,						
	4MA	GAGE-QUANTITY	910VU	136	136BR	38-13-12
	7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
	10MA	SWITCH-LIMIT	910VU	136	136BR	38-42-13
	15MA	UNIT-PRESELECTION CONTROL		138		38-13-14
	16MA	SWITCH-PRESELECTION	863VU	221		38-13-14
R	18MA	VALVE-FILL/OVERFLOW AND DRAIN		136		38-14-11
	381541	TANK-WATER		138		38-11-11
	381542	TANK-WATER		138		38-11-11

EFFECTIVITY: ALL

KSSU

38-11-00

Page 1
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
1	PANEL-POTABLE WATER SERVICE		136	136BR	
2	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	38-00-00
3	POTABLE WATER FILL/DRAIN PORT WITH CAP		136	136BR	
4	PORT-OVERFLOW		136	136BR	
**ON A/C 404-500,					
4MA	GAGE-QUANTITY	910VU	136	136BR	38-13-12
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
10MA	SWITCH-LIMIT	910VU	136	136BR	38-42-13
15MA	UNIT-PRESELECTION CONTROL		138		38-13-14
16MA	SWITCH-PRESELECTION	863VU	221		38-13-14
R 18MA	VALVE-FILL/OVERFLOW AND DRAIN		136		38-14-11
381541	TANK-WATER		138		38-11-11
381542	TANK-WATER		138		38-11-11
381545	TANK-WATER		138		38-11-11
1	PANEL-POTABLE WATER SERVICE		136	136BR	
2	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	38-00-00
3	POTABLE WATER FILL/DRAIN PORT WITH CAP		136	136BR	
4	PORT-OVERFLOW		136	136BR	

**ON A/C ALL

3. Description

**ON A/C 226-226, 229-249, 401-401,

A. Water Tanks (381541, 381542)

The water tanks are installed in the pressurized zone of the RH fuselage at (FR39) between the FWD cargo compartment and wing box. They are constructed of GRP (Glassfiber Reinforced Plastic) material and equipped with mounting provisions for quantity transmitter (7MA) and plate assemblies on which fill/drain, distribution and pressurization plumbing with their associated controls can be installed.

**ON A/C 404-500,

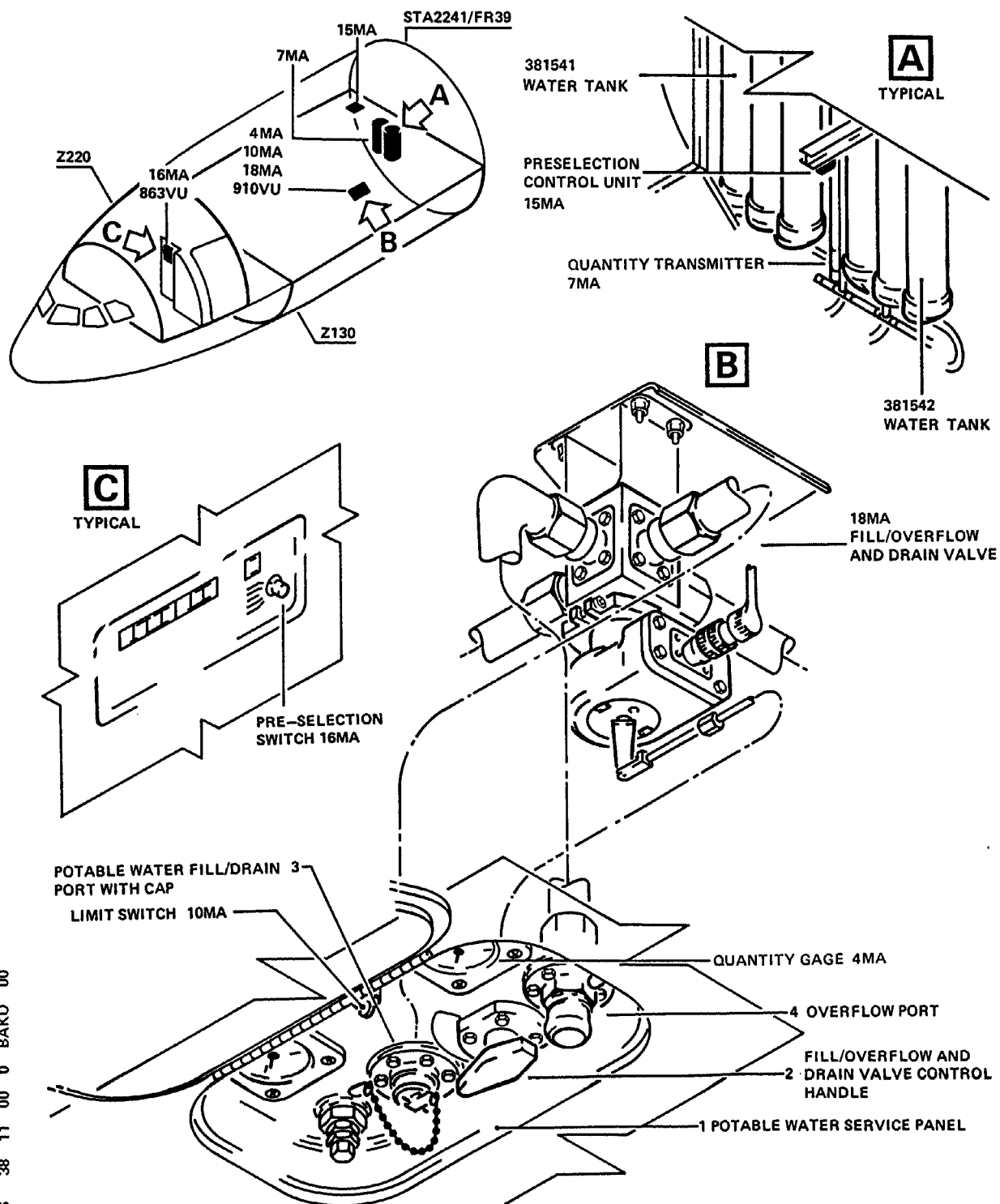
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38-11-00

Page 2
Jun 01/14

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Component Location
Figure 001

EFFECTIVITY: 226-226, 229-249, 401-401,

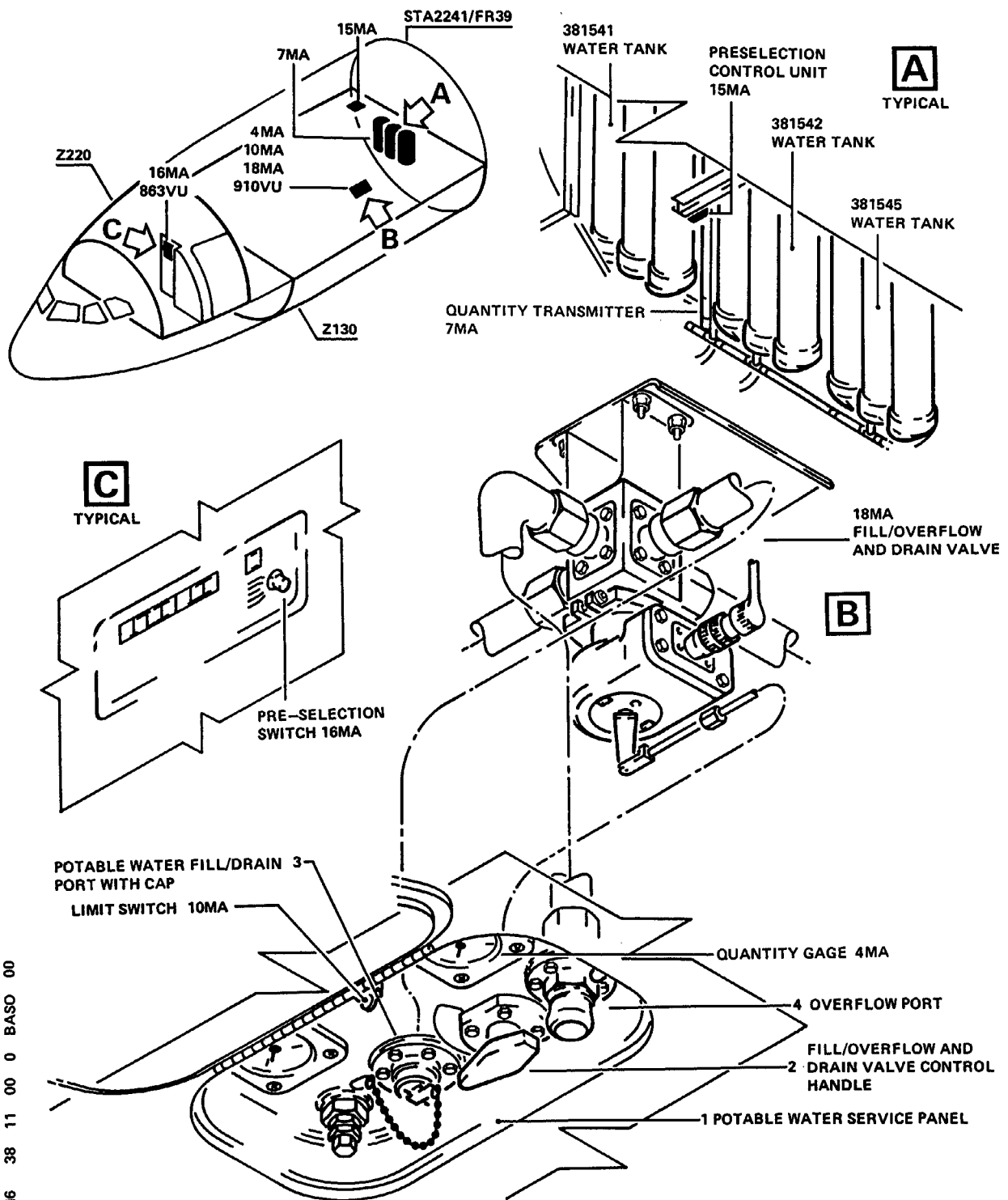
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38-11-00

Page 3
Jun 01/14



Component Location
Figure 002

EFFECTIVITY: 404-500,

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38-11-00

Page 4
Jun 01/14

BMG 38 11 00 0 BASD 00

A. Water Tanks (381541, 381542, 381545)

The water tanks are installed in the pressurized zone of the RH fuselage at (FR39) between the FWD cargo compartment and wing box. They are constructed of GRP (Glassfiber Reinforced Plastic) material and equipped with mounting provisions for quantity transmitter (7MA) and plate assemblies on which fill/drain, distribution and pressurization plumbing with their associated controls can be installed.

****ON A/C ALL****B. Potable Water Service Panel**

The potable water service panel is located on the outer skin RH lower fuselage between (FR38.1) and (FR38.2), and is equipped with the following filling facilities:

- Quantity Gage (4MA)
- Door microswitch (10MA)
- Potable water fill/drain port
- Fill/overflow and drain valve control handle
- Potable water overflow port

C. Preselection System

(Ref. Fig. 003)

The preselection system controls the amount of water to be stored. It consists of:

- Quantity Gage (4MA)
The quantity gage is installed on the potable water service panel and electrically connected to quantity transmitter (7MA) and to limit switch (10MA).
- Preselection Switch (16MA)
The preselection switch is installed on the purser's panel (863VU) and allows the required water quantity to be set in percent. It is connected to the preselection control unit (15MA).

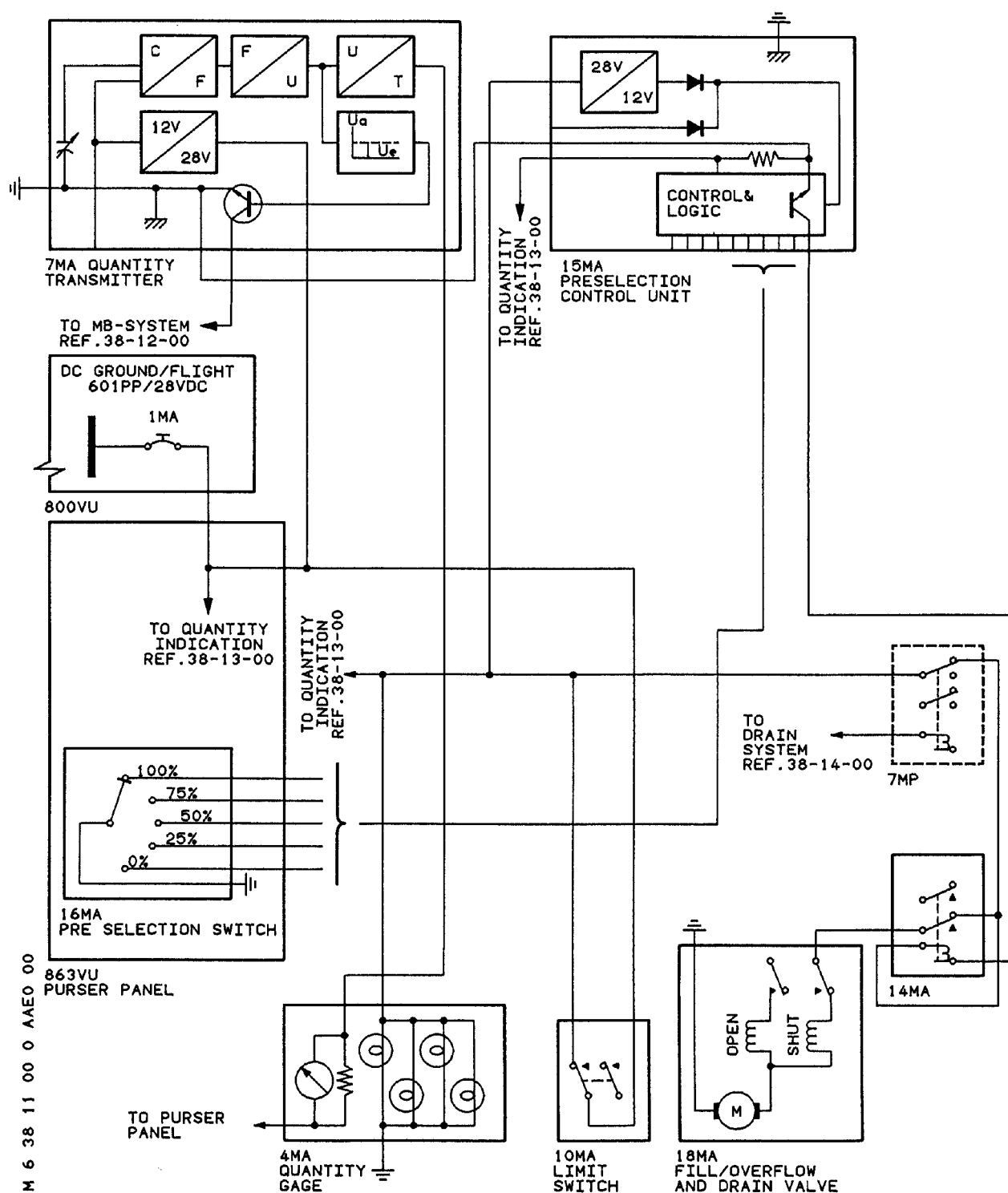
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KSSU

38-11-00

Page 5
Jun 01/98



Electrical Schematic
Figure 003

R EFFECTIVITY: ALL

KSSU

38-11-00

Page 6
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

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- Preselection Control Unit (15MA)

The preselection control unit is installed on the longitudinal crossbeam between (FR38.1) and (FR38.2).

Electrical power is supplied to the preselection control unit (15MA) via circuit breaker (1MA) on circuit breaker panel (800VU) and limit switch (10MA) on the potable water service panel.

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In addition, it is also connected to quantity transmitter (7MA) and to relay (14MA), which controls the fill/overflow and drain valve (18MA).

R

- Fill/Overflow and drain valve (18MA)

It is a 4-way valve installed in between the tank fill and overflow lines. For filling, the valve is manually opened and electrically closed.

4. Operation

The quantity of water to be stored is selected by preselection switch (16MA). For filling, the fill/overflow and drain valve control handle is turned from NORMAL to FILL position and then pulled. This opens the fill/drain and overflow ports.

R

While filling, the quantity transmitter (7MA) sends an electrical signal to quantity gage (4MA), for monitoring the filling progress, and to the preselection control unit (15MA) which compares this with the electrical signal transmitted by the preselection switch (16MA).

When the electrical signals are of equal value, the preselection control unit (15MA) activates relay (14MA), which causes the fill/overflow and drain valve (18MA) to close electrically and the control handle to return to NORMAL position.

R

EFFECTIVITY: ALL

KSSU

38-11-00

Page 7
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

WATER TANK - REMOVAL/INSTALLATION

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags
D.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.03 in.) dia.
E.	Water Quantity Flow Meter
F.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
G.	Packing

****0N A/C** 226-226, 229-249,

H.	Ty-Wraps
J. Material No. 05-022	Special Materials (Ref. 20-31-00)

****0N A/C** 401-401,

H. Material No. 05-022	Special Materials (Ref. 20-31-00)
------------------------	-----------------------------------

****0N A/C** 226-226, 229-249, 401-401,

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Position access platform under FWD cargo compartment door (Z811).
- (3) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (4) Remove FWD cargo compartment fixed partitions (131RW) and (132SW) (Ref. 53-10-55, P. Block 401).

NOTE : For better access, remove access panel (136AR) and ceiling panel (132GC), if necessary (Ref. 25-54-10, P. Block 201).

EFFECTIVITY: 226-226, 229-249, 401-401,

R

KSSU

38-11-11

CONF. 01
Page 401
Jun 01/13

(5)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

B. Removal

R **0N A/C 226-226, 229-249,

(Ref. Fig. 401)

**0N A/C 401-401,

(Ref. Fig. 402)

(1)Remove RH water tank (1) as follows:

(a)Disconnect and remove hose (2) from T-fitting (5) and water quantity transmitter 7MA (10).

(b)Disconnect and remove hose (3) from T-fittings (9, 31).

(c)Disconnect and remove tube (4) from T-fitting (5) and tube (6).

(d)Remove bolts (7), washers (8) and remove tank (1).

(e)Fit blanking caps to T-fittings, hoses, tubes and to water quantity transmitter.

R **0N A/C 226-226, 229-249,

(1)Remove RH water tank (1) as follows:

(a)Disconnect and remove hose (2) from T-fitting (5) and water quantity transmitter 7MA (10).

(b)Disconnect and remove hose (3) from T-fittings (9, 31).

(c)Disconnect and remove hose (4) from tube (6).

(d)Remove bolts (7), washers (8) and remove tank (1).

(e)Fit blanking caps to T-fittings, hoses, tubes and to water quantity transmitter.

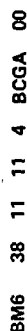
R **0N A/C 226-226, 229-249, 401-401,

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

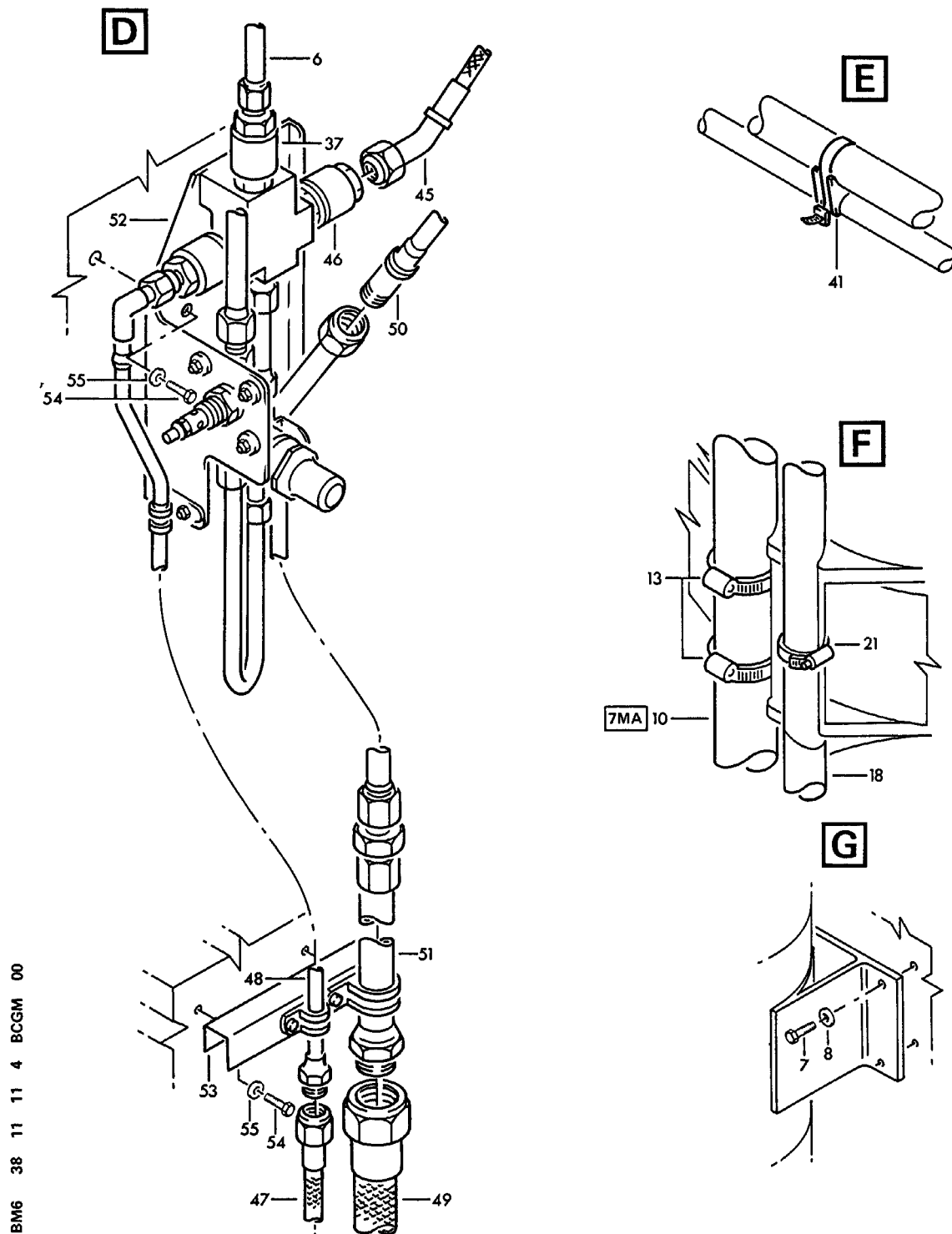
CONF. 01
Page 402
Jun 01/07



Water Tank (sheet 1/2)
Figure 401

KSSU

CONF. 01
Page 403
Jun 01/13



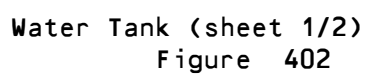
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Water Tank (sheet 2/2)
Figure 401

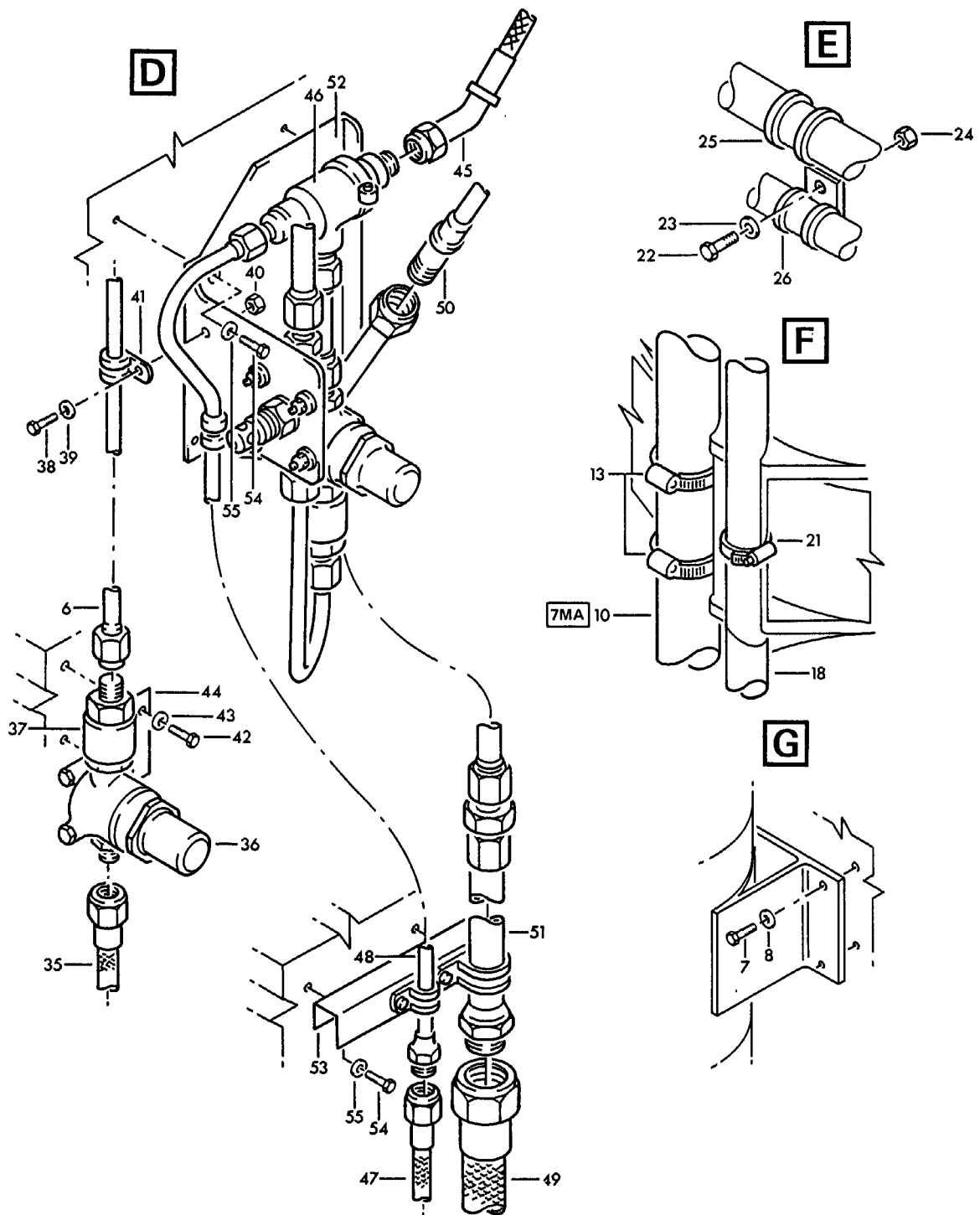
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EFFECTIVITY: 226-226, 229-249,
KSSU

38-11-11
CONF. 01
Page 404
Jun 01/13



CONF. 01
Page 405
Jun 01/13



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Water Tank (sheet 2/2)
Figure 402

EFFECTIVITY: 401-401,

R

KSSU

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38-11-11

CONF. 01
Page 406
Jun 01/13

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE, DO NOT PUSH OR BEND.

(2) Remove water quantity transmitter 7MA (10) as follows:

- (a) Disconnect and cap electrical plug 7MA-A (68) of water quantity transmitter 7MA (10).
- (b) Disconnect and remove hoses (11, 12) from T-fittings (65, 27) and water quantity transmitter 7MA (10).
- (c) Remove water quantity transmitter 7MA (10) by removing clamps (13).
- (d) Fit blanking caps to all openings at water quantity transmitter, hoses and T-fittings.

R **0N A/C 226-226, 229-249,

(3) Remove LH water tank (14) as follows:

- (a) Disconnect and cap electrical plug 19MA-A (15) from pressure switch 19MA (66), electrical plug 20MA-A (16) from pressure transmitter 20MA (64) and electrical plug 22MD-A (17) from pressure switch 22MD (67).
- (b) Disconnect unions of tube (18) at elbow-fittings (19, 20).
- (c) Remove tube (18) by removing clamps (21).
- (d) Disconnect tube (6) from check valve (37).
- (e) Remove tube (6) by removing Ty-wraps with spacers (41).
NOTE : Retain spacers for reinstallation.
- (f) Disconnect hose (29) from T-fitting (27).
- (g) Disconnect and remove tube (30) from T-fittings (31, 32).
- (h) Disconnect and remove tube (33) from T-fittings (28, 34).
- (j) Disconnect hose (45) from check valve (46).
- (k) Disconnect hose (47) from tube (48).
- (l) Disconnect hose (49) and tube (50) from tube (51).
- (m) Remove mounting plate (52) and bracket (53) with attached tubing by removing bolts (54) and washers (55).
- (n) Remove bolts (7), washers (8) and remove tank (14).
- (p) Fit blanking caps to tubes, hoses, elbow-fittings, T-fittings, filter and check valves.

**0N A/C 401-401,

(3) Remove LH water tank (14) as follows:

- (a) Disconnect and cap electrical plug 19MA-A (15) from pressure switch 19MA (66), electrical plug 20MA-A (16) from pressure transmitter 20MA (64) and electrical plug 22MD-A (17) from pressure switch 22MD (67).
- (b) Disconnect unions of tube (18) at elbow-fittings (19, 20).
- (c) Remove tube (18) by removing clamps (21).
- (d) Remove nut (24), washer (23) and bolt (22).
- (e) Remove clamps (25, 26).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01
Page 407
Jun 01/07

- (f) Disconnect hose (29) from T-fitting (27).
- (g) Disconnect and remove tube (30) from T-fittings (31, 32).
- (h) Disconnect and remove tube (33) from T-fittings (28, 34).
- (j) Disconnect hose (35) from filter (36).
- (k) Disconnect tube (6) from check valve (37).
- (l) Remove bolt (38), washer (39) and nut (40).
- (m) Remove tube (6) with clamp (41).
- (n) Remove bolts (42), washers (43) and bracket assembly (44).
NOTE : Retain bracket assembly for reinstallation.
- (p) Disconnect hose (45) from shuttle valve (46).
- (q) Disconnect hose (47) from tube (48).
- (r) Disconnect hose (49) and tube (50) from tube (51).
- (s) Remove mounting plate (52) and bracket (53) with attached tubing by removing bolts (54) and washers (55).
- (t) Remove bolts (7), washers (8) and remove tank (14).

- (u) Fit blanking caps to tubes, hoses, elbow-fittings, T-fittings, filter, check valve and shuttle valve.

R **0N A/C 226-226, 229-249, 401-401,

C. Preparation of Replacement Component

R **0N A/C 226-226, 229-249,

(Ref. Fig. 401)

**0N A/C 401-401,

(Ref. Fig. 402)

R **0N A/C 226-226, 229-249, 401-401,

- (1) Prepare RH water tank (1) as follows:
 - (a) Remove covers (56, 57) from removed tank (1) by removing bolts (58) and washers (59).
NOTE : Retain covers for reinstallation.
 - (b) Remove and discard packing (60).
 - (c) Remove shipping caps from replacement tank (1) and install caps to removed tank (1).
 - (d) Install new packing (60) to replacement tank (1).
 - (e) Position covers (56, 57) on replacement tank (1) and secure with bolts (58) and washers (59).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01
Page 408
Jun 01/07

(2) Prepare LH water tank (14) as follows:

(a) Remove cover (57) from removed tank (14) by removing bolts (58) and washers (59).

NOTE : Retain cover for reinstallation.

(b) Remove lockwire from pressure transmitter 20MA (64) and bolt (62).

(c) Remove bolt (62) and washer (63).

(d) Remove cover (61) by removing bolts (58) and washers (59).

NOTE: Retain cover for reinstallation.

(e) Remove and discard packing (60).

(f) Remove shipping caps from replacement tank (14) and install caps on removed tank (14).

(g) Install new packing (60) on replacement tank (14).

(h) Position covers (57, 61) on replacement tank (14) and secure with bolts (58) and washers (59).

(j) Install bolt (62) with washer (63) on cover (61).

(k) Secure pressure transmitter 20MA (64) with lockwire 0.8 mm (0.03 in.) dia. to bolt (62).

D. Preparation for Installation

R **0N A/C 226-226, 229-249,

(Ref. Fig. 401)

**0N A/C 401-401,

(Ref. Fig. 402)

R **0N A/C 226-226, 229-249, 401-401,

(1) Prepare RH water tank (1) as follows:

(a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.

(2) Prepare LH water tank (14) as follows:

(a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE, DO NOT PUSH OR BEND.

(3) Prepare water quantity transmitter 7MA (10) as follows:

(a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.

R **0N A/C 226-226, 229-249,

(4) Remove all blanking caps from tubes, hoses, T-fittings, elbow-fittings and check valves.

**0N A/C 401-401,

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01

Page 409

Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

(4) Remove all blanking caps from tubes, hoses, T-fittings, elbow-fittings, filter, check valve and shuttle valve.

R **0N A/C 226-226, 229-249, 401-401,

E. Installation

R **0N A/C 226-226, 229-249,

(Ref. Fig. 401)

**0N A/C 401-401,

(Ref. Fig. 402)

R **0N A/C 226-226, 229-249,

(1) Install LH water tank (14) as follows:

- (a) Position tank (14) on brackets and secure with bolts (7) and washers (8).
- (b) Position mounting plate (52) and bracket (53) with attached tubing on tank (14) and secure with bolts (54) and washers (55).
- (c) Connect hose (45) to check valve (46).
- (d) Connect hose (47) to tube (48).
- (e) Connect hose (49) and tube (50) to tube (51).
- (f) Position tube (18) and connect unions to elbow-fittings (19, 20).
- (g) Secure tube (18) by installing clamps (21).
- (h) Connect tube (30) to T-fittings (31, 32).
- (j) Connect hose (29) to T-fittings (27).
- (k) Connect tube (6) to check valve (37) and hose (4).
- (l) Connect tube (33) to T-fittings (28, 34).
- (m) Remove caps and connect electrical plug 19MA-A (15) to pressure switch 19MA (66), electrical plug 20MA-A (16) to pressure transmitter 20MA (64) and electrical plug 22MD-A (17) to pressure switch 22MD (67).
- (n) Position spacers (41) and secure with Ty-wraps.

**0N A/C 401-401,

(1) Install LH water tank (14) as follows:

- (a) Position tank (14) on brackets and secure with bolts (7) and washers (8).
- (b) Position mounting plate (52) and bracket (53) with attached tubing on tank (14) and secure with bolts (54) and washers (55).
- (c) Connect hose (45) to shuttle valve (46).
- (d) Connect hose (47) to tube (48).
- (e) Connect hose (49) and tube (50) to tube (51).
- (f) Position tube (18) and connect unions to elbow-fittings (19, 20).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01
Page 410
Jun 01/07

- (g)Secure tube (18) by installing clamps (21).
- (h)Connect tube (30) to T-fittings (31, 32).
- (j)Connect hose (29) to T-fittings (27).
- (k)Install bracket assembly (44) and secure with bolts (42) and washers (43).
- (l)Position tube (6) with clamp (41) and secure with bolt (38), washer (39) and nut (40).
- (m)Connect tube (6) to check valve (37) and hose (35) to filter (36).
- (n)Connect tube (33) to T-fittings (28, 34).
- (p)Remove caps and connect electrical plug 19MA-A (15) to pressure switch 19MA (66), electrical plug 20MA-A (16) to pressure transmitter 20MA (64) and electrical plug 22MD-A (17) to pressure switch 22MD (67).
- (q)Install clamps (25, 26) and secure with bolt (22), washer (23) and nut (24).

R **0N A/C 226-226, 229-249, 401-401,

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE, DO NOT PUSH OR BEND.

- (2)Install water quantity transmitter 7MA (10) as follows:
 - (a)Position water quantity transmitter 7MA (10) and secure with clamps (13).
 - (b)Position and connect hoses (11, 12) to T-fittings (27, 65) and to water quantity transmitter 7MA (10).
 - (c)Remove cap and connect electrical plug (68) to water quantity transmitter 7MA (10).

**0N A/C 401-401,

- (3)Install RH water tank (1) as follows:
 - (a)Position tank (1) on brackets and secure with bolts (7) and washers (8).
 - (b)Position and connect hose (2) to T-fitting (5) and to water quantity transmitter 7MA (10).
 - (c)Position and connect hose (3) to T-fittings (9, 31).
 - (d)Position and connect tube (4) to T-fitting (5) and to tube (6).

R **0N A/C 226-226, 229-249,

- (3)Install RH water tank (1) as follows:
 - (a)Position tank (1) on brackets and secure with bolts (7) and washers (8).
 - (b)Position and connect hose (2) to T-fitting (5) and to water quantity transmitter 7MA (10).
 - (c)Position and connect hose (3) to T-fittings (9, 31).
 - (d)Position and connect hose (4) to tube (6).

R **0N A/C 226-226, 229-249, 401-401,

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01
Page 411
Jun 01/07

F. Test

NOTE : It is recommended that disinfection procedure (Ref. 38-10-00, P. Block 301) and the following test procedure be accomplished simultaneously.

(1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(2) Make certain that electronics racks ventilation is correct.

(3) Remove safety clips and tags and close circuit breakers 1MA, 1MD and 1MP.

(4) Open potable water service panel access door (136BR).

(5) Perform test.

ACTION	RESULT
1. On purser's panel (863VU): - place preselection switch (16MA) to 25 % position.	
2. On potable water service panel: - replenish potable water system (Ref. 12-15-38, P. Block 1) using external water quantity flow - meter at filling line to verify actual quantity of water.	On potable water service panel: - quantity gage (4MA) indicates selected water quantity. NOTE : The fill/overflow and drain valve (18MA) closes automatically, when selected water quantity is reached.
NOTE : Deviation of + 10 l per 100 l is allowed.	On purser's panel (863VU): - combi gage (22MA) indicates selected water quantity.
- check water tanks and connected lines for leakage.	
NOTE : Leakage is not permissible.	
3. On purser's panel (863VU) and on potable water service panel: - repeat step 1. and 2. with preselection switch (16MA) in position 50 %, 75 % and 100 %.	- for results, see step 2.
4. Pressurize potable water system (Ref. 38-40-00, P. Block 301).	On purser's panel (836VU): - combi gage (22MA) indicates a pressure of approx. 25 psi (1.72 bar). On potable water service panel: - pressure gage (21MA) indicates a pressure of approx. 25 psi (1.72 bar).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01
Page 412
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

ACTION	RESULT
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- check water tanks and connected lines for water and/or air leaks.
NOTE : Leakage is not permissible.

- (6) Remove external water quantity flow meter.
- (7) Drain potable water system (Ref. 12-24-38, P. Block 1), if necessary.
- (8) De-energize the aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).
- (9) Close potable water service panel access door (136BR).

G. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install FWD cargo compartment fixed partitions (131RW) and (132SW) (Ref. 53-10-55, P. Block 401).
NOTE : Install access panel (136AR) and ceiling panel (132GC), if removed (Ref. 25-54-10, P. Block 201).
- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4) Remove access platform.
- (5) If required, disinfect (Ref. 38-10-00, P. Block 301) and replenish potable water system (Ref. 12-15-38, P. Block 1).
- (6) Remove safety clip and tag and close circuit breaker 19MD.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-11-11

CONF. 01
Page 413
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

WATER TANK - REMOVAL/INSTALLATION

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags
D.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.03 in.) dia.
E.	Water Quantity Flow Meter
F.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
G.	Packing
H. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
 - (2) Position access platform under FWD cargo compartment door (Z811).
 - (3) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
 - (4) Remove FWD cargo compartment fixed partitions (131RW) and (132SW) (Ref. 53-10-55, P. Block 401).
- NOTE** : For better access, remove access panel (136AR) and ceiling panel (132GC), if necessary (Ref. 25-54-10, P. Block 201).
- (5) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

R EFFECTIVITY: 404-500,

KSSU

38-11-11

CONF. 02
Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

(1) Remove RH water tank (1) as follows:

- (a) Disconnect and remove hose (2) from T-fitting (3) and water quantity transmitter 7MA (4).
- (b) Disconnect and remove hose (5) from T-fittings (6, 7).
- (c) Disconnect and remove tube (8) from T-fitting (3) and tube (9).
- (d) Remove bolts (10), washers (11) and remove tank (1).
- (e) Fit blanking caps to T-fittings, hoses, tubes and to water quantity transmitter.

(2) Remove LH water tank (12) as follows:

- (a) Disconnect and remove tube (16) from T-fittings (17, 18).
- (b) Disconnect and remove tube (13) from T-fittings (14, 15).
- (c) Disconnect and remove hose (19) from T-Fittings (7, 15).
- (d) Remove bolts (10), washers (11) and remove tank (12).
- (e) Fit blanking caps to T-fittings, tubes and hose.

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.**(3) Remove water quantity transmitter 7MA (4) as follows:**

- (a) Disconnect and cap electrical plug (21) of water quantity transmitter 7MA (4).
- (b) Disconnect and remove hoses (22, 23) from T-fittings (24, 25) and water quantity transmitter 7MA (4).
- (c) Remove water quantity transmitter 7MA (4) by removing clamps (26).
- (d) Fit blanking caps to all openings at water quantity transmitter, hoses and T-fittings.

(4) Remove MID water tank (27) as follows:

- (a) Disconnect and cap electrical plug (28) from pressure switch 19MA (29), electrical plug (30) from pressure transmitter 20MA (31) and electrical plug (32) from pressure switch 22MD (20).
- (b) Disconnect unions of tube (33) at elbow-fittings (34, 35).
- (c) Remove tube (33) by removing clamps (36).
- (d) Remove nut (37), washer (38) and bolt (39).
- (e) Remove clamps (40, 41).
- (f) Disconnect hose (42) from T-fitting (24).
- (g) Disconnect and remove tube (43) from T-fittings (18, 44).
- (h) Disconnect hose (45) from filter (46).
- (j) Disconnect tube (9) from check valve (47).
- (k) Remove bolt (48), washer (49) and nut (50).
- (l) Remove tube (9) by removing clamp (51).
- (m) Remove bolts (52), washers (53) and bracket assembly (54).

NOTE : Retain bracket assembly for reinstallation.

- (n) Disconnect hose (55) from shuttle valve (56).
- (o) Disconnect hose (57) from tube (58).
- (p) Disconnect hoses (59, 60) from tube (61).
- (q) Remove mounting plate (62) and bracket (63) with attached tubing by removing bolts (64) and washers (65).
- (r) Remove bolts (10), washers (11) and remove tank (27).
- (s) Fit blanking caps to tubes, hoses, elbow-fittings, T-fittings, filter, check valve and shuttle valve.

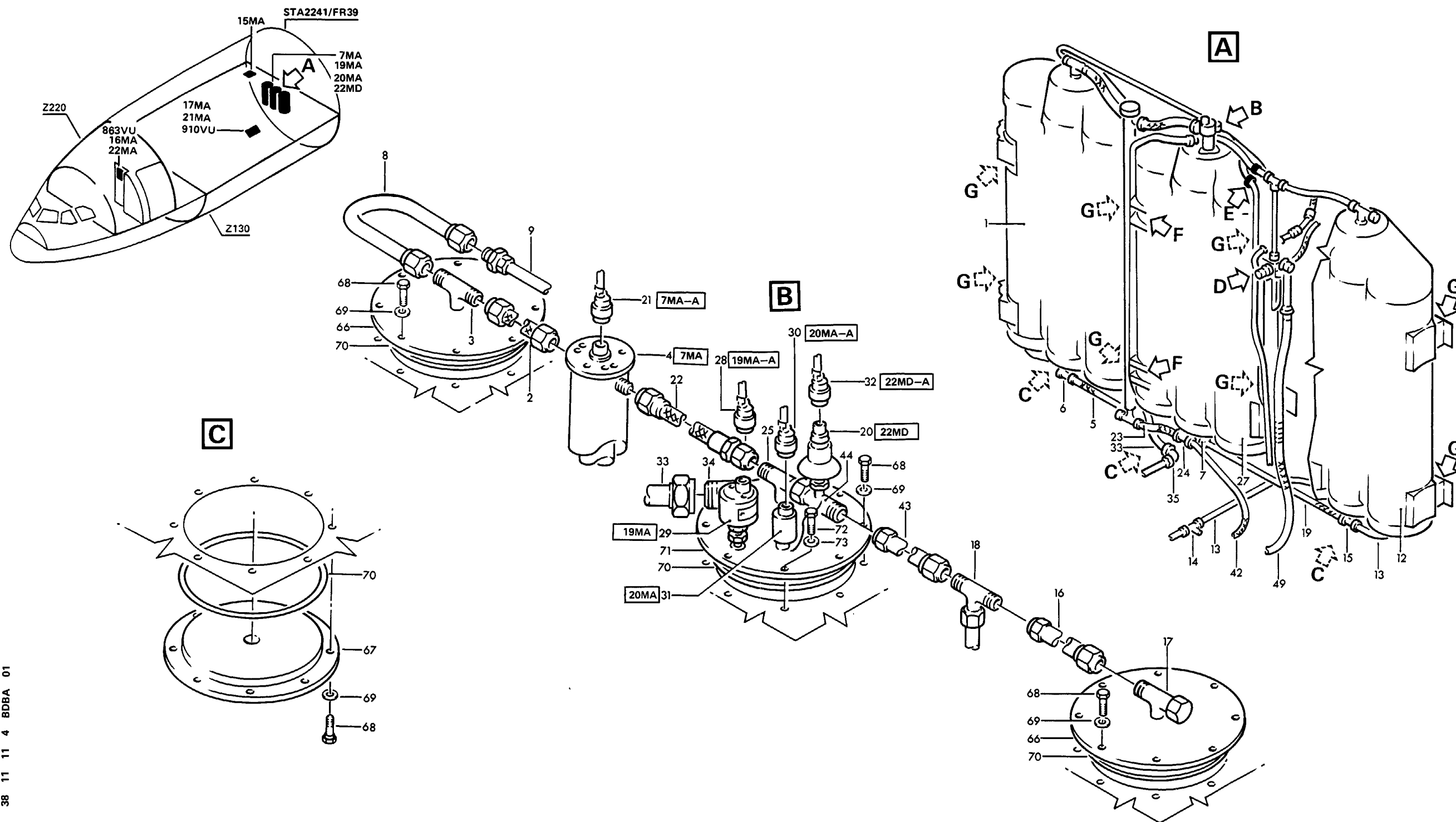
C. Preparation of Replacement Component

(Ref. Fig. 401)

R EFFECTIVITY: 404-500,

KSSU

38-11-11CONF. 02
Page 402
Jun 01/13



Water Tank (sheet 1/2)
Figure 401

BMG 38 11 11 4 BDBA 01

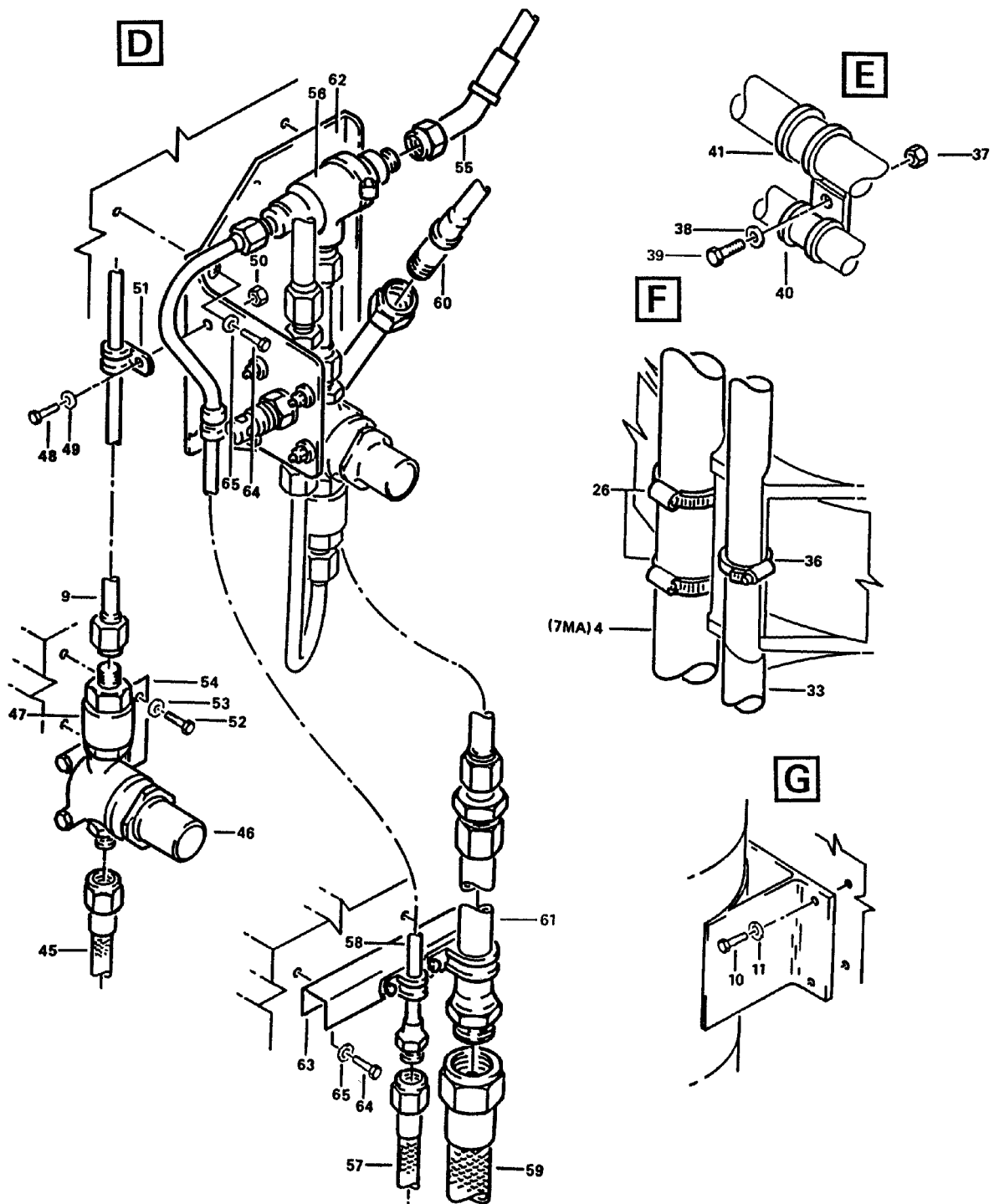
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38-11-11

CONF. 02
Page 403- 404
Jun 01/13



Water Tank (sheet 2/2)
Figure 401

BM6 38 11 11 4 BDBM 00

R EFFECTIVITY: 404-500,

KSSU

38-11-11

CONF. 02
Page 405
Jun 01/13

- (1) Prepare RH water tank (1) as follows:
- (a) Remove covers (66, 67) from removed tank (1) by removing bolts (68) and washers (69).
 - NOTE** : Retain covers for reinstallation.
 - (b) Remove and discard packing (70).
 - (c) Remove shipping caps from replacement tank (1) and install caps to removed tank (1).
 - (d) Install new packing (70) to replacement tank (1).
 - (e) Position covers (66, 67) on replacement tank (1) and secure with washers (69) and bolts (68).
- (2) Prepare LH water tank (12) as follows:
- (a) Remove covers (66, 67) from removed tank (12) by removing bolts (68) and washers (69).
 - NOTE** : Retain covers for reinstallation.
 - (b) Remove and discard packing (70).
 - (c) Remove shipping caps from replacement tank (12) and install caps to removed tank (12).
 - (d) Install new packing (70) to replacement tank (12).
 - (e) Position covers (66, 67) on replacement tank (12) and secure with washers (69) and bolts (68).
- (3) Prepare MID water tank (27) as follows:
- (a) Remove cover (67) from removed tank (27) by removing bolts (68) and washers (69).
 - NOTE** : Retain cover for reinstallation.
 - (b) Remove lockwire from pressure transmitter 20MA (31) and bolt (72).
 - (c) Remove bolt (72) and washer (73).
 - (d) Remove cover (71) by removing bolts (68) and washers (69).
 - NOTE** : Retain cover for reinstallation.
 - (e) Remove and discard packing (70).
 - (f) Remove shipping caps from replacement tank (27) and install caps on removed tank (27).
 - (g) Install new packing (70) on replacement tank (27).
 - (h) Position covers (67, 71) on replacement tank (27) and secure with washers (69) and bolts (68).
 - (j) Install bolt (72) with washer (73) on cover (71).
 - (k) Secure pressure transmitter 20MA (31) with lockwire 0.8 mm (0.03 in.) dia. to bolt (72).

D. Preparation for Installation

(Ref. Fig. 401)

- (1) Prepare RH water tank (1) as follows:
- (a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.
- (2) Prepare LH water tank (12) as follows:
- (a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.
- (3) Prepare MID water tank (27) as follows:
- (a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.

R EFFECTIVITY: 404-500,

KSSU

38-11-11CONF. 02
Page 406
Jun 01/13

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.

(4) Prepare water quantity transmitter 7MA (4) as follows:

(a) Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.

(5) Prepare installation area as follows:

(a) Remove all blanking caps and plugs from tubes, hoses, T-fittings, elbow-fittings, filter, check valve and shuttle valve.

E. Installation

(Ref. Fig. 401)

(1) Install MID water tank (27) as follows:

(a) Position tank (27) on brackets and secure with bolts (10) and washers (11).

(b) Position mounting plate (62) and bracket (63) with attached tubing on tank (27) and secure with bolts (64) and washers (65).

(c) Connect hose (55) to shuttle valve (56).

(d) Connect hose (57) to tube (58).

(e) Connect hoses (59, 60) to tube (61).

(f) Position tube (33) and connect unions to elbow-fittings (34, 35).

(g) Secure tube (33) by installing clamps (36).

(h) Connect hose (42) to T-fitting (24).

(j) Install bracket assembly (54) and secure with bolts (52) and washers (53).

(k) Position tube (9) with clamp (51) and secure with bolt (48), washer (49) and nut (50).

(l) Connect tube (9) to check valve and hose (45) to filter (46).

(m) Position and connect tube (43) to T-fittings (18, 44).

(n) Install clamps (40, 41) and secure with bolt (39), washer (38) and nut (37).

(p) Remove caps and connect electrical plug (28) to pressure switch 19MA (29), electrical plug (30) to pressure transmitter 20MA (31) and electrical plug (32) to pressure switch 22MD (20).

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.

(2) Install water quantity transmitter 7MA (4) as follows:

(a) Position water quantity transmitter 7MA (4) and secure with clamps (26).

(b) Position and connect hoses (22, 23) to T-fittings (24, 25) and water quantity transmitter 7MA (4).

(c) Remove cap and connect electrical plug (21) to water quantity transmitter 7MA (4).

(3) Install LH water tank (12) as follows:

(a) Position tank (12) on brackets and secure with bolts (10) and washers (11).

(b) Position and connect tube (16) to T-fittings (17, 18).

(c) Position and connect hose (19) to T-fittings (7, 15).

(d) Position and connect tube (13) to T-fittings (14, 15).

(4) Install RH water Tank (1) as follows:

- (a) Position tank (1) on brackets and secure with bolts (10) and washers (11).
- (b) Position and connect hose (2) to T-fitting (3) and water quantity transmitter 7MA (4).
- (c) Position and connect hose (5) to T-fittings (6, 7).
- (d) Position and connect tube (8) to T-fitting (3) and to tube (9).

F. Test

NOTE : It is recommended that disinfection procedure (Ref. 38-10-00, P. Block 301) and the following test procedure be accomplished simultaneously.

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Remove safety clips and tags and close circuit breakers 1MA, 1MD and 1MP.
- (4) Open potable water service panel access door (136BR).
- (5) Perform test.

ACTION	RESULT
1. On purser's panel (863VU): - place preselection switch (16MA) to 25 % position.	
2. On potable water service panel: - replenish potable water system (Ref. 12-15-38, P. Block 1) using external water quantity flow meter in filling line to verify actual quantity of water. NOTE : Deviation of + 10 l per 100 l is allowed.	On purser's panel (863VU): - combi gage (22MA) indicates selected water quantity. On potable water service panel: - the fill/overflow and drain valve (18MA) closes automatically and TANK FULL indication light (17MA) comes on, when selected water quantity is reached.
- check water tanks and connected lines for leakage. NOTE : Leakage is not permissible.	
3. Repeat step 1. and 2. with preselection switch (16MA) in position 50 %, 75 % and 100 %.	- for results, see step 2.
4. Pressurize potable water system (Ref. 38-40-00, P. Block 301). - check water tanks and connected lines for water and/or air leaks. NOTE : Leakage is not permissible.	On purser's panel (836VU): - combi gage (22MA) indicates a pressure of approx. 25 psi (1.72 bar). On potable water service panel: - pressure gage (21MA) indicates a pressure of approx. 25 psi (1.72 bar).

R EFFECTIVITY: 404-500,

KSSU

38-11-11

CONF. 02
Page 408
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

- (6) Remove external water quantity flow meter.
- (7) Drain potable water system (Ref. 12-24-38, P. Block 1), if necessary.
- (8) De-energize the aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).
- (9) Close potable water service panel access door (136BR).

G. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

- (2) Install FWD cargo compartment fixed partitions (131RW) and (132SW) (Ref. 53-10-55, P. Block 401).

NOTE : Install access panel (136AR) and ceiling panel (132GC), if removed (Ref. 25-54-10, P. Block 201).

- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).

- (4) Remove access platform.

- (5) If required, disinfect (Ref. 38-10-00, P. Block 301) and replenish potable water system (Ref. 12-15-38, P. Block 1).

- (6) Remove safety clip and tag and close circuit breaker 19MD.

R EFFECTIVITY: 404-500,

KSSU

38-11-11

CONF. 02
Page 409
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

DISTRIBUTION - DESCRIPTION AND OPERATION

1. General

****0N A/C 226-226, 229-249, 401-401,**

The water distribution consists of a system of pipes. The pipes are routed underneath the cabin floor from the water storage system to the respective water faucets in lavatories and galleys.

R **0N A/C 404-500,

The water distribution consists of a system of pipes. The pipes are routed underneath the cabin floor from the water storage system to the respective water faucets in lavatories, galleys and to the toilet bowl flushing system.

****0N A/C ALL**

2. Component Location

****0N A/C 226-226, 229-249,**

(Ref. Fig. 001)

****0N A/C 401-401, 404-500,**

Post COCAUA-DA25-072 For A/C 401-401,404-500,

(Ref. Fig. 002)

****0N A/C ALL**

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
**0N A/C 226-226, 229-249,					
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
19MA	SWITCH-PRESSURE		138		38-41-17
20MB	HEATER-WATER, LAVATORY K		232		38-12-16
27MB	HEATER-WATER, LAVATORY J		231		38-12-16
28MB	HEATER-WATER, LAVATORY N		232		38-12-16
29MB	HEATER-WATER, LAVATORY H		231		38-12-16
32MB	HEATER-WATER, LAVATORY U		262		38-12-16
33MB	HEATER-WATER, LAVATORY V		261		38-12-16
15MD	SWITCH-PUSHBUTTON, SYST. FWD	863VU	221		
16MD	SWITCH-PUSHBUTTON, SYST. AFT	863VU	221		
17MD	VALVE-MOTORIZED, SHUTOFF SYST. FWD		138		38-12-11

EFFECTIVITY: ALL

KSSU

38-12-00

Page 1
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
18MD	VALVE-MOTORIZED, SHUTOFF SYST. AFT		138		38-12-11
381628	VALVE SHUTOFF, MANUAL, LAVATORY J		231		38-12-12
381629	VALVE SHUTOFF, MANUAL, LAVATORY N		232		38-12-12
381647	VALVE SHUTOFF, MANUAL, LAVATORY H		231		38-12-12
381648	VALVE SHUTOFF, MANUAL, LAVATORY K		232		38-12-12
381650	VALVE SHUTOFF, MANUAL, LAVATORY U		262		38-12-12
381652	VALVE SHUTOFF, MANUAL, LAVATORY V		261		38-12-12
381576	FAUCET-WATER, LAVATORY N		232		38-12-15
381577	FAUCET-WATER, LAVATORY H		231		38-12-15
381578	FAUCET-WATER, LAVATORY U		262		38-12-15
381579	FAUCET-WATER, LAVATORY V		261		38-12-15
381808	FAUCET-WATER, LAVATORY J		231		38-12-15
381922	FAUCET-WATER, LAVATORY K		232		38-12-15

**ON A/C 401-401, 404-500,

Post COCAUA-DA25-072 For A/C 401-401,404-500,

7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11*
19MA	SWITCH-PRESSURE		138		38-41-17*
27MB	HEATER-WATER, LAVATORY J		231		38-12-16*
28MB	HEATER-WATER, LAVATORY N		232		38-12-16*
30MB	HEATER-WATER, LAVATORY Z		252		38-12-16*
31MB	HEATER-WATER, LAVATORY Y		251		38-12-16*
32MB	HEATER-WATER, LAVATORY U		262		38-12-16*
33MB	HEATER-WATER, LAVATORY V		261		38-12-16*
15MD	SWITCH-PUSHBUTTON, SYST. FWD	863VU	221		*
16MD	SWITCH-PUSHBUTTON, SYST. AFT	863VU	221		*
17MD	VALVE-MOTORIZED, SHUTOFF SYST. FWD		138		38-12-11*
18MD	VALVE-MOTORIZED, SHUTOFF SYST. AFT		138		38-12-11*
381628	VALVE SHUTOFF, MANUAL, LAVATORY J		231		38-12-12*
381629	VALVE SHUTOFF, MANUAL, LAVATORY N		232		38-12-12*
381650	VALVE SHUTOFF, MANUAL, LAVATORY U		262		38-12-12*
381652	VALVE SHUTOFF, MANUAL, LAVATORY V		261		38-12-12*
381653	VALVE SHUTOFF, MANUAL, LAVATORY Y		251		38-12-12*
381654	VALVE SHUTOFF, MANUAL, LAVATORY Z		252		38-12-12*
381576	FAUCET-WATER, LAVATORY N		232		38-12-15*
381578	FAUCET-WATER, LAVATORY U		262		38-12-15*
381579	FAUCET-WATER, LAVATORY V		261		38-12-15*
381585	FAUCET-WATER, LAVATORY Y		251		38-12-15*
381586	FAUCET-WATER, LAVATORY Z		252		38-12-15*
381808	FAUCET-WATER, LAVATORY J		231		38-12-15*

**ON A/C ALL

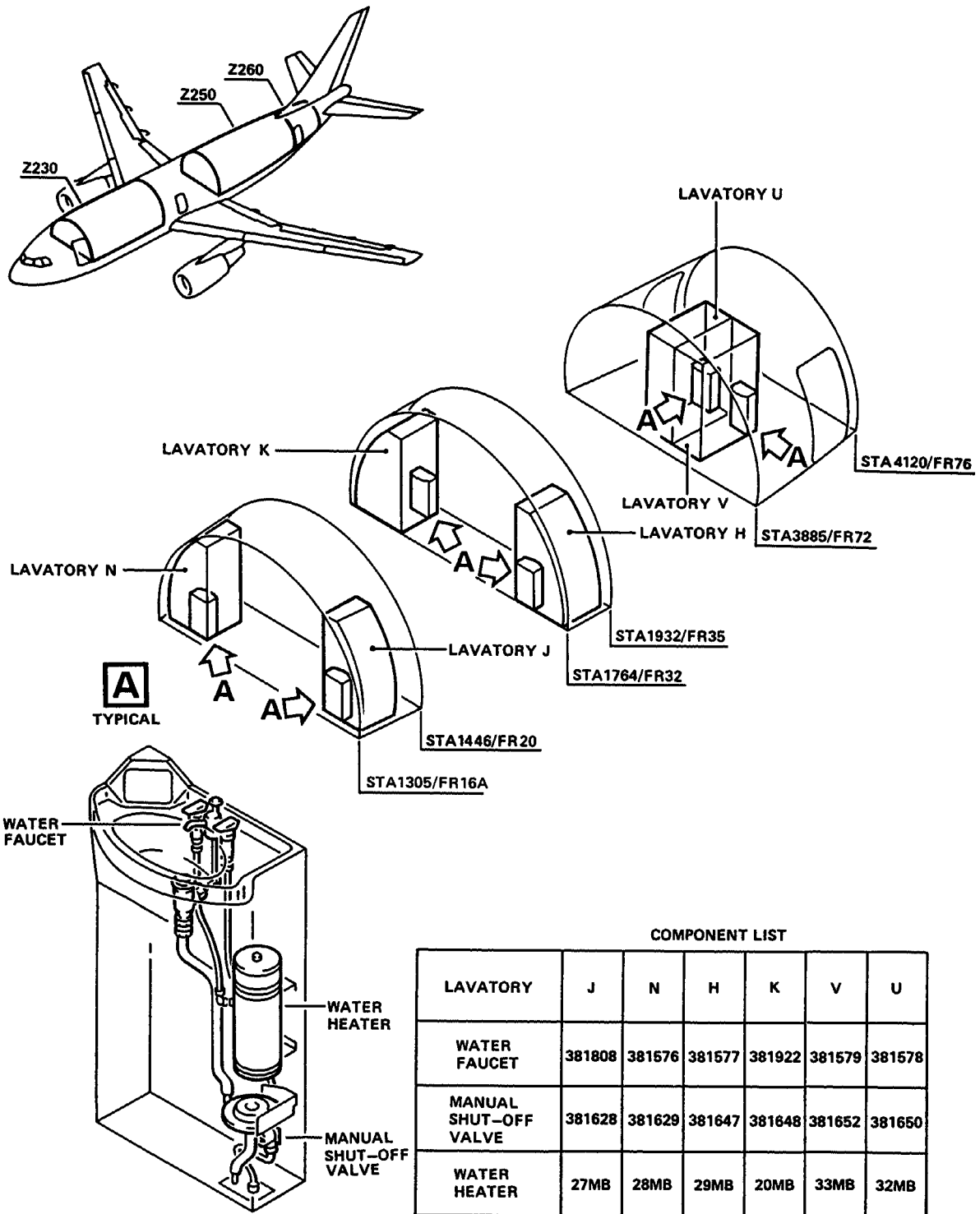
R EFFECTIVITY: ALL

KSSU

38-12-00

Page 2
Jun 01/13

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Component Location (Sheet 1/2)
Figure 001

BM6 38 12 00 0 BAFP 01

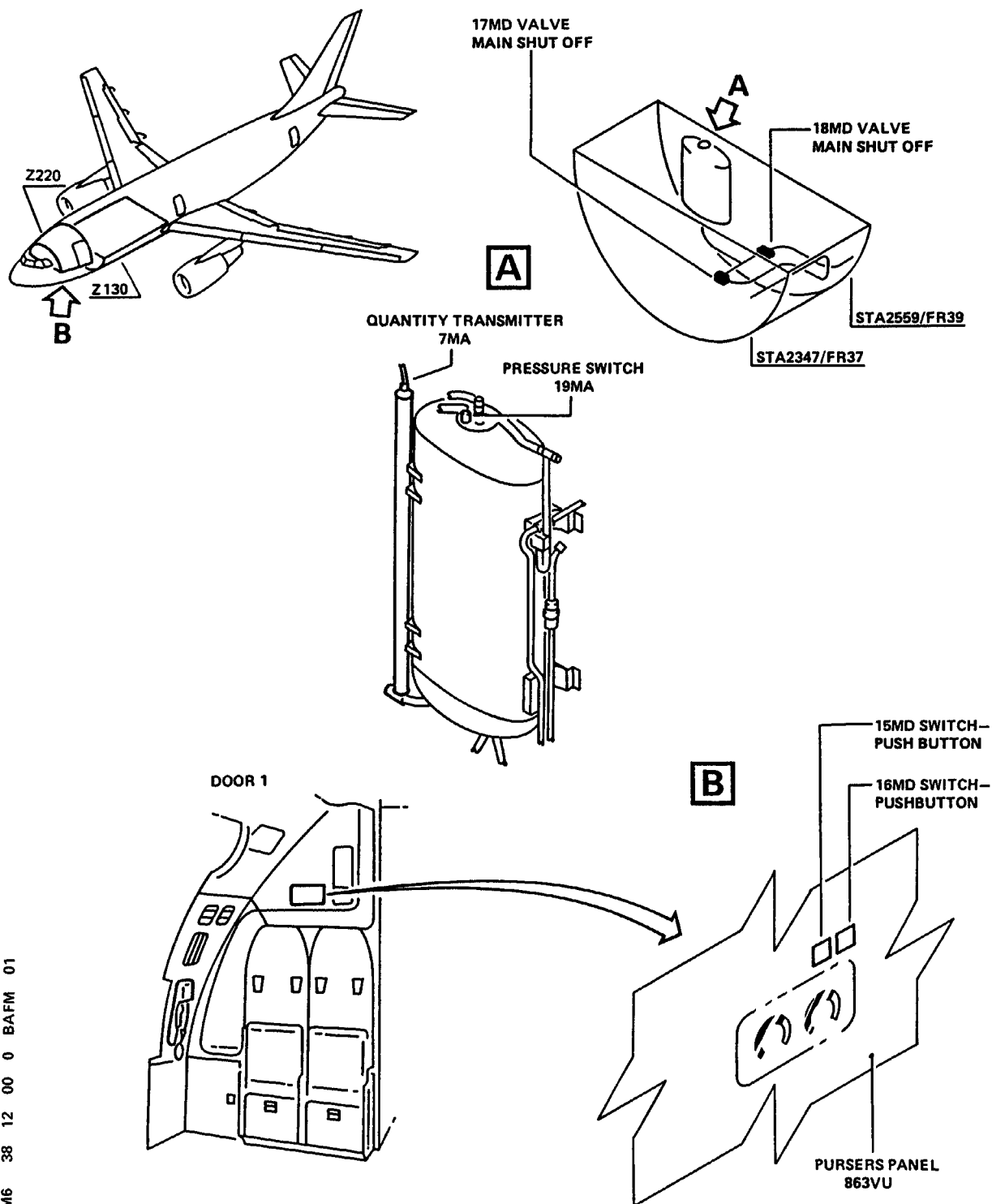
R EFFECTIVITY: 226-226, 229-249,

KSSU

38-12-00

Page 3
Jun 01/13

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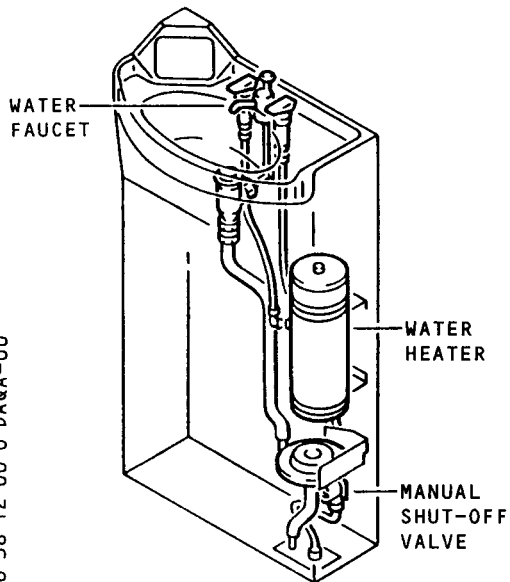
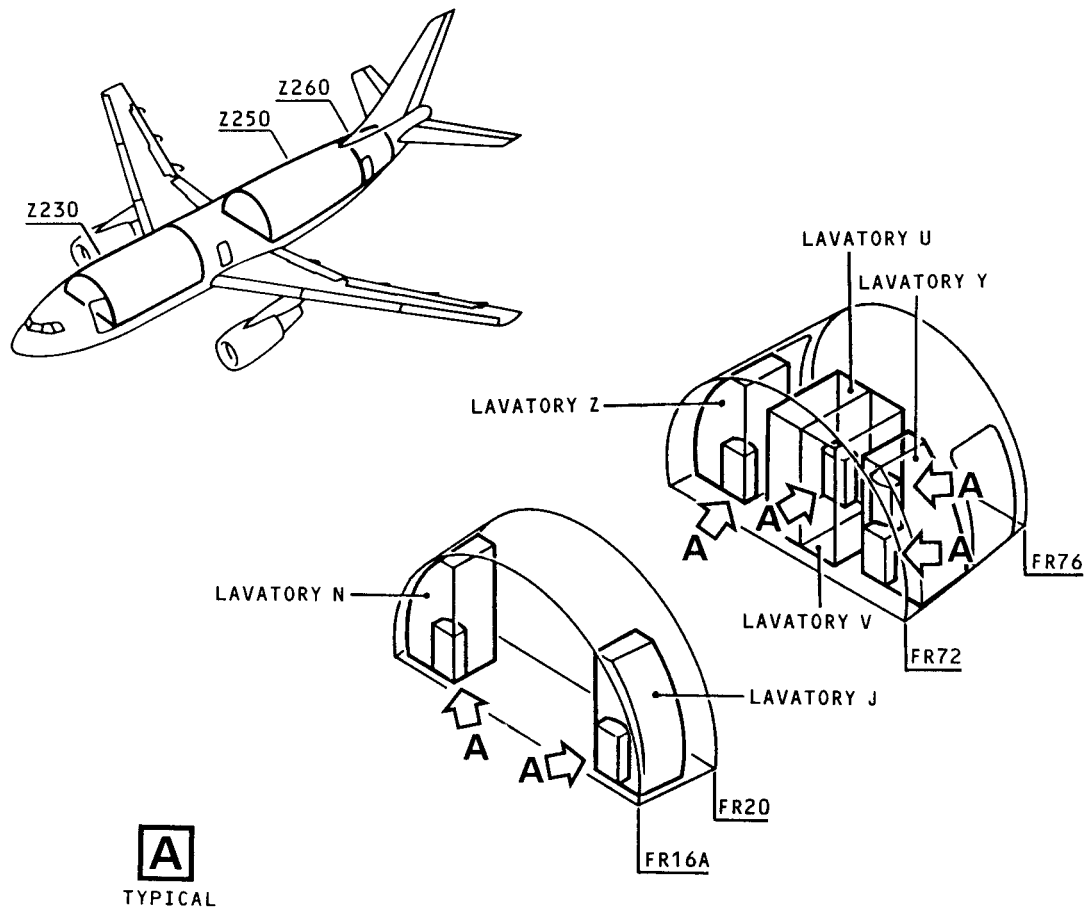
Component Location (Sheet 2/2)
Figure 001

EFFECTIVITY: 226-226, 229-249,

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KSSU

38-12-00



COMPONENT LIST

LAVATORY	J	N	Z	V	U	Y
WATER FAUCET	381808	381576	381586	381579	381578	381582
MANUAL SHUT-OFF VALVE	381628	381629	381654	381652	381650	381653
WATER HEATER	27MB	28MB	30MB	33MB	32MB	31MB

Component Location (Sheet 1/2)
Figure 002

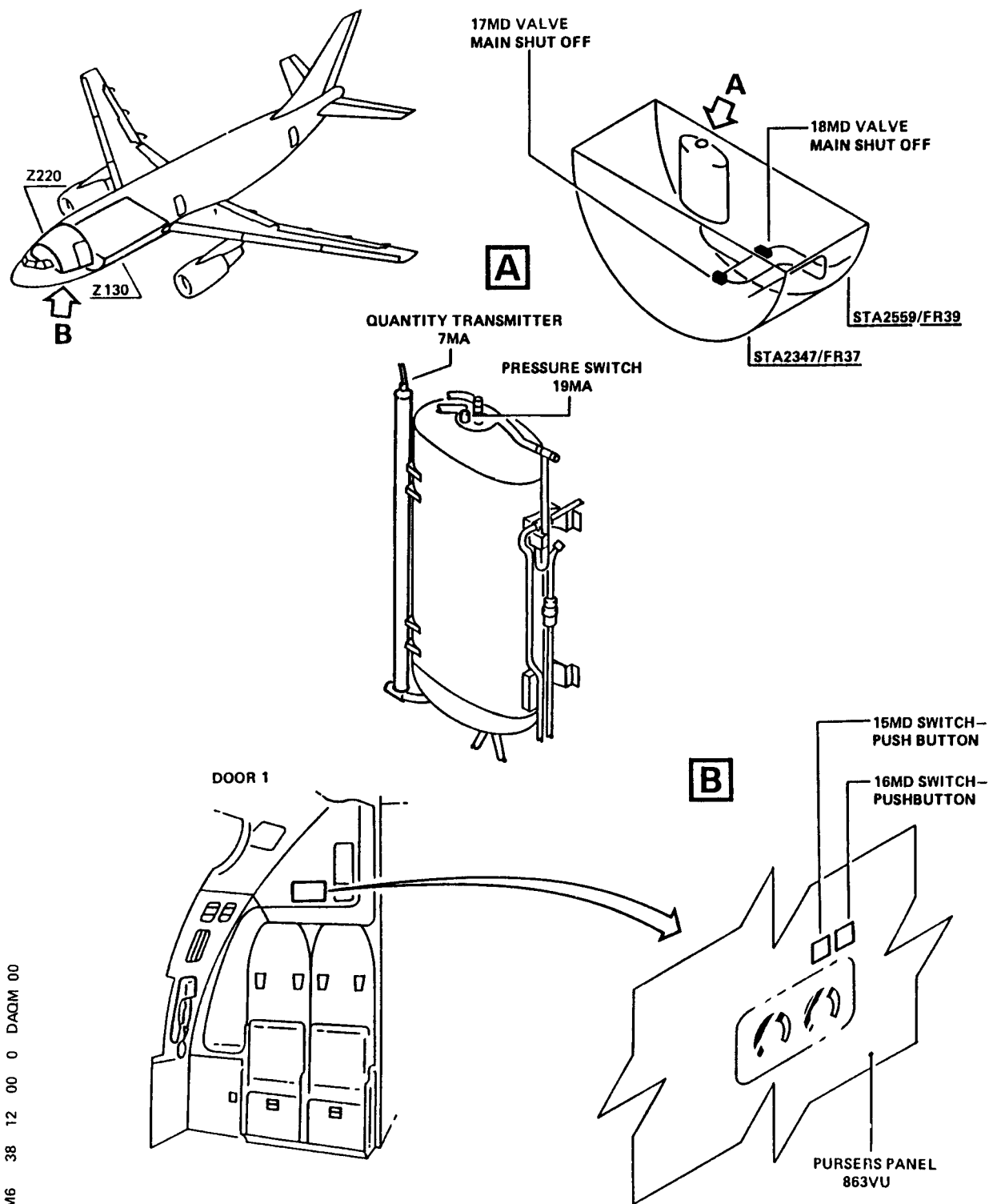
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R EFFECTIVITY: 401-401, 404-500,

KSSU

38-12-00

Page 5
Jun 01/13



Component Location (Sheet 2/2)
Figure 002

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R EFFECTIVITY: 401-401, 404-500,

KSSU

38-12-00

Page 6
Jun 01/13

3. Description

A. Motorized Shutoff Valve

(Ref. Fig. 003)

The two motorized valves (17MD) fwd and (18MD) aft controlled electrically from the purser's panel are normally open. The fwd or the aft system can be isolated from the distribution system by closing the respective valve using pushbutton switches (15MD) fwd or (16MD) aft on the purser's panel (863VU). An indicator light in the respective switch comes on when the valve is closed.

B. Water Faucet

The water faucet consists of two self-venting cartridges, two time delay devices integrated in a common housing, and a common spout.

The unit is connected to the water heater and to the cold water supply lines. Two spring-loaded levers, marked with red and blue for hot and cold water respectively, when pressed down and then released, allow water to flow through the spout for a preset time of 8 - 14 sec.

The water flow stops automatically after the preset time has elapsed.

A rod, connected to the washbasin drain assembly, actuates the poppet of the drain assembly and will remain in selected position.

C. Manual Shutoff Valve

****ON A/C 226-226, 229-249, 401-401,**

The valve allows the supply of potable water to the water faucet via water heater. It is possible to isolate these units from the potable water supply system by closing the valve manually. The 'open' and 'closed' position of the valve is marked.

R **ON A/C 404-500,

The valve allows the supply of potable water to the water faucet via water heater and to the vacuum toilet system. It is possible to isolate these units from the potable water supply system by closing the valve manually. The 'open' and 'closed' position of the valve is marked.

****ON A/C ALL**

D. Water Heater

****ON A/C 226-226, 229-249,**

(Ref. Fig. 004)

****ON A/C 401-401, 404-500,**

Post COCAUA-DA25-072

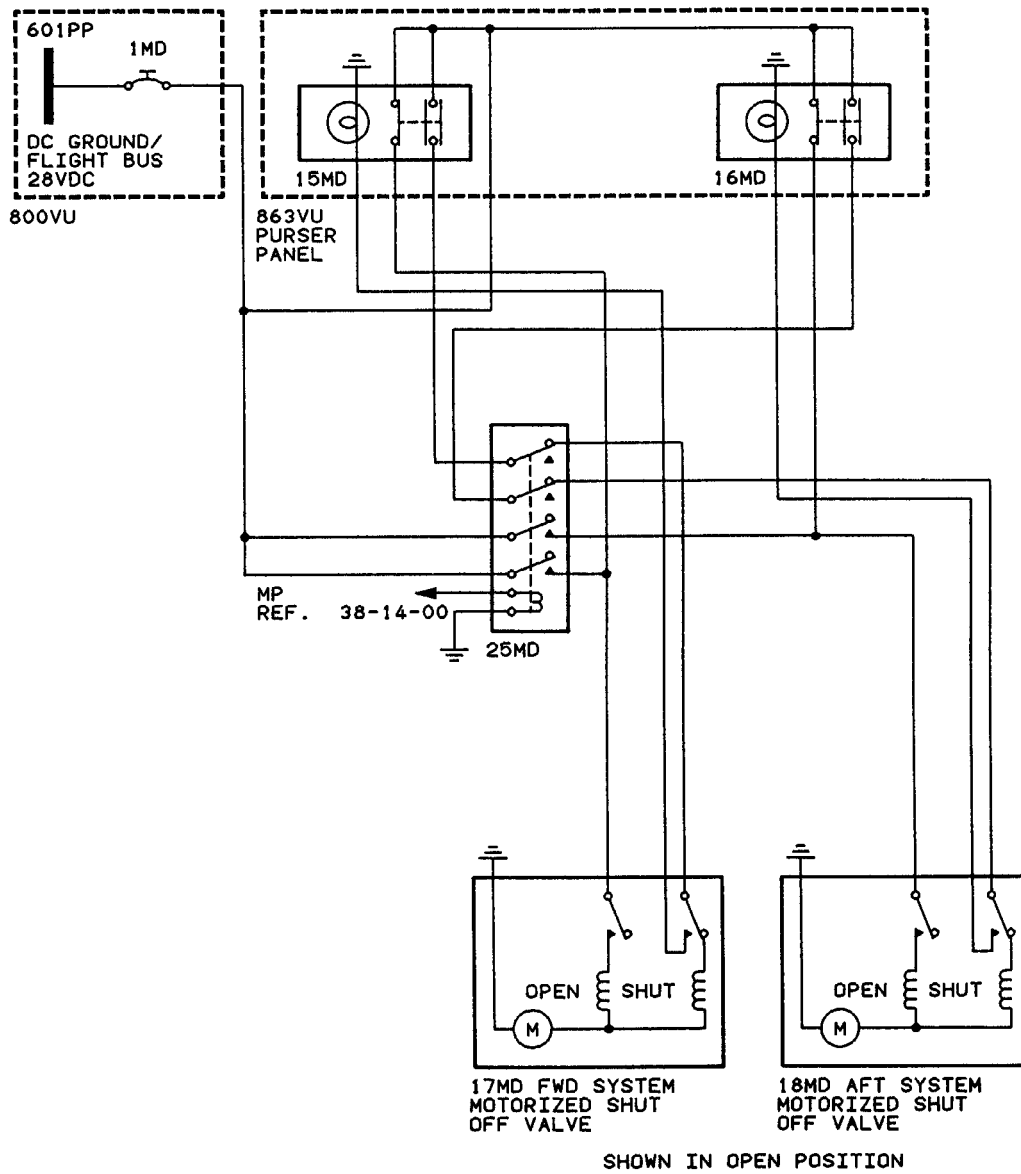
For A/C 401-401,404-500,

R EFFECTIVITY: ALL

KSSU

38-12-00

Page 7
Jun 01/13



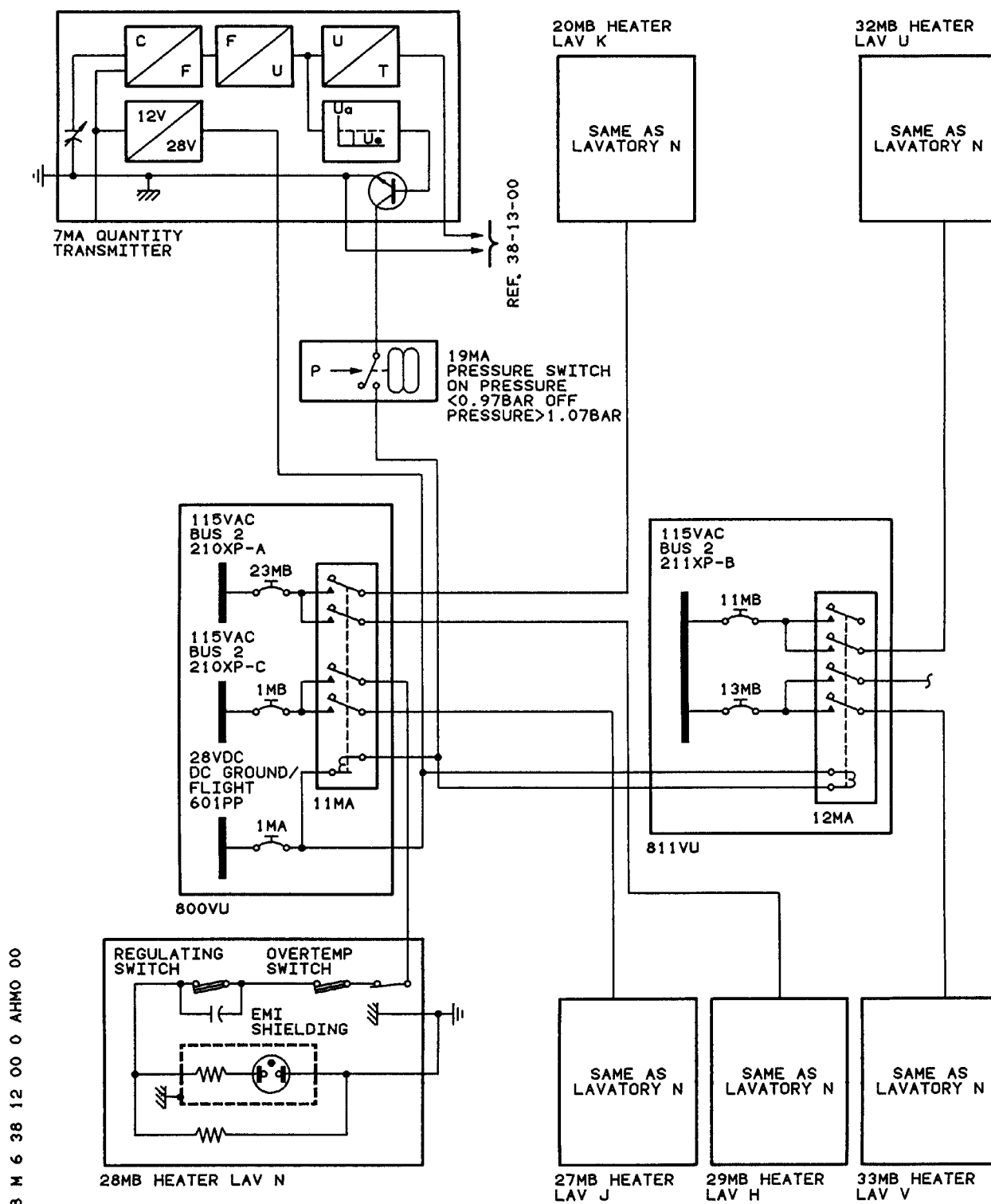
Electrical Schematic
Figure 003

R EFFECTIVITY: ALL

KSSU

38-12-00

Page 8
Jun 01/13



Electrical Schematic
Figure 004

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-12-00

Page 9
Jun 01/13

(Ref. Fig. 005)

****ON A/C ALL**

The water heater is installed under the washbasin with its inlet connected to the potable water supply line and the outlet to the water faucet valve marked for hot water. The amount of water which can be heated at one time is approx. 1.5 l (0.4 US gal.).

With power supply on and the toggle switch of the water heater in ON position, the heating element is energized until a preset temperature is reached at which time the heat cycle switch opens to de-energize the heating element. A pressure switch (19MA), installed on the potable water tank switches on the power supply to the water heater when the system pressure exceeds 15.5 psi (1.07 bar). The pressure switch (19MA) cuts off the power supply to the water heaters when the system pressure drops below 14 psi (0.97 bar). As hot water is replaced by cold water through usage, the temperature drops causing the heat cycle switch to close energizing the heating element again. The heat cycle switch regulates the temperature between +44 °C (111 °F) and +49 °C (120 °F). A safety switch deactivates the heater circuit when a water temperature of 60 °C \pm 5 °C (140 °F \pm 8 °F) has been reached. Manual reset of heater circuit safety switch is possible when temperature has fallen to +35 °C (95 °F) or below. The water quantity transmitter which is located at the tanks contains a low level switch to cut off the power supply to the heater, if the tank contents drops below 10%. The water heater is provided with a pressure relief valve which opens when the pressure reaches 55 psi (3.8 bar).

(Ref. Fig. 006)

4. Operation

****ON A/C 226-226, 229-249,**

(Ref. Fig. 007)

****ON A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

(Ref. Fig. 008)

****ON A/C 404-500,**

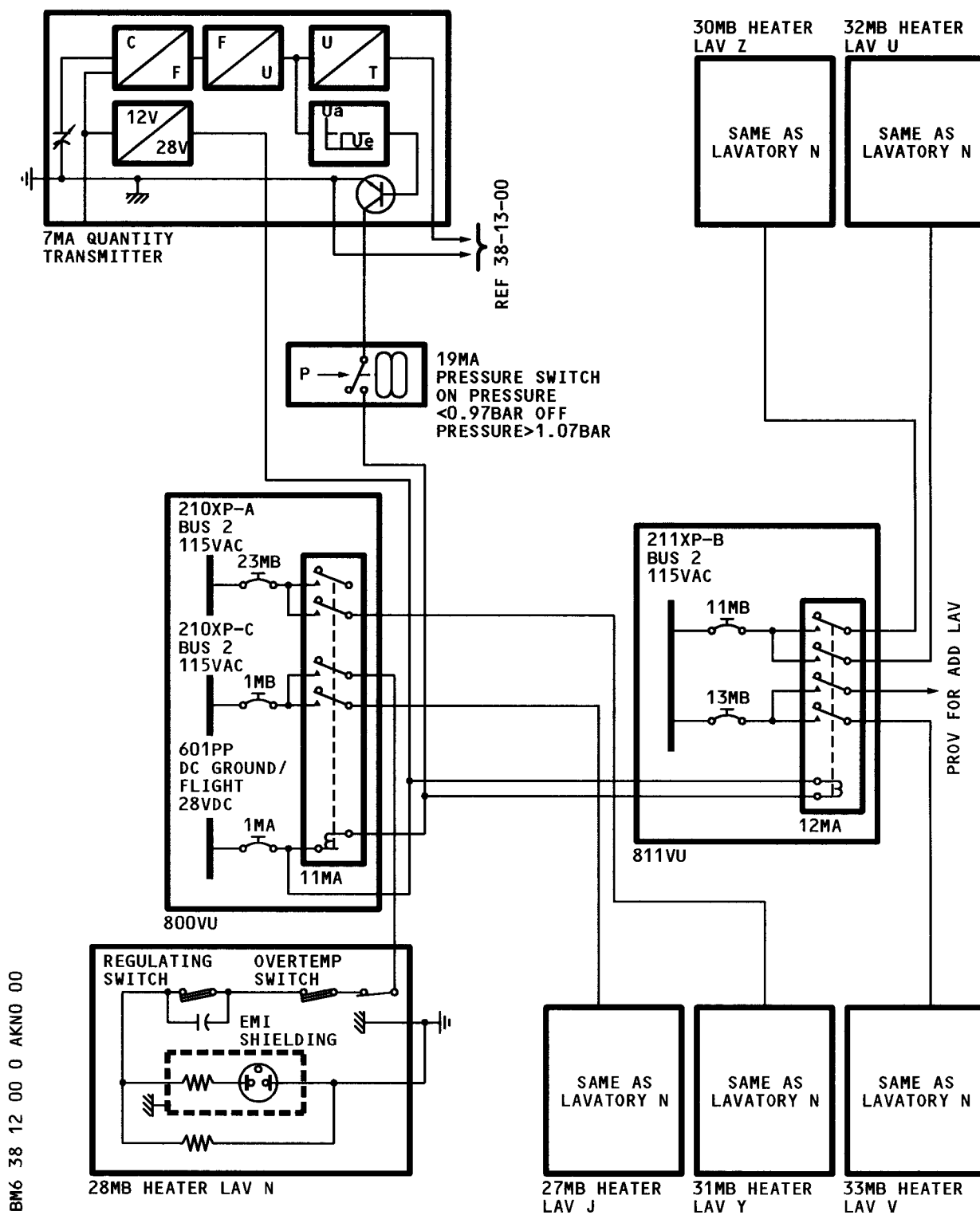
Post COCAUA-DA25-072 For A/C 404-500,

EFFECTIVITY: ALL

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KSSU

38-12-00Page 10
Jun 01/13



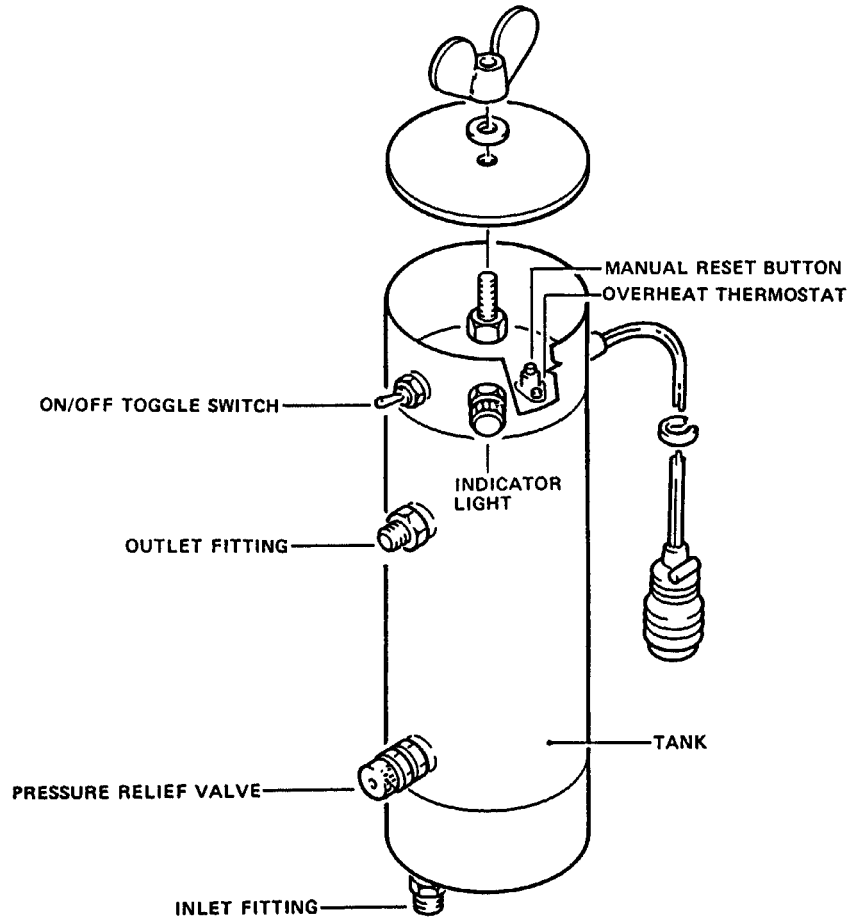
Electrical Schematic
Figure 005

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-12-00

Page 11
Jun 01/13



Water Heater
Figure 006

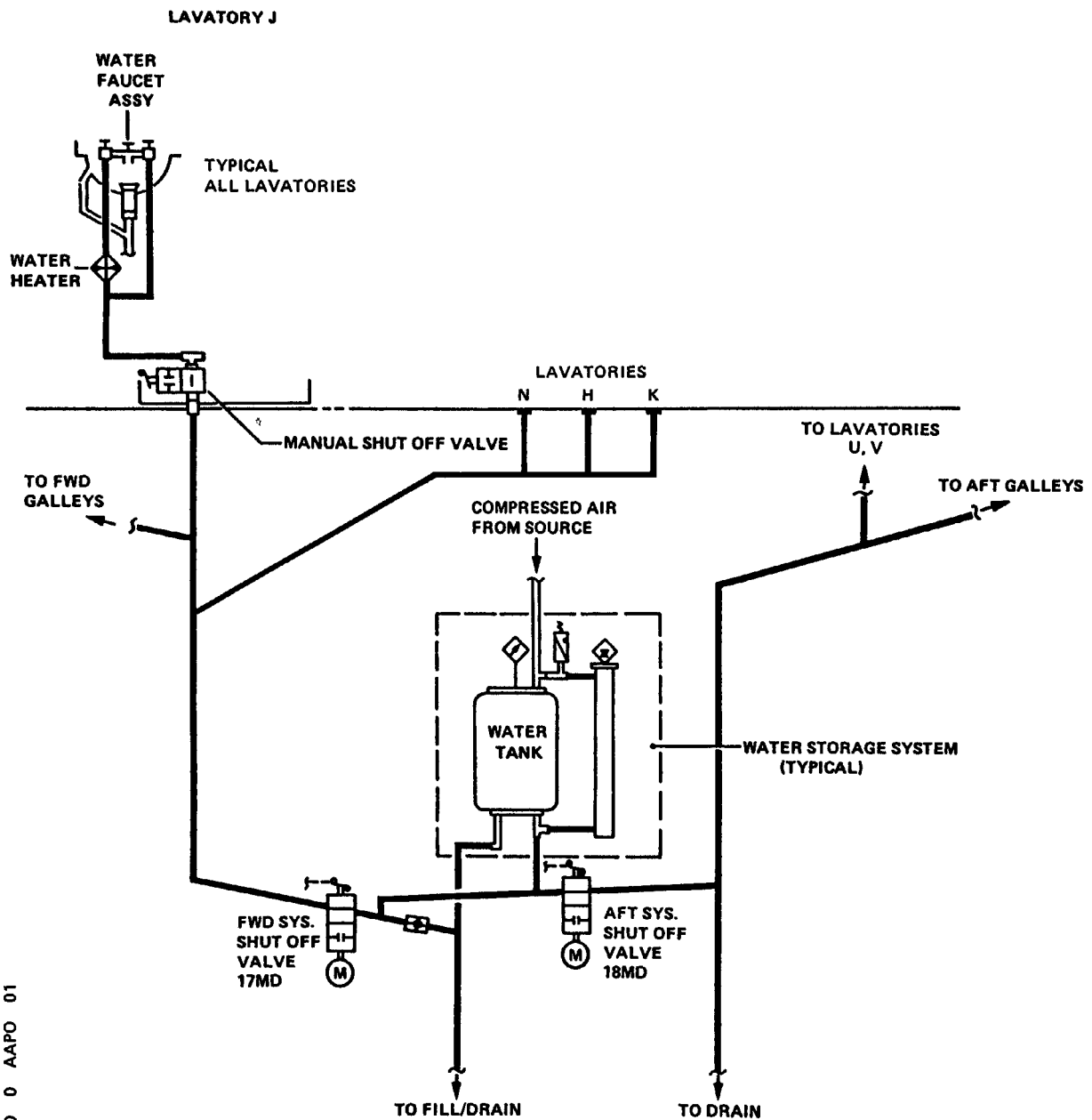
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R EFFECTIVITY: ALL

KSSU

38-12-00

Page 12
Jun 01/13



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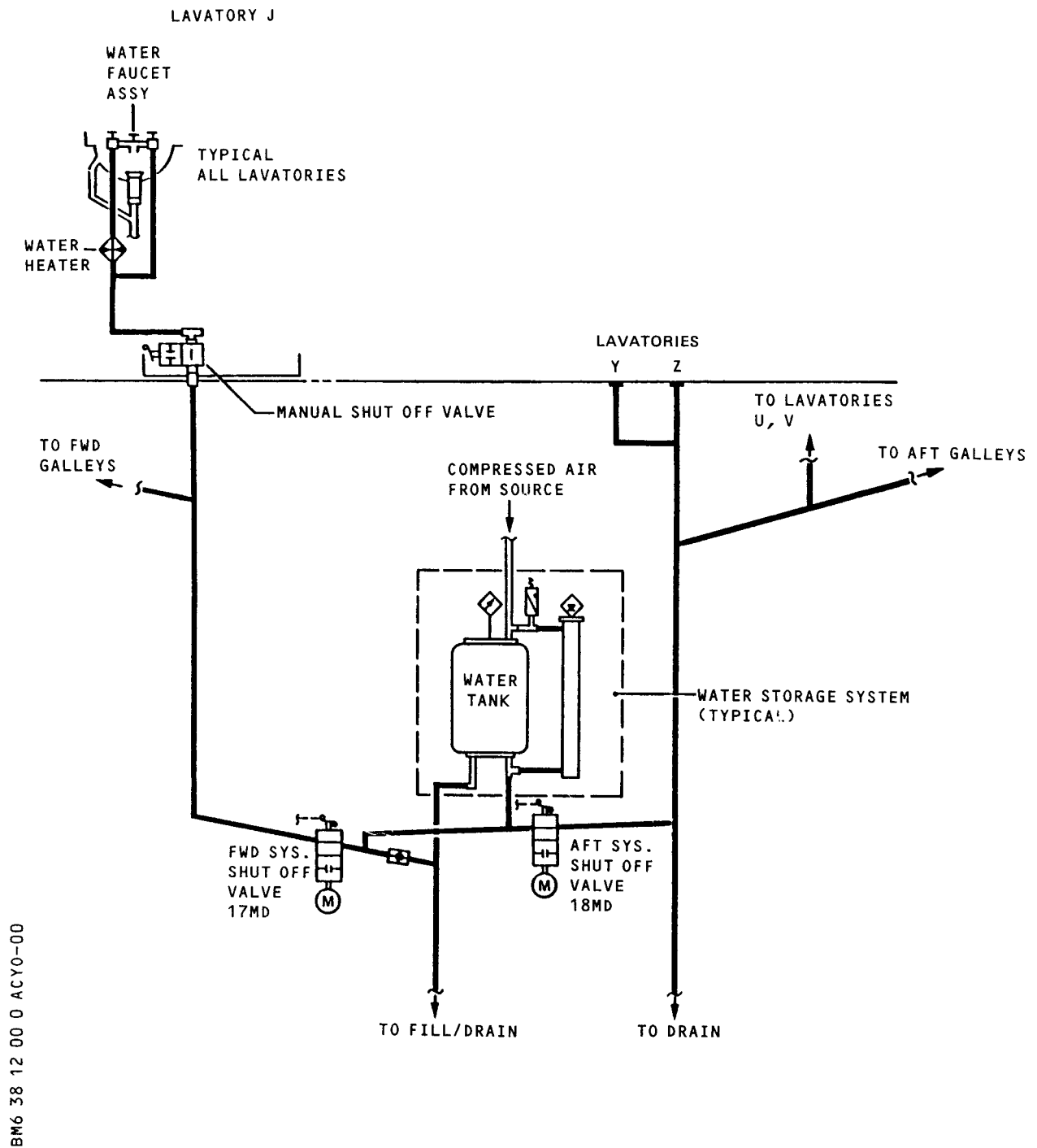
System Diagram
Figure 007

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-12-00

Page 13
Jun 01/13



System Diagram
Figure 008

*

R EFFECTIVITY: 401-401,

KSSU

38-12-00

Page 14
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

(Ref. Fig. 009)

****ON A/C ALL**

Water is transported from the storage system to the various availability locations assisted by compressed air. The potable water distribution system contains mechanically and manually and electrically operated valves. Two main supply lines, installed underneath the cabin floor, lead to the fwd and aft sections of the aircraft. A motorized main shutoff valve (17MD) fwd and (18MD) aft is installed in each of the main supply lines. Individual manual shutoff valves are installed to enable each lavatory compartment and its components to be isolated.

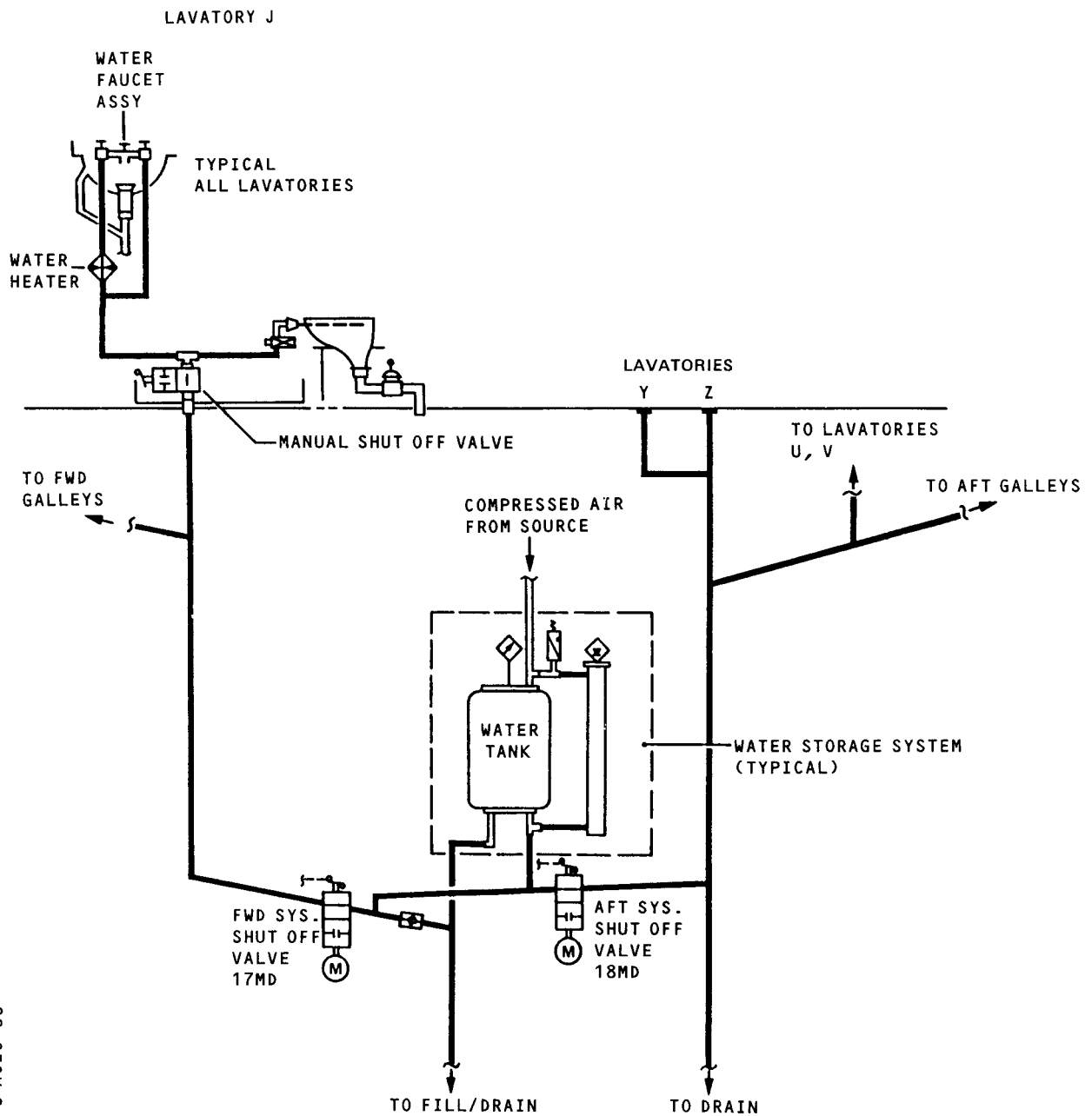
EFFECTIVITY: ALL

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KSSU

38-12-00

Page 15
Jun 01/13



BM6 38 12 00 0 ACZO-00

System Diagram
Figure 009

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R EFFECTIVITY: 404-500,

KSSU

38-12-00

Page 16
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

DISTRIBUTION - ADJUSTMENT/TEST

R 1. System Operational Test

A. Equipment and Materials

****0N A/C** 226-226, 229-249, 401-401,

ITEM	DESIGNATION
(1)	Two Containers - Capacity 60 l (15.85 US gal.)
**0N A/C 404-500,	
(1)	Two Containers - Capacity 80 l (21.14 US gal.)
**0N A/C ALL	
(2)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- (a) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (b) Make certain that electronics racks ventilation is correct.

****0N A/C** 226-226, 229-249, 401-401,

- (c) Replenish potable water system (Ref. 12-15-38, P. Block 1) with 60 l (15.85 US gal.).

****0N A/C** 404-500,

- (c) Replenish potable water system (Ref. 12-15-38, P. Block 1) with 80 l (21.14 US gal.).

****0N A/C** ALL

- (d) Pressurize potable water system (Ref. 38-40-00, P. Block 301).
- (e) Make certain that the following circuit breakers are closed:

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KSSU

38-12-00

Page 501
Jun 01/15

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AIRCRAFT MAINTENANCE MANUAL

PANEL	SERVICE	IDENT.	LOCATION
-------	---------	--------	----------

****0N A/C 226-226, 229-249,**

800VU	WATER SYSTEM	1MA	H 5
800VU	LAVATORY FRONT & MIDDLE/HOT WATER	1MB	G 7
800VU	LAVATORY FRONT & MIDDLE/HOT WATER	23MB	G 8
800VU	WATER SYSTEM	1MD	H 6
811VU	LAVATORY REAR/HOT WATER	11MB	B 4
811VU	LAVATORY REAR/HOT WATER	13MB	B 5

****0N A/C 401-401, 404-500,**

800VU	WATER SYSTEM	1MA	H 5
800VU	LAVATORY FWD & MID/HOT WATER	1MB	G 7
800VU	LAVATORY FWD & MID/HOT WATER	23MB	G 8
800VU	WATER SYSTEM	1MD	H 6
811VU	LAVATORY AFT/HOT WATER	11MB	B 4
811VU	LAVATORY AFT/HOT WATER	13MB	B 5

****0N A/C ALL**

(f)Make certain FWD and AFT motorized shutoff valves (17MD, 18MD) are open.

(g)Make certain water heaters are off, washbasin drain assemblies and manual shutoff valves are open.

(h)Position containers under drain masts.

EFFECTIVITY: ALL

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KSSU

38-12-00

Page 502
Jun 01/13

(2)Test

ACTION	RESULT
1. On washbasins: - Depress cold water faucet. <u>NOTE</u> : When time delayed water faucets are activated, a water flow of approx. 8 - 12 sec. is initiated.	On washbasins: - Water flows from faucet. <u>NOTE</u> : Water drains via drain masts.
2. In sanitary cabinets: - Place manual shutoff valve in CLOSED position.	
3. On washbasins: - Depress cold water faucet again.	On washbasins: - Water flow stops after a while.
4. In sanitary cabinets: - Place manual shutoff valve in OPEN position.	
5. On purser's panel (863VU): - Press pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD).	On purser's panel (863VU): - Indicator lights in the pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD) come on. In A/C underfloor zone 130: - Motorized shutoff valves (17MD) fwd system and (18MD) aft system are in the CLOSED position.
6. On a fwd and aft washbasin: - Depress cold water faucet.	On washbasin: - Water flow stops after a while.
7. On purser's panel (863VU): - Press pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD).	On purser's panel (863VU): - Indicator lights in pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD) go off. In A/C underfloor zone 130: - Motorized shutoff valves (17MD) fwd system and (18MD) aft system are in the OPEN position.
8. On any lavatory water heater: - Place on/off toggle switch in ON position.	On lavatory water heater: - Indicator light comes on.
9. Depressurize potable water system (Ref. 38-40-00, P. Block 301).	On lavatory water heater: - Indicator light goes off. <u>NOTE</u> : Power supply to the water heaters is interrupted by pressure switch (19MA) when pressure reaches a pre-determined minimum value.
10. On lavatory water heater: - Place on/off toggle switch in OFF position.	

EFFECTIVITY: ALL

R

KSSU

38-12-00

Page 503
Jun 01/02

ACTION	RESULT
11. Pressurize potable water system (Ref. 38-40-00, P. Block 301).	
12. On lavatory water heaters: - Place on/off toggle switch in ON position.	On lavatory water heaters: - Indicator light comes on. <u>NOTE</u> : Water must be tepid after approx. 10 minutes.
13. On lavatory water heaters: - Place on/off toggle switch in OFF position.	On lavatory water heaters: - Indicator light goes off.
14. On washbasins: - Depress hot water faucet.	On washbasins: - Water must be tepid and flow free of air bubbles. <u>NOTE</u> : Water drains via drain masts.
15. On any lavatory water heater: - Place on/off toggle switch in ON position.	On lavatory water heater: - Indicator light comes on.
16. On washbasin: - Depress hot water faucet and hold in the OPEN position.	On washbasin: - Water flows continuously from faucet. <u>NOTE</u> : Water drains via drain mast.
	On lavatory water heater: - Indicator light goes off. <u>NOTE</u> : Power supply to the water heaters is interrupted by a low level switch in quantity transmitter (7MA) when the water tank system contents reaches a predetermined minimum level.
17. On washbasin: - Release hot water faucet.	
18. On lavatory water heater: - Place on/off toggle switch in OFF position.	
(3)Close-Up	
(a)Drain potable water system (Ref. 12-24-38, P. Block 1).	
(b)De-energize the aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).	
(c)Remove containers under drain masts.	
(d)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.	

EFFECTIVITY: ALL

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KSSU

38-12-00

Page 504
Jun 01/01



AIRCRAFT MAINTENANCE MANUAL

MOTORIZED SYSTEM SHUTOFF VALVES - REMOVAL/INSTALLATION

R 1. Reason for the Job

R A. Removal of motorized system shutoff valves.

R B. Removal of motorized system shutoff valve actuator.

R 2. Motorized System Shutoff Valves

R A. Equipment and Materials

ITEM	DESIGNATION
R 1.	Circuit Breaker Safety Clips and Tags
R 2.	Blanking Caps and Plugs
R 3.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
R 4. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

R B. Procedure

R (1) Job Set-Up

R (a) Drain potable water system (Ref. 12-24-38, P. Block 1).

R (b) Remove access door 136AR.

R (c) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6

R (2) Removal (Ref. Fig. 401)

R (a) Disconnect electrical connectors (1).

R (b) Install blanking caps to electrical connections.

R (c) Disconnect unions (2, 3).

R (d) Remove nuts (5), washers (6) and bolts (8).

R (e) Remove shutoff valves (4).

R (f) Install blanking caps and plugs to all openings.

R (3) Preparation for Installation (Ref. Fig. 401)

R (a) Remove old sealing tape from fittings.

R (b) Wrap sealing tape (Mat. No. 05-022) around threads of fittings.

R (c) Make certain that shutoff valves (4) are clean and no external damage is visible.

R (d) Remove all blanking caps and plugs from openings and electrical connections.

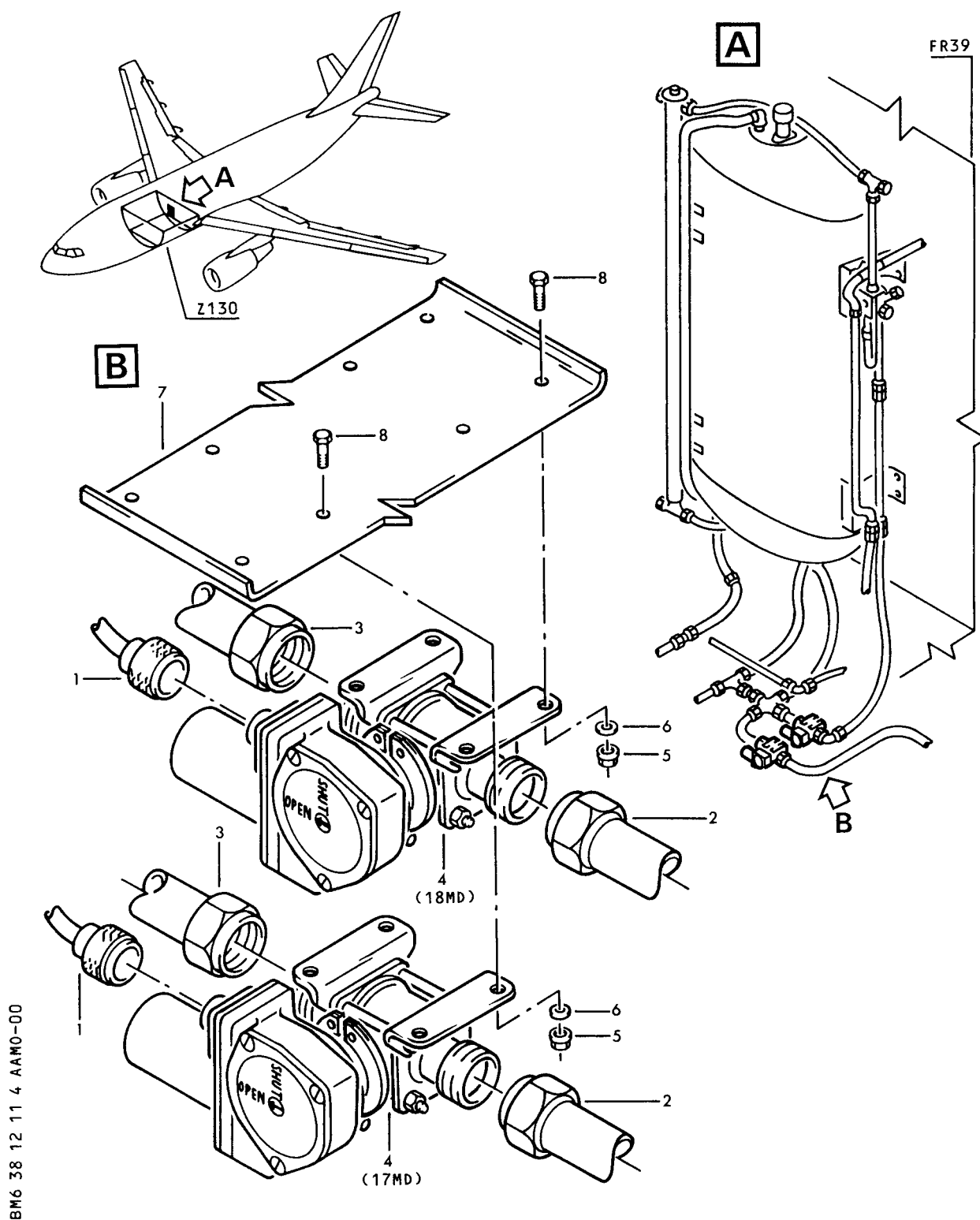
R (4) Installation (Ref. Fig. 401)

EFFECTIVITY: ALL

KSSU

38-12-11

Page 401
Jun 01/05



BM6 38 12 11 4 AAM0-00

Motorized System Shutoff Valves
Figure 401

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KSSU

38-12-11

Page 402
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

- R (a)Put shutoff valves (4) in position under bracket (7).
R (b)Install bolts (8), washers (6) and nuts (5).
R (c)Connect unions (2, 3).
R (d)Connect electrical connectors (1).
R (5)Test
R (a)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
R (b)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
R (c)Check all connections for leakage.
R NOTE : Leakage is not permissible.
R (d)Remove safety clips and tags and close circuit breakers 1MA, 1MD.
R (e)Test

ACTION	RESULT
1. On purser's panel 863VU: - press WATER SYST push-button switches.	On purser's panel 863VU: - switch lights come on. - main shutoff valves close.
2. On purser's panel 863VU: - release WATER SYST pushbutton switches 15MD and 16MD.	On purser's panel 863VU: - switch lights go off. In zone 138: - main shutoff valves open. <u>NOTE</u> : Valve operation audible (motor) and visible (indicator on valves).

- R (6)Close-Up
R (a)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (b)Install access door 136AR.
R (c)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

3. Shutoff Valve Actuator

A. Equipment and Materials

ITEM	DESIGNATION
1.	Circuit Breaker Safety Clips and Tags
2.	Blanking Caps
3.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
4. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

EFFECTIVITY: ALL

KSSU

38-12-11

Page 403
Jun 01/05

R B. Procedure

R (1)Job Set-Up

R (a)Remove access door 136AR.

R (b)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6

R (2)Removal (Ref. Fig. 402)

R (a)Disconnect the electrical connector (6).

R (b)Install the blanking caps on the electrical connections.

R (c)Remove the screw (4) and the clamp (3).

R (d)Remove the actuator (5) from the shutoff valve (2).

R (3)Installation (Ref. Fig. 402)

R (a)Install the actuator (5) on the shutoff valve (2).

R **NOTE** : Install the actuator (5) so that the slot in the base
R aligns with the dowel (1) in the valve body (2).

R (b)Install the clamp (3) and tighten the screw (4).

R (c)Remove the blanking caps from the electrical connections.

R (d)Connect the electrical connector (6).

R (4)Test

R (a)Connect electrical ground power unit and energize aircraft electrical
R network (Ref. 24-41-00, P. Block 301).

R (b)Replenish potable water system (Ref. 12-15-38, P. Block 1) and
R pressurize water system (Ref. 38-40-00, P. Block 301) if necessary.

R (c)Remove safety clips and tags and close circuit breakers 1MA, 1MD.

R (d)Test

ACTION	RESULT
1. On purser's panel 863VU: - press WATER SYST push- button switches 15MD and 16MD.	On purser's panel 863VU: - switch lights come on. - main shutoff valves close.
2. On purser's panel 863VU: - release WATER SYST pushbutton switches 15MD and 16MD.	On purser's panel 863VU: - switch lights go off. In zone 138: - main shutoff valves open. NOTE : Valve operation audible (motor) and visible (indicator on valves).

R (5)Close-Up

R (a)Make certain that working area is clean and clear of tools and miscel-
R laneous items of equipment.

R (b)Install access door 136AR.

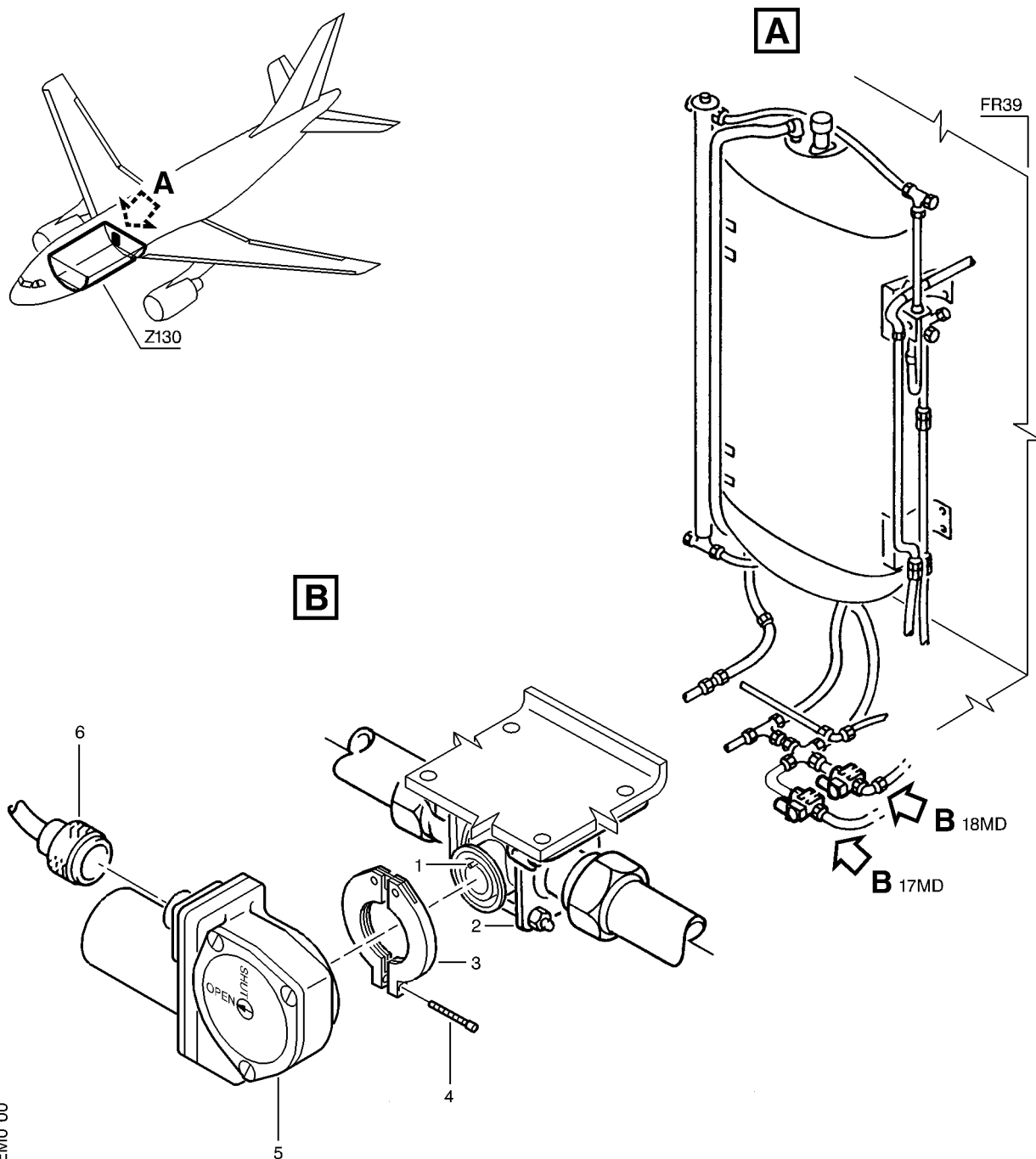
R (c)De-energize the aircraft electrical network and disconnect electrical
R ground power unit (Ref. 24-41-00, P. Block 301).

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KSSU

38-12-11

Page 404
Jun 01/05



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R

Motorized System Shutoff Valve Actuator
Figure 402

EFFECTIVITY: ALL

KSSU

38-12-11

Page 405
Jun 01/05



AIRCRAFT MAINTENANCE MANUAL

MANUAL SHUTOFF VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps and Plugs
B. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- | | |
|--------------------------|---------------------------------|
| - 12-15-38, P. Block 1 | Replenishing Potable Water |
| - 12-24-38, P. Block 1 | Potable Water System - Draining |
| - 38-40-00, P. Block 301 | Air Supply |

2. Procedure

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Open sanitary unit cabinet door in lavatory.

B. Removal (Ref. Fig. 401)

- (1) Disconnect unions (1).
- (2) Remove bolts (2) and washers (3).
- (3) Remove shutoff valve (4).
- (4) Install blanking caps and plugs to all openings.

C. Preparation for Installation

- (1) Remove old sealing tape from fittings.
- (2) Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
- (3) Make certain that shutoff valve (4) is clean and no external damage is visible.
- (4) Remove all blanking caps and plugs from openings.

D. Installation (Ref. Fig. 401)

- (1) Put shutoff valve (4) in position.
- (2) Install bolts (2) and washers (3).
- (3) Connect unions (1).

E. Test

- (1) Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
- (2) Check all connections for leakage.
NOTE : Leakage is not permissible.
- (3) Open water faucet and check that water flows.
- (4) Close shutoff valve (4) and check that water flow stops.
- (5) Open shutoff valve (4).

F. Close-Up

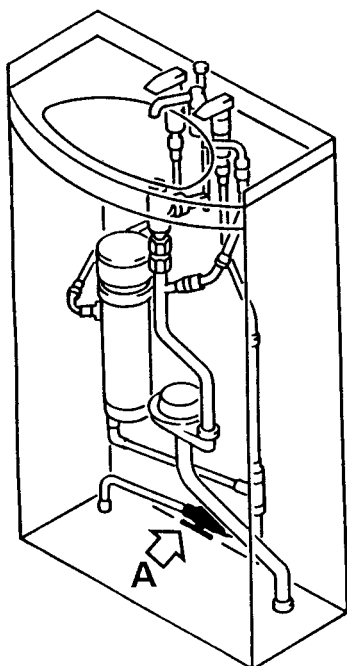
- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Close sanitary unit cabinet door.

EFFECTIVITY: ALL

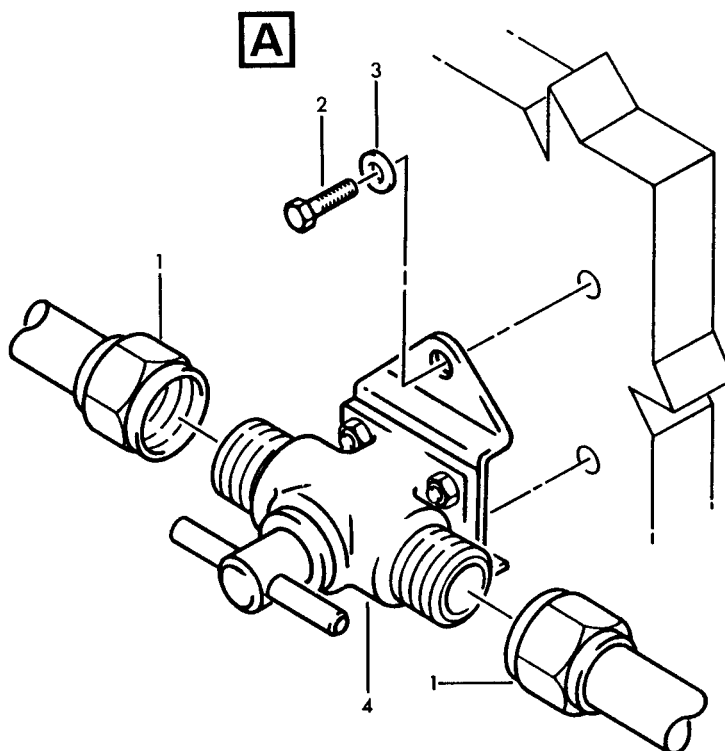
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38-12-12

Page 401
Dec 01/95



SANITARY UNIT CABINET
TYPICAL LAYOUT



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Manual Shutoff Valve
Figure 401

EFFECTIVITY: ALL

KSSU

38-12-12

Page 402
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

PRESSURE CONTROL VALVE (381872) - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps and Plugs
B. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- | | |
|--------------------------|---------------------------------|
| - 12-15-38, P. Block 1 | Replenishing Potable Water |
| - 12-24-38, P. Block 1 | Potable Water System - Draining |
| - 38-40-00, P. Block 301 | Air Supply |

2. Procedure

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Remove access door 136AR.

B. Removal (Ref. Fig. 401)

- (1) Disconnect unions (2, 3, 6).
- (2) Remove bolts (7) and washers (8).
- (3) Remove pressure control valve (9) (381872).
- (4) Install blanking caps and plugs to all openings.

C. Preparation for Installation

- (1) Remove old sealing tape from fittings.
- (2) Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
- (3) Make certain that pressure control valve (9) (381872) is clean and no external damage is visible.
- (4) Remove all blanking caps and plugs from openings.

D. Preparation for Replacement Component

- (1) Remove transport blanks from new valve (9) (381872).
- (2) Remove following parts from removed valve (9) (381872):
 - (a) Remove elbows (5).
 - (b) Remove elbow (1).
- (3) Install following parts on the new valve (9) (381872):
 - (a) Install elbows (5).
 - (b) Install elbow (1).
- (4) Install transport blanks on removed valve (9) (381872).

E. Installation (Ref. Fig. 401)

- (1) Put pressure control valve (9) (381872) in position.
- (2) Install bolts (7) and washers (8).
- (3) Connect unions (2, 3, 6).

F. Test

- (1) Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).

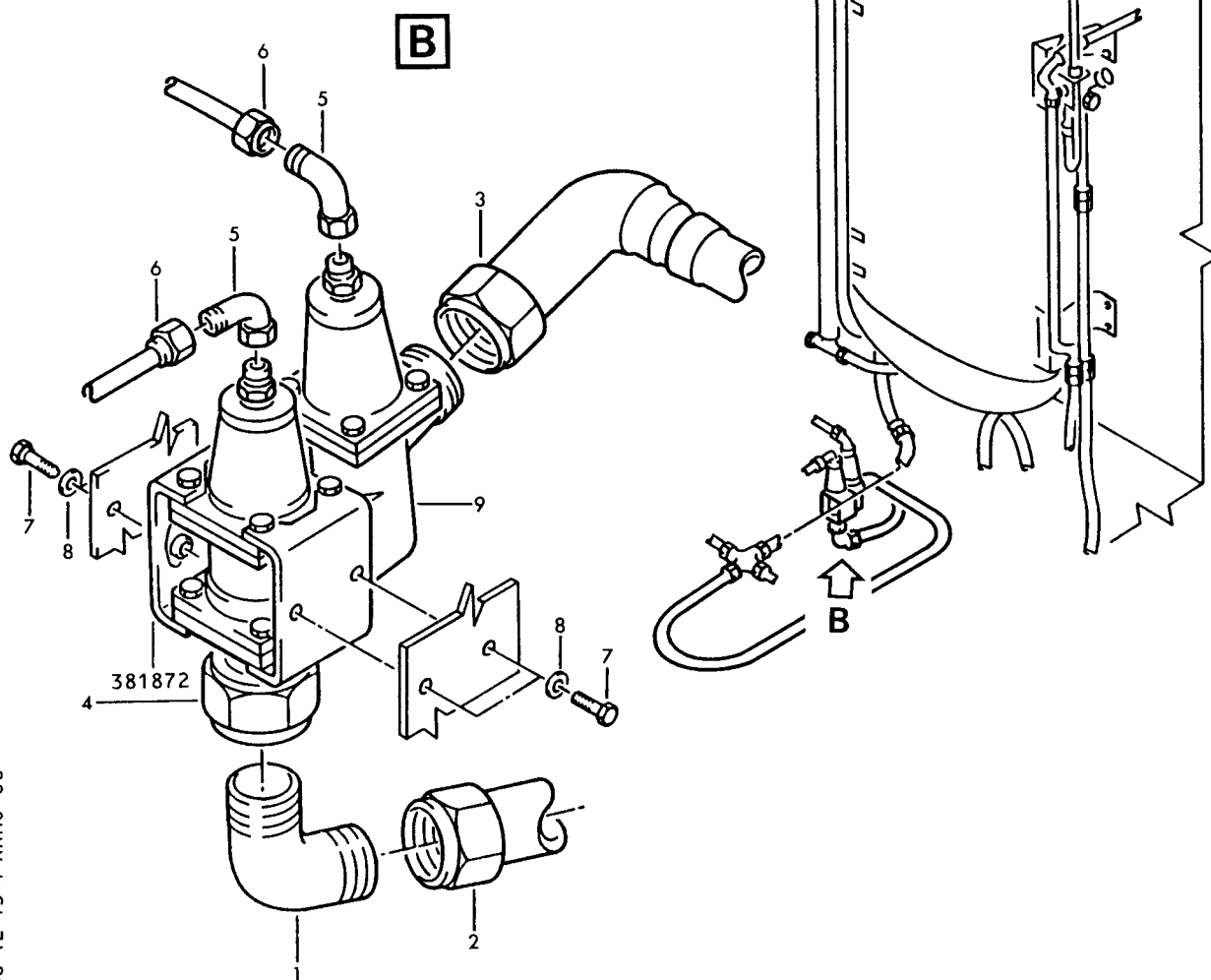
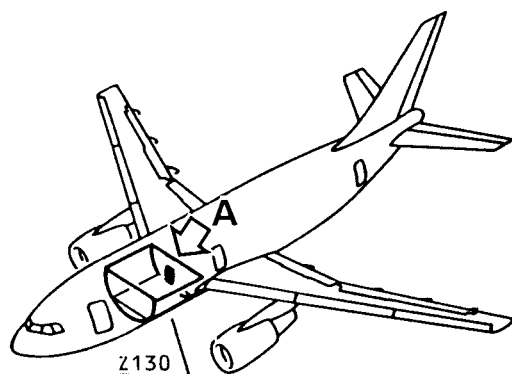
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KSSU

38-12-13

Page 401
Dec 01/95

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Pressure Control Valve
Figure 401

EFFECTIVITY: ALL

KSSU

38-12-13

Page 402
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

(2) Check all connections for leakage.

NOTE : Leakage is not permissible.

G. Close-Up

(1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(2) Install access door 136AR.

EFFECTIVITY: ALL

KSSU

38-12-13

Page 403
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

WASH BASIN FAUCET - SERVICING

1. Reason for the Job

A. Dripping Tap

R 2. Replacement of Tap Packings

R A. Equipment and Materials

R ITEM	DESIGNATION
R A.	Packings
R B. T2595-5	Spanner Wrench

R Referenced Procedure

R - 12-15-38, P. Block 1 Replenishing Potable Water

R B. Procedure

R **NOTE** : Procedure valid for all wash basin faucets.

R (1) Job Set-Up

R (a) Open sanitary unit cabinet door in appropriate lavatory, close manual
R shutoff valve and place water heater ON/OFF switch in OFF position.

R (b) Open water faucets (hot and cold) and allow water to drain.

R (2) Removal of packings

R (Ref. Fig. 301)

R (a) Push in spring-loaded pivot pins (1) and remove handle (2) from
R faucet hinge assembly (4).

R **NOTE** : Use 0.125 in. (3.2 mm) diameter pin, or similar tool.

R (b) Remove knurled nut (3) and faucet hinge assembly (4).

R (c) Remove escutcheon (5) from valve body (7).

R (d) Unscrew and remove cartridge assembly (6) or alternative cartridge
R assembly from valve body (7).

R **NOTE** : Use spanner wrench, T2595-5 for alternative cartridge.

R (e) Remove and discard packings (8, 9) from cartridge assembly (6).

R (Ref. Fig. 301)

R (3) Installation of packings

R (Ref. Fig. 301)

R (a) Install new packings (8, 9) on cartridge assembly (6).

R (b) Install cartridge assembly (6) in valve body (7) and torque cartridge
R to 25 lbf.in (0.283 m.daN) maximum.

R (c) Install and escutcheon (5) on valve body (7).

R (d) Install faucet hinge assembly (4) on cartridge assembly (6) and secure
R with knurled nut (3).

R (e) Install handle (2) on faucet hinge assembly (4) by engaging holes in
R handle with ends of related pins (1).

R (4) Test

R (a) Check for proper spring-loaded action of handle (2).

R (b) Open shutoff valve in sanitary unit cabinet and place water heater
R ON/OFF switch in ON position, if applicable.

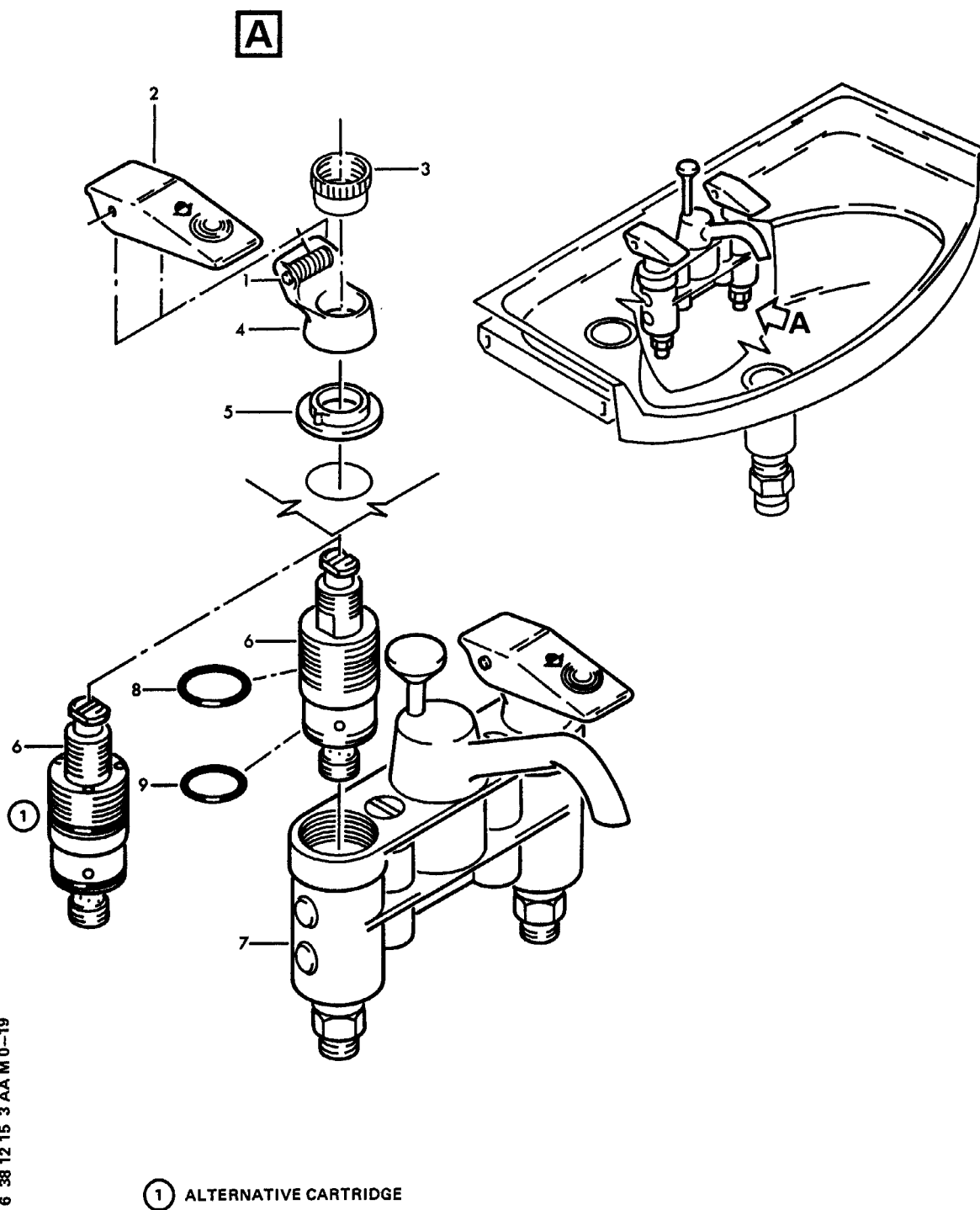
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KSSU

38-12-15

Page 301
Mar 01/03

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BM 6 38 12 15 3 AA M 0-19

R

Replacement of Packings
Figure 301

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KSSU

38-12-15

Page 302
Mar 01/03

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AIRCRAFT MAINTENANCE MANUAL

- R (c)Open and close faucet several times.
R NOTE : Water must not run after the faucet is closed.
R (5)Close-Up
R (a)Replenish potable water, if necessary (Ref. 12-15-38, P. Block 1).
R (b)Close sanitary unit cabinet door.
R (c)Make certain that working area is clean and clear of tools and miscel-
R laneous items of equipment.

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KSSU

38-12-15

Page 303
Mar 01/03

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AIRCRAFT MAINTENANCE MANUAL

WASH BASIN FAUCET - REMOVAL/INSTALLATION

CAUTION : RESTRAIN FITTINGS WHILE DETACHING/ATTACHING THE GLAND NUTS OF HOSES.

1. Reason for the Job

- A. Removal of lavatory washbasin fixtures.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 1 m.daN (88 lbf.in.)
B.	O-ring
C.	Gasket
D. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 38-10-00, P. Block 301 Sterilization of Potable Water System

3. Procedure

A. Job Set-Up

- (1) Open sanitary unit cabinet door in appropriate lavatory; close shut-off valve (drain) and place water heater ON/OFF switch in OFF position.
- (2) Open water faucets (hot and cold) and allow water to drain.

B. Removal

(Ref. Fig. 401)

- (1) Remove washbasin faucet.

CAUTION : RESTRAIN FITTINGS (1) WHILE DETACHING THE GLAND NUTS OF HOSES (2).

- (a) Disconnect hoses (2) at fittings (1).
 - (b) Release clamp located on rod (5).
 - (c) Remove pushrod (4).
 - (d) Depress spring-loaded pins (8) and remove levers (9).
 - (e) Remove nuts (10), hinges (11) and plates (12).
 - (f) Remove screws (13), lockwashers (14), bracket (23) and turret (15).
 - (g) Remove valve body (3). Discard O-ring (22).
- (2) Remove sink drain valve.
 - (a) Disconnect hose (17).
 - (b) If applicable, release clamp located on rod (5).
 - (c) Rotate drain plug (19) counter clockwise and remove.
 - (d) Remove collar (20), valve (18) and gasket (21). Discard gasket.
 - (3) Remove drinking water fountain.

(Ref. Fig. 402)

 - (a) Remove screws (1), washers (2) and cover (3).
 - (b) Disconnect pipe (4).
 - (c) Remove screws (5), washers (6) and bracket (7) together with fountain (8).
 - (d) Remove nut (9) and fitting (10) to detach fountain (8) from bracket (7).

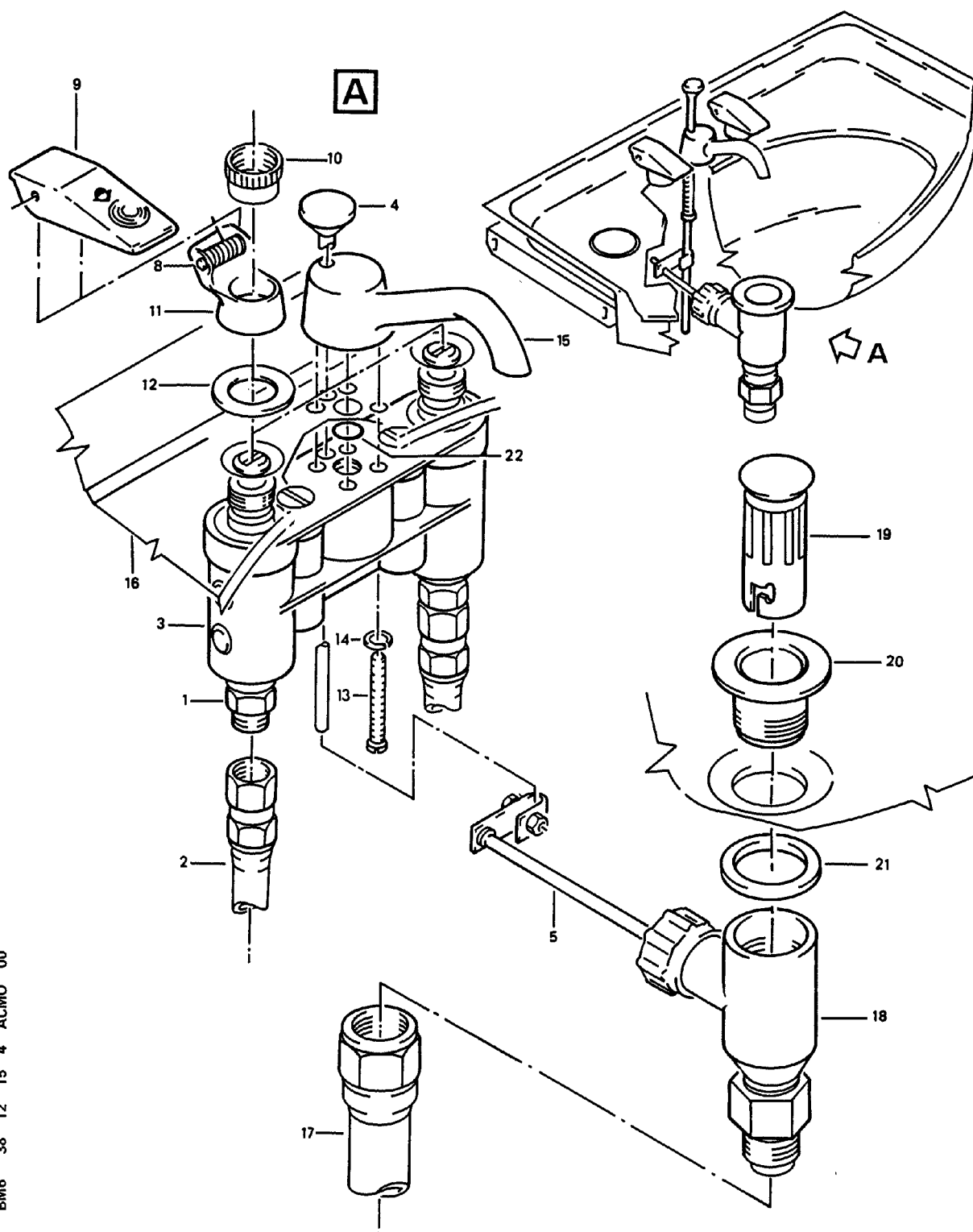
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KSSU

38-12-15

Page 401
Jun 01/10



Washbasin Fixtures
Figure 401

EFFECTIVITY: ALL

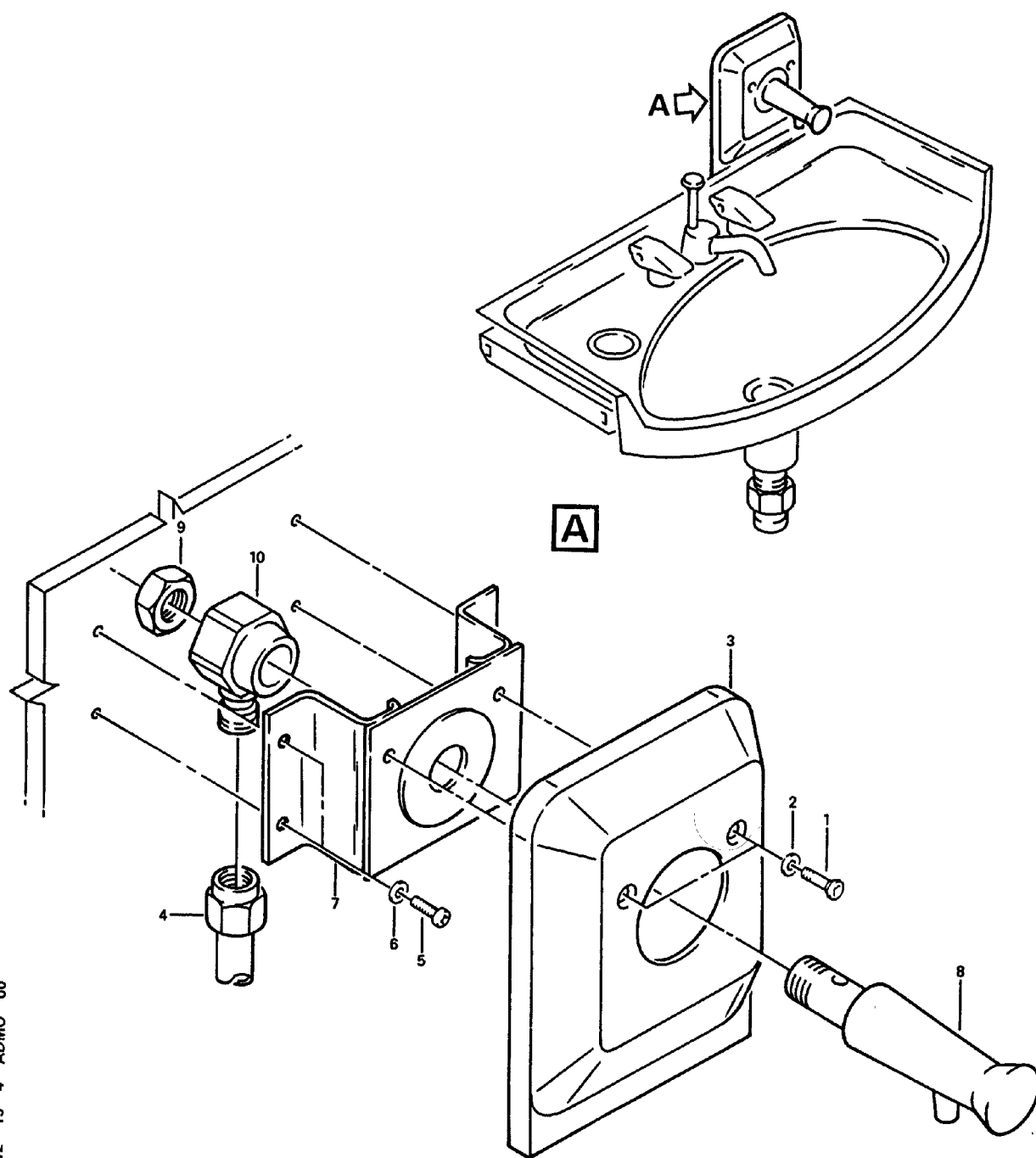
KSSU

38-12-15

Page 402
Dec 01/89

Printed in France

BM6 38 12 15 4 ACMO 00



Drinking Water Fountain
Figure 402

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KSSU

38-12-15

Page 403
Dec 01/89

Printed in France

BM6 38 12 15 4 ADMO 00

C. Installation

(Ref. Fig. 401)

- (1) Wrap sealing tape (Mat. No. 05-022) around the first four threads of fittings.
- (2) Install washbasin faucet.
 - (a) Install new O-ring (22) and then position valve (3).
 - (b) Position turret (15), secure with lockwashers (14) and screws (13).
 - (c) Install plates (12) and hinges (11) and secure with nuts (10). TORQUE nuts to 0.28 m.daN (25 lbf. in.) max.
 - (d) Depress spring-loaded pins (8) and install levers (9).
 - (e) Position pushrod (4).
 - (f) Secure clamp of rod (5) to pushrod (4).
- CAUTION** : RESTRAIN FITTINGS (1) WHILE ATTACHING THE GLAND NUTS OF HOSES (2).
- (g) Connect hoses (2). TORQUE hose fitting to 0.56 m.daN (50 lbf. in.) max.
- (3) Install sink drain valve.
 - (a) Install new gasket (21) and position valve (18). Secure with collar (20).
 - (b) Install drain plug (19) and rotate clockwise until locked.
 - (c) Secure clamp of rod (5).
 - (d) Connect hose (17). TORQUE hose fitting to 0.6 m.daN (60 lbf. in.) max.

(4) Install drinking water fountain.

(Ref. Fig. 402)

- (a) Install fountain (8) to bracket (7).
 - 1 Install fitting (10) and rotate to pipe (4) direction.
 - 2 Install nut (9).
- (b) Position bracket (7) to bulkhead and install screws (5) and washers (6).
- (c) Connect pipe (4) to fitting (10).
- (d) Install cover (3), screws (1) and washers (2).

D. Adjustment

(Ref. Fig. 401)

- (1) Adjust rod (5) so that pushrod (4) stroke is not more than 22.8 mm (0.90 in.) and drain plug (19) does not open more than 9.3 mm (0.37 in.).

E. Close-Up

- R (1) Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
- R (2) Open shut-off valve (drain) in sanitary unit cabinet.
- R (3) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- R (4) Open manual shut-off valve, place water heater ON/OFF switch in ON position and close sanitary unit cabinet door of appropriate lavatory.

EFFECTIVITY: ALL

KSSU

38-12-15Page 404
Jun 01/10



AIRCRAFT MAINTENANCE MANUAL

WATER HEATER - REMOVAL/INSTALLATION

CAUTION : ALLOW WATER HEATER TO COOL BEFORE REMOVING.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	One Container - Capacity 2 l (0.53 US gal.)
C.	Circuit Breaker Safety Clips and Tags
D.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
E. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
**ON A/C 226-226, 229-249,			
800VU	LAVATORY FRONT & MIDDLE/HOT WATER	1MB	G 7
800VU	LAVATORY FRONT & MIDDLE/HOT WATER	23MB	G 8
811VU	LAVATORY REAR/HOT WATER	11MB	B 4
811VU	LAVATORY REAR/HOT WATER	13MB	B 5

**ON A/C 401-401, 404-500,

Post COCAUA-DA25-072 For A/C 401-401, 404-500,

800VU	LAVATORY FWD & MID/HOT WATER	1MB	G 7	*
800VU	LAVATORY FWD & MID/HOT WATER	43MB	G 8	*
811VU	LAVATORY AFT/HOT WATER	11MB	B 4	*
811VU	LAVATORY AFT/HOT WATER	13MB	B 5	*

**ON A/C ALL

EFFECTIVITY: ALL

KSSU

38-12-16

Page 401
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

- (4) Open sanitary unit cabinet door in appropriate lavatory.
- (5) Close manual shutoff valve and switch off water heater.
- (6) Open water faucets (hot and cold) to relieve pressure.

CAUTION : ALLOW WATER HEATER TO COOL BEFORE REMOVING.

B. Removal

(Ref. Fig. 401)

- (1) Disconnect electrical connector (1).
- (2) Place container under water heater (5).
- (3) Disconnect inlet line (2) and outlet line (3).
- NOTE** : Collect leaking water in container.
- (4) Remove water heater (5) from brackets (6) by removing clamps (4).
- (5) Install caps on electrical connector, water heater and hoses.
- (6) Remove container.

C. Preparation for Installation

(Ref. Fig. 401)

- (1) Remove blanking caps from water heater (5) and wrap sealing tape (Mat. No. 05-022) around thread of inlet and outlet fitting.

D. Installation

(Ref. Fig. 401)

- (1) Position water heater (5) on brackets (6) and secure with clamps (4).
- NOTE** : Do not tighten clamps at this stage.
- (2) Remove blanking caps and connect inlet line (2) and outlet line (3).
- (3) Remove blanking cap and connect electrical connector (1).
- (4) Tighten clamps (4).

E. Test

- (1) Replenish potable water system (Ref. 12-15-38, P. Block 1).
- (2) Pressurize potable water system (Ref. 38-40-00, P. Block 301).
- (3) Open manual shutoff valve slowly.
- (4) Check line connections for leakage.

NOTE : Leakage is not permissible.

****ON A/C 226-226, 229-249,**

- (5) Remove safety clips and tags and close circuit breakers 1MB, 23MB, 11MB and 13MB.

****ON A/C 401-401, 404-500,**

Post COCAUA-DA25-072 For A/C 401-401, 404-500,

- (5) Remove safety clips and tags and close circuit breakers 1MB, 43MB, 11MB and 13MB.

****ON A/C ALL**

EFFECTIVITY: ALL

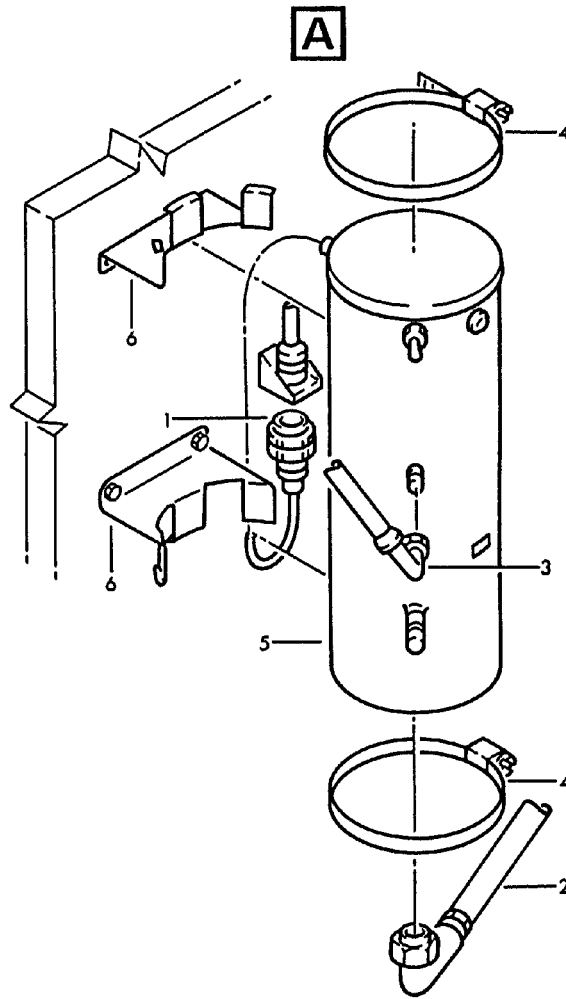
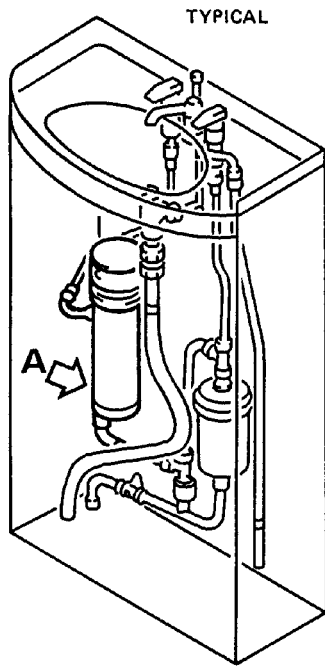
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KSSU

38-12-16

Page 402
Jun 01/13

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Water Heater
Figure 401

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KSSU

38-12-16

Page 403
Jun 01/02



AIRCRAFT MAINTENANCE MANUAL

(6) Switch on water heater.

(7) After 10 minutes, open hot water faucet and check that water is tepid.

F. Close-Up

(1) Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).

(2) De-energize the aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).

(3) Switch off water heater and close sanitary unit cabinet door.

(4) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

R

KSSU

38-12-16

Page 404
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

NON-RETURN VALVE (381590) - SUPPLY LINE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps and Plugs
B. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
R - 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Remove access door 136AR.

B. Removal (Ref. Fig. 401)

- (1) Disconnect unions (1).
- (2) Remove non-return valve (3) (381590).
- (3) Install blanking caps and plugs to all openings.

C. Preparation for Installation (Ref. Fig. 401)

- (1) Remove old sealing tape from fittings (2, 4).
- (2) Wrap sealing tape (Mat. No. 05-022) around threads of fittings (2, 4).
- (3) Make certain that non-return valve (3) (381590) is clean and no external damage is visible.
- (4) Remove all blanking caps and plugs from openings.

D. Installation (Ref. Fig. 401)

- (1) Put non-return valve (3) (381590) in position between fittings (2) and (4).
- NOTE** : Make sure that the flow arrow points towards fitting (2).
- (2) Connect unions (1).

E. Test

- (1) Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
- (2) Check all connections for leakage.
- NOTE** : Leakage is not permissible.

F. Close-Up

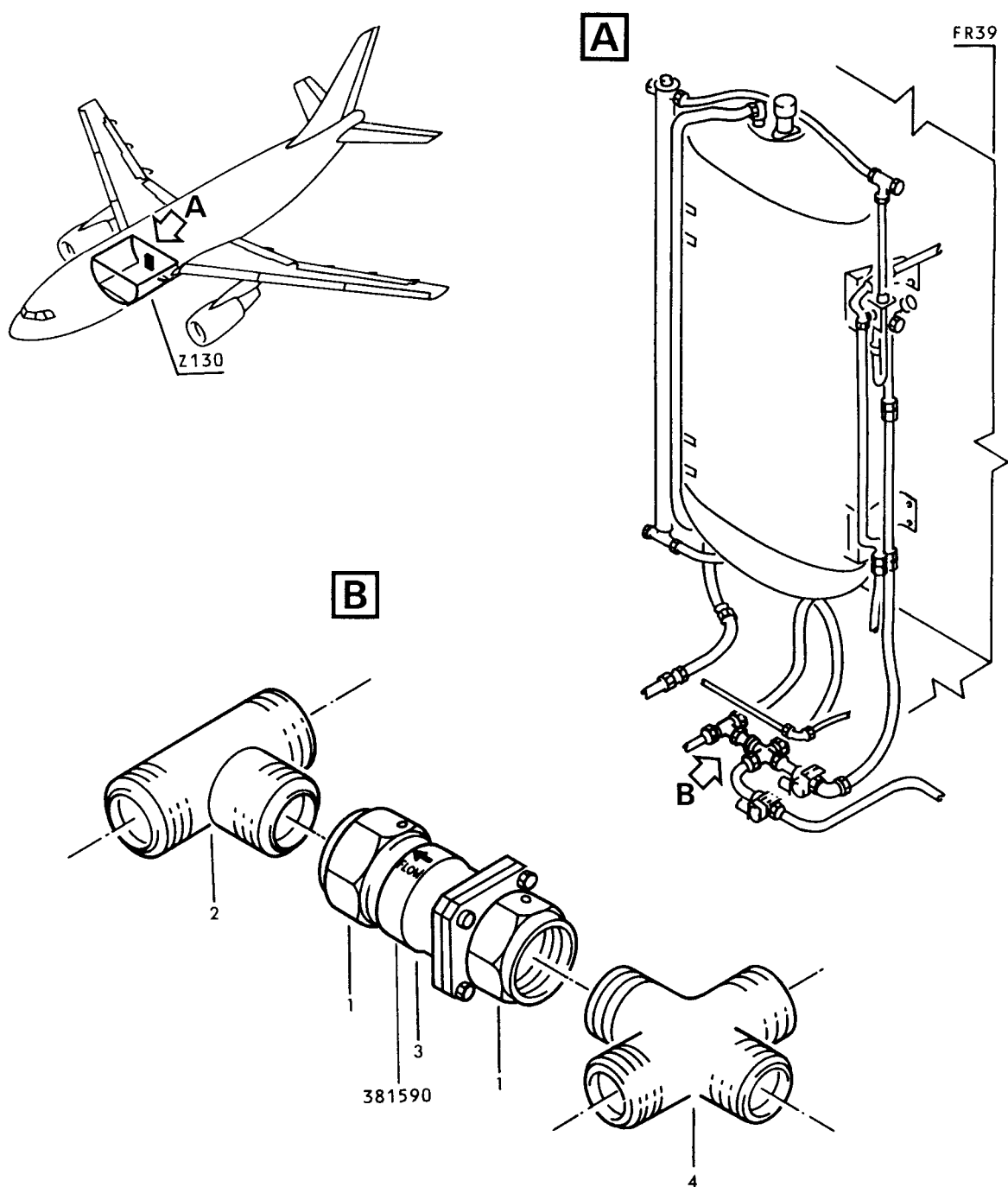
- R (1) Do the sterilization of the potable water system (Ref. 38-10-00,
- R P. Block 301).
- R (2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- R (3) Install access door 136AR.

EFFECTIVITY: ALL

KSSU

38-12-21

Page 401
Jun 01/10



Non-Return Valve - Supply Line
Figure 401

EFFECTIVITY: ALL

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38-12-21

Page 402
Dec 01/95

QUANTITY INDICATING - DESCRIPTION AND OPERATION

1. General

The purpose of the quantity indication system is to show at any time the amount of potable water available in the storage tanks to the ground service or cabin personnel.

2. Component Location

R

(Ref. Fig. 001)

R

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
4MA	QUANTITY GAGE		136	136BR	38-13-12
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
9MA	PUSHBUTTON-PUSH FOR IND	863VU	221		
10MA	SWITCH-DOOR MICRO		136	136BR	38-42-13
15MA	UNIT-PRESELECTION CONTROL		138		38-13-14
16MA	SWITCH-PRESELECTION	863VU	221		38-13-14
22MA	GAGE-COMBI	863VU	221		38-13-12
1	PANEL-POTABLE WATER SERVICE		136	136BR	

R

3. Description

R

The transmitter (7MA) is installed in the system to measure the quantity of water in the potable water tanks. The transmitter is mounted in a cylindrical housing, which, in turn, is connected to the water tanks.

The combi gage (22MA) on purser's panel (863VU) and the quantity gage (4MA) on potable water service panel are connected electrically to the transmitter (7MA) via the preselection control unit (15MA). Door microswitch (10MA), installed on the potable water service panel, connects the electrical power supply to the quantity indicating system when potable water service panel access door (136BR) is open. The quantity of water required in the tanks is selected in percentage at preselection switch (16MA) on purser's panel (863VU). A pushbutton PUSH FOR IND (9MA) is installed on the purser's panel (863VU) and connects, when potable water service panel access door (136BR) is closed, the electrical power supply to the quantity indicating system when pressed.

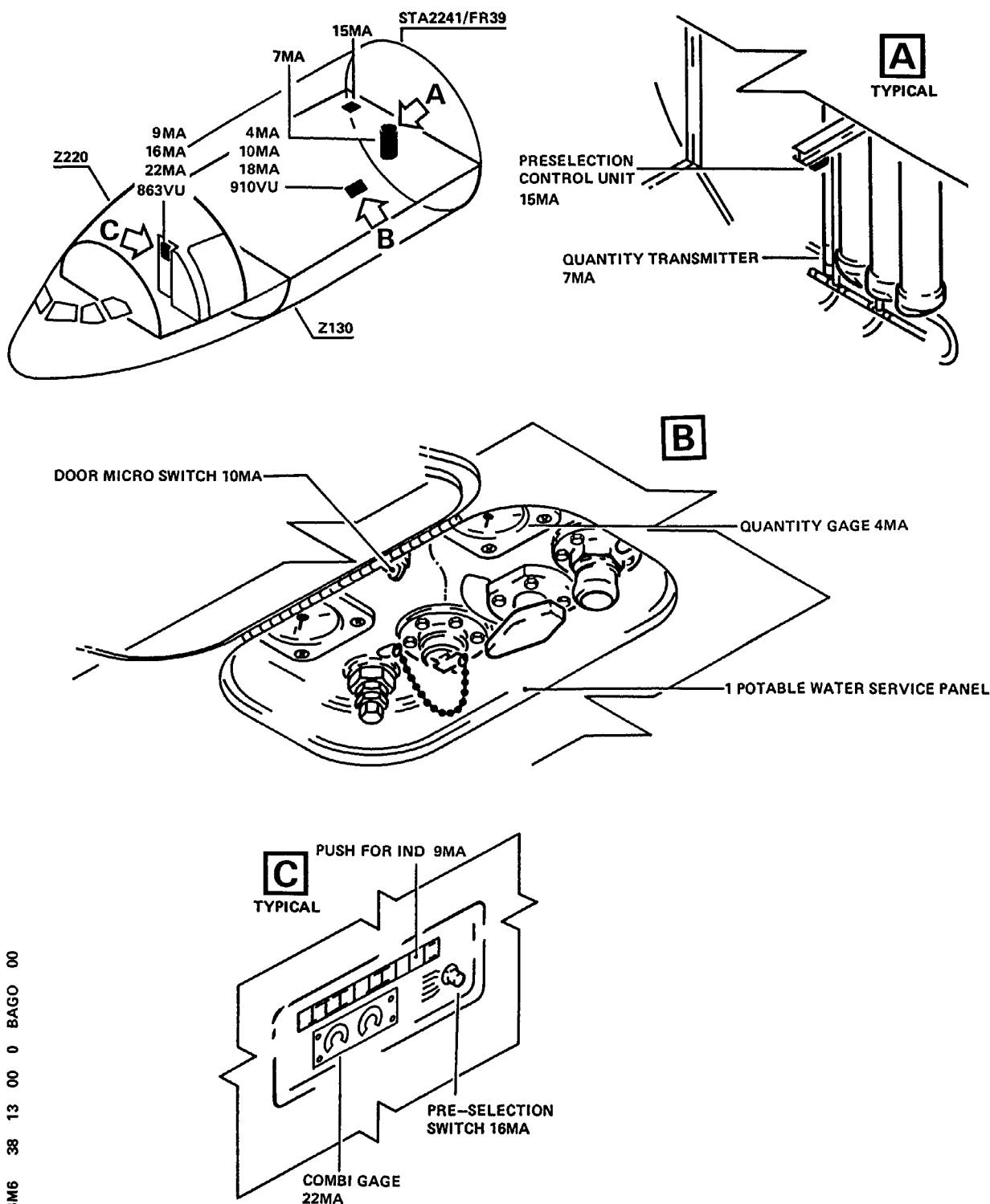
The system is powered and protected via circuit breaker (1MA).

EFFECTIVITY: ALL

KSSU

38-13-00

Page 1
Dec 01/95



Component Location
Figure 001

R EFFECTIVITY: ALL

KSSU

38-13-00

Page 2
Dec 01/95

R

4. Operation

R

(Ref. Fig. 002)

R

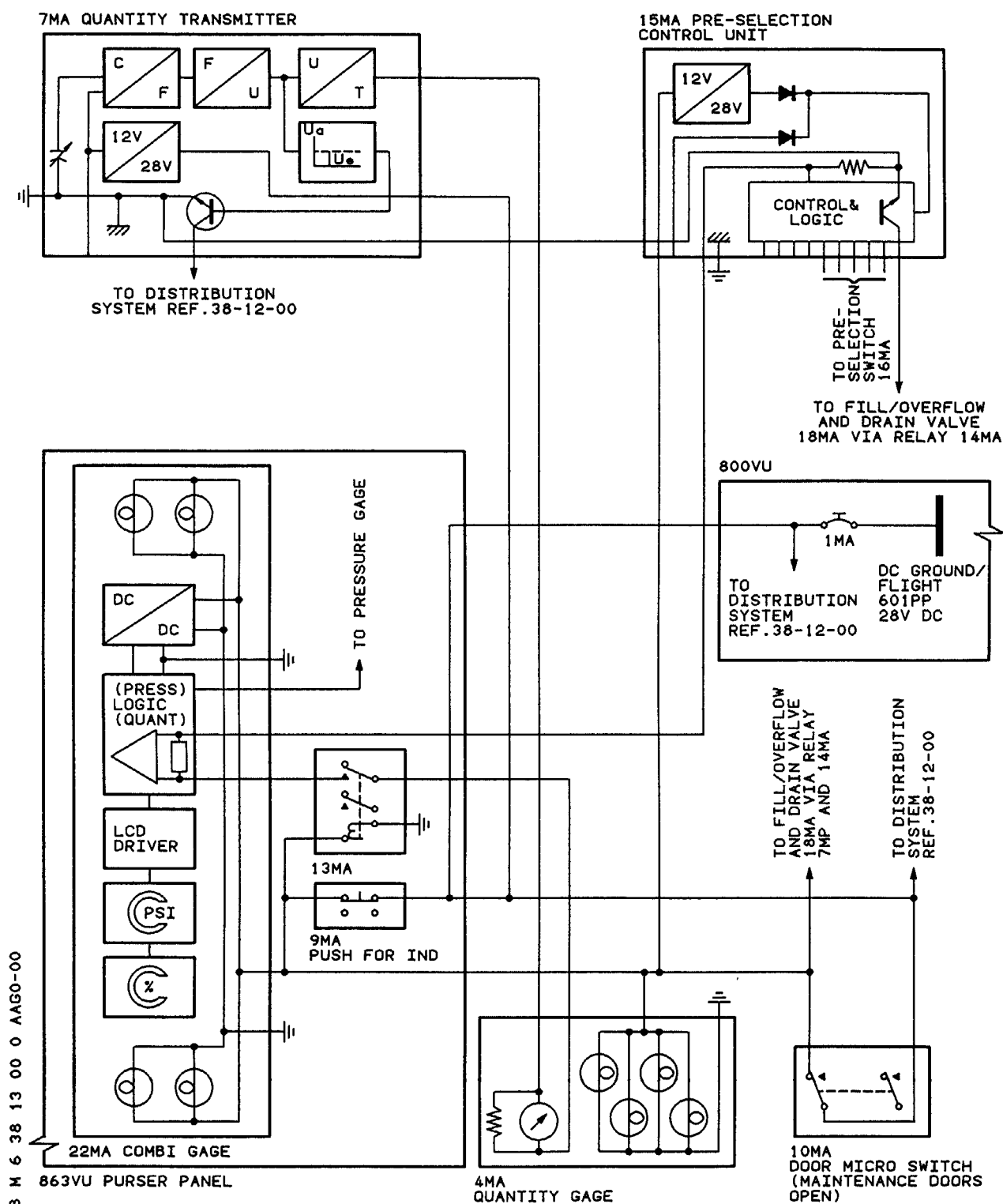
Transmitter (7MA) measures the water quantity by capacitance. This measurement is in direct relationship to the change of water level, which causes a change of current flow. The output signal is indicated on combi gage (22MA) and quantity gage (4MA). The preselection control unit (15MA), located in Zone 138, is electrically connected to the water quantity transmitter (7MA), preselection switch (16MA), electrical fill/overflow and drain valve (18MA). The preselection control unit (15MA) receives a current signal corresponding to the quantity selected by the preselection switch (16MA) on purser's panel (863VU) and compares this with the current signal transmitted by the water quantity transmitter (7MA). When the signal from the quantity transmitter (7MA) equals the signal from the preselection switch (16MA), a current signal is given by the preselection control unit (15MA) to the actuator of the electrical fill/overflow and drain valve (18MA) to shut off the valve.

The combi gage (22MA) and quantity gage (4MA) are powered via circuit breaker (1MA) when microswitch (10MA) is actuated by opening the potable water service panel access door (136BR) or when the pushbutton PUSH FOR IND (9MA) on purser's panel (863VU) is pressed.

R EFFECTIVITY: ALL

KSSU

38-13-00Page 3
Dec 01/95



Electrical Schematic
Figure 002

R EFFECTIVITY: ALL

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38-13-00

Page 4
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

QUANTITY INDICATING - ADJUSTMENT/TEST

1. Functional Test of System

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Circuit Breaker Safety Clip and Tag
(2)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz

Referenced Procedures

- | | |
|--------------------------|---------------------------------|
| - 12-15-38, P. Block 1 | Replenishing Potable Water |
| - 12-24-38, P. Block 1 | Potable Water System - Draining |
| - 24-41-00, P. Block 301 | AC External Power Control |

R

B. Procedure

(1) Job Set-Up

- (a) Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (b) Make certain that electronics racks ventilation is correct.
- (c) Drain the potable water system (Ref. 12-24-38, P. Block 1).
- (d) Make certain that the following circuit breaker is closed:

R

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H 5

R

- (e) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H 2

R

(2) Test

ACTION	RESULT
--------	--------

EFFECTIVITY: ALL

KSSU

38-13-00

Page 501
Dec 01/95

ACTION	RESULT
<p>1. On potable water service panel:</p> <ul style="list-style-type: none"> - Open potable water service panel access door (136BR). 	<p>On potable water service panel:</p> <ul style="list-style-type: none"> - Dial light in quantity gage (4MA) comes on. - Quantity gage (4MA) indicates an empty tank. <p>On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) comes on and indicates an empty tank.
<p>2. On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Place preselection switch (16MA) to 25 % position. 	
<p>3. On potable water service panel:</p> <ul style="list-style-type: none"> - Fill potable water system (Ref. 12-15-38, P. Block 1). 	<p>On potable water service panel:</p> <ul style="list-style-type: none"> - When selected water quantity is reached the fill/overflow and drain valve (18MA) closes automatically. - Dial light in quantity gage (4MA) is on. - Quantity gage (4MA) indicates actual water quantity. <p>On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) is on and indicates actual water quantity.
<p>4. On purser's panel (863VU) and on potable water service panel:</p> <ul style="list-style-type: none"> - Repeat steps 2. and 3. with preselection switch (16MA) in positions 50 %, 75 % and 100 %. 	<p>On potable water service panel:</p> <ul style="list-style-type: none"> - At each position, the fill/overflow and drain valve (18MA) closes automatically when selected water quantity is reached. - Dial light in quantity gage (4MA) is on at each position. - Quantity gage (4MA) indicates at each position the actual water quantity. <p>On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) is on and indicates at each position the actual water quantity.
<p>5. On potable water service panel:</p> <ul style="list-style-type: none"> - Press and hold microswitch (10MA). <p>NOTE : This action simulates closed position of potable water service panel access door (136BR).</p>	<p>On potable water service panel:</p> <ul style="list-style-type: none"> - Dial light in quantity gage (4MA) goes off. - Quantity gage (4MA) indicates an empty tank. <p>On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) goes off.
<p>6. On purser's panel (863VU):</p>	<p>On purser's panel (863VU):</p>

R EFFECTIVITY: ALL

KSSU

38-13-00

Page 502
Dec 01/95

ACTION	RESULT
<ul style="list-style-type: none"> - Press and hold pushbutton PUSH FOR IND (9MA). 	<ul style="list-style-type: none"> - Background lighting in combi gage (22MA) comes on and indicates actual water quantity.
7. On purser's panel (863VU): <ul style="list-style-type: none"> - Release pushbutton PUSH FOR IND (9MA). 	On potable water service panel: <ul style="list-style-type: none"> - Dial light in quantity gage (4MA) comes on. - Quantity gage (4MA) indicates actual water quantity.
8. On potable water service panel: <ul style="list-style-type: none"> - Release microswitch (10MA). 	On purser's panel (863VU): <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) goes off. On potable water service panel: <ul style="list-style-type: none"> - Dial light in quantity gage (4MA) goes off. - Quantity gage (4MA) indicates an empty tank.
9. On potable water service panel: <ul style="list-style-type: none"> - Close potable water service panel access door (136BR). 	On potable water service panel: <ul style="list-style-type: none"> - Dial light in quantity gage (4MA) comes on. - Quantity gage (4MA) indicates actual water quantity. On purser's panel (863VU): <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) comes on and indicates actual water quantity.

R

(3)Close-Up

- (a)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (b)Remove safety clip and tag, and close circuit breaker 19MD.
- (c)Wipe dry service panel and adjacent area.
- (d)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R

EFFECTIVITY: ALL

KSSU

38-13-00

Page 503
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

WATER QUANTITY TRANSMITTER - REMOVAL/INSTALLATION

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE:

- DO NOT BEND OR USE EXCESSIVE FORCE,
- HANDLE WITH CARE AND AVOID JARRING OR SHOCK.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Torque Wrench, up to 0.25 m.daN (22 lbf.in.)
C.	Blanking Caps
D.	Circuit Breaker Safety Clip and Tag

Referenced Procedures

R	- 12-24-38, P. Block 1	Potable Water System - Draining
	- 38-10-00, P. Block 301	Potable Water System
	- 38-13-00, P. Block 501	Quantity Indication
	- 38-40-00, P. Block 301	Air Supply
	- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
	- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1)Position access platform under FWD cargo compartment door (Z811).
- (2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (3)Remove FWD cargo compartment fixed partition (132SW) (Ref. 53-10-55, P. Block 401).
- (4)Depressurize air supply system (Ref. 38-40-00, P. Block 301).
- (5)Drain potable water system (Ref. 12-24-38, P. Block 001).

- (6)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

EFFECTIVITY: ALL

KSSU

38-13-11

Page 401
Jun 01/10

B. Removal

(Ref. Fig. 401)

- (1) Disconnect electrical connector (2).
- (2) Disconnect upper and lower unions (1, 5). Install blanking caps.
- (3) Release hose clamps (3) and remove quantity transmitter assembly (4).
- (4) Remove screws (10) and washers (9).
- (5) Carefully pull quantity transmitter (7MA) (7) out of hose (6).
- (6) Remove and discard gasket (8).

C. Installation

(Ref. Fig. 401)

- (1) Install a new gasket (8) on quantity transmitter (7MA) (7).
- (2) Carefully push quantity transmitter (7MA) (7) into hose (6).
- (3) Install screws (10) and washers (9) and torque screws (10) to 0.1 m.daN (8.85 lbf.in.).
- (4) Install quantity transmitter assembly (4) with clamps (3).
- (5) Remove blanking caps and connect upper and lower unions (1, 5) to quantity transmitter assembly (4).
- (6) Connect electrical connector (2).

D. Test

- (1) Carry out functional test of water quantity indication system (Ref. 38-13-00, P. Block 501).

E. Close-Up

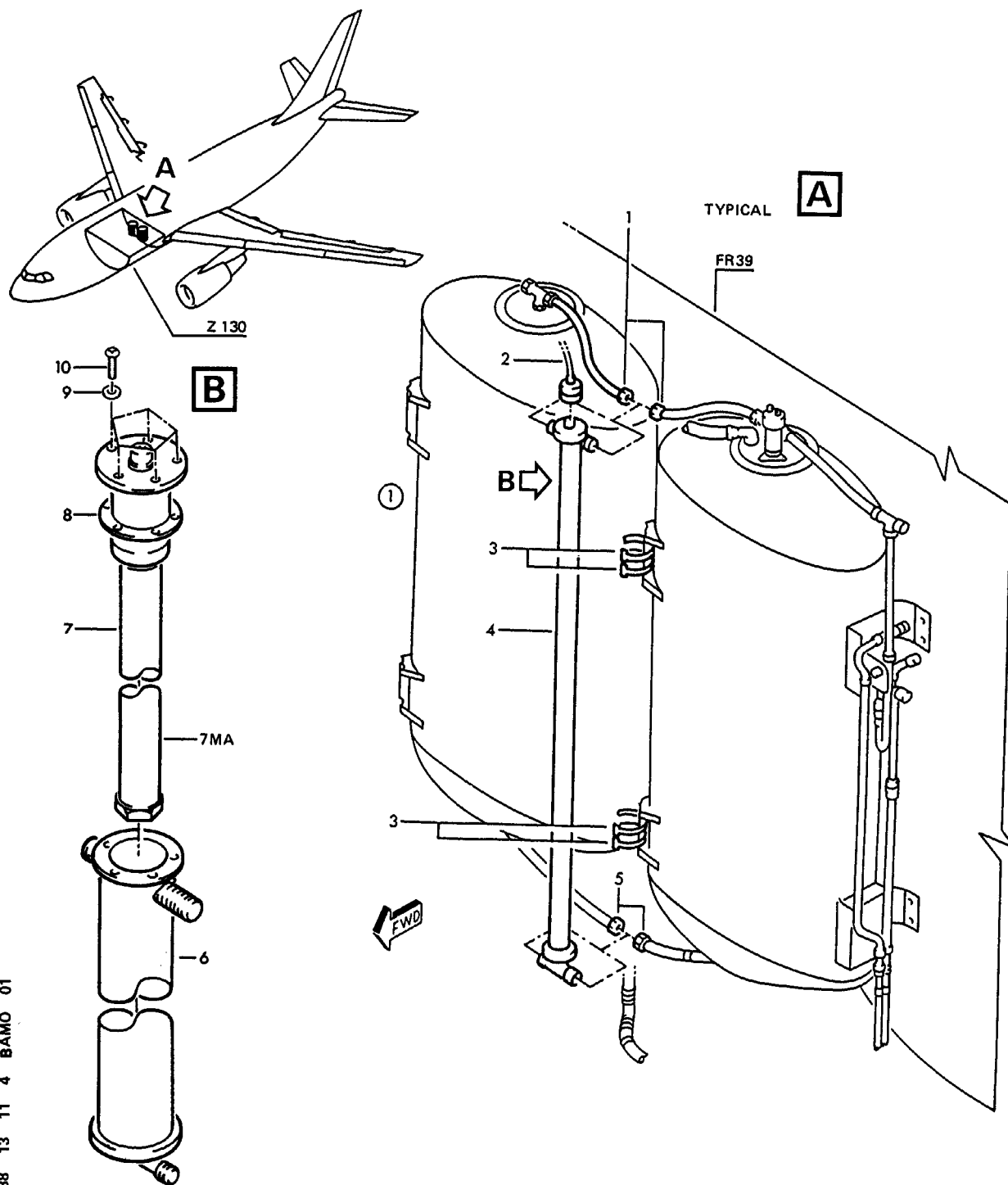
- R (1) Do the sterilization of the potable water system (Ref. 38-10-00,
R P. Block 301).
- (2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
 - (2) Install FWD cargo compartment fixed partition (132SW) (Ref. 53-10-55, P. Block 401).
 - (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
 - (4) Remove access platform.

- (5) Remove safety clip and tag and close circuit breaker 1MA.

EFFECTIVITY: ALL

KSSU

38-13-11Page 402
Jun 01/10



BM6 38 13 11 4 BAMO 01

① OPTIONAL WATER TANK

Water Quantity Transmitter (7MA)
Figure 401

R

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38-13-11

Page 403
Mar 01/92

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AIRCRAFT MAINTENANCE MANUAL

WATER QUANTITY GAGE - REMOVAL/INSTALLATION

R

WARNING : USE EXTREME CARE WHEN WORKING WITH CLEANING AGENTS (MAT. NO. 11-003).
MAKE CERTAIN THAT WORKING AREA IS WELL VENTILATED. AVOID INHALATION
OF FUMES, MIST OR DUST. PROTECT EYES AND SKIN.
APPLY MATERIALS IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS.
FIRE PROTECTION REGULATIONS MUST BE OBSERVED.

R

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Access Platform 1 m (3.3 ft.)
D. Material No. 09-002	Sealants (Ref. 20-31-00)
E. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)

R

Referenced Procedure
- 38-13-00, P. Block 501 Quantity Indicating

2. Procedure

A. Job Set-Up

R

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

- (2)Position access platform.
- (3)Open potable water service panel access door (136BR).
- (4)Remove access door (136AR).

R

EFFECTIVITY: ALL

KSSU

38-13-12

Page 401
Dec 01/95

B. Removal

R

(1) Remove combi gage 22MA from purser's panel 863VU.

R

(Ref. Fig. 401)

R

- (a) Open access panel (1) at FWD purser's station.
- (b) Release set screw (10) and remove knob (9).
- (c) Remove screws (2) and tinted acrylic cover (3).
NOTE : Tinted acrylic cover (3) is fragile.
- (d) Disconnect and cap electrical connector 22MA-A (4) from combi gage 22MA.
- (e) Remove nuts (7), washers (6) and bolts (5).
- (f) Remove combi gage 22MA (8) from purser's panel 863VU.
- (2) Remove quantity gage 4MA from potable water service panel 910VU.
(Ref. Fig. 402)
- (a) Disconnect and cap electrical connector 4MA-A from quantity gage 4MA.
- (b) Remove nuts (2), washers (3) and bolts (4).
- (c) Remove flange (5) and seal (6).
- (d) Remove screw (7) and quantity gage 4MA (8) with clamp (9).
WARNING : CLEANING AGENT (MAT. NO. 11-003) IS DANGEROUS.
- (e) Remove old sealant using cleaning agent (Mat. No. 11-003).

R

C. Installation

R

(1) Install quantity gage 22MA to purser's panel 863VU.

R

(Ref. Fig. 401)

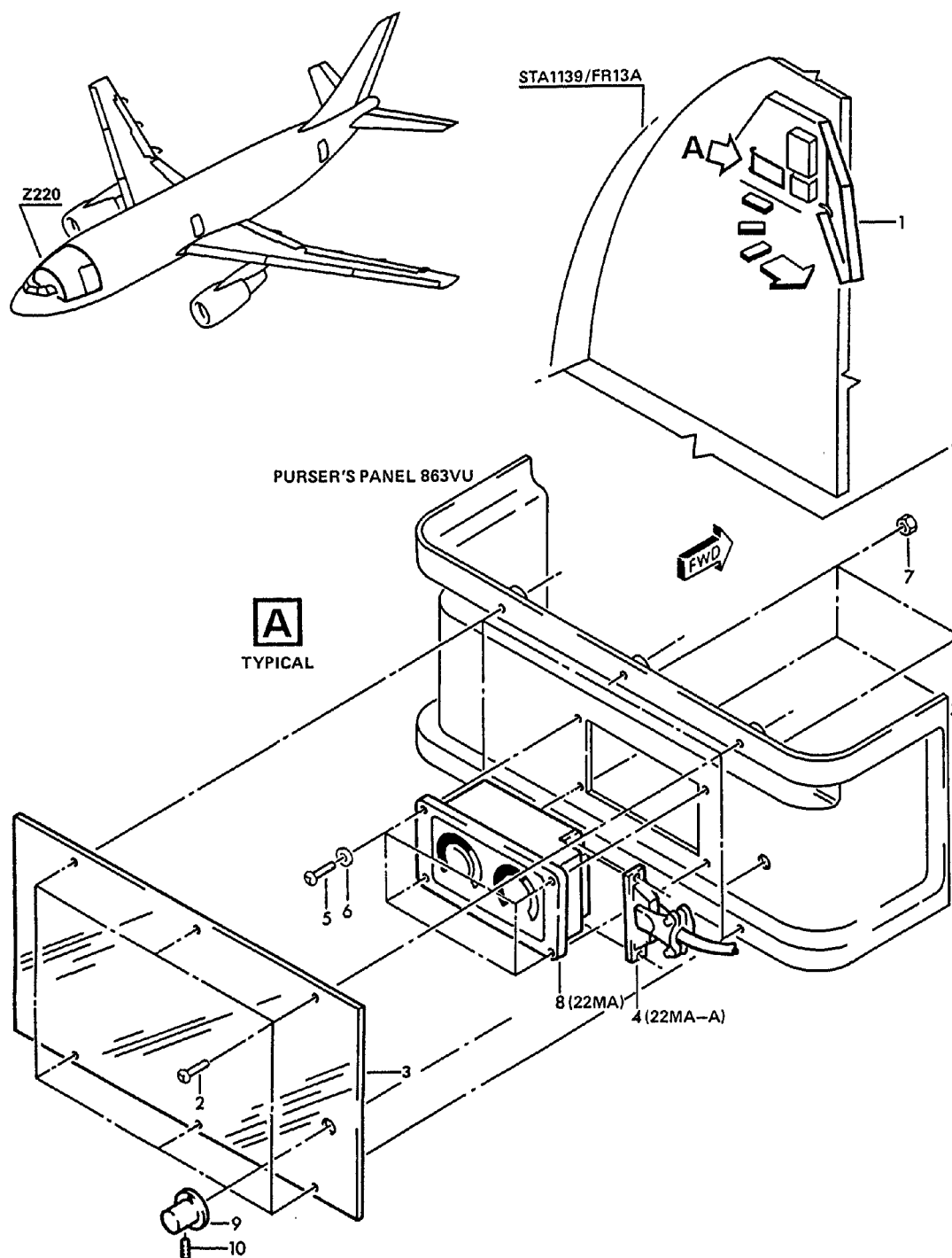
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EFFECTIVITY: ALL

KSSU

38-13-12

Page 402
Dec 01/95



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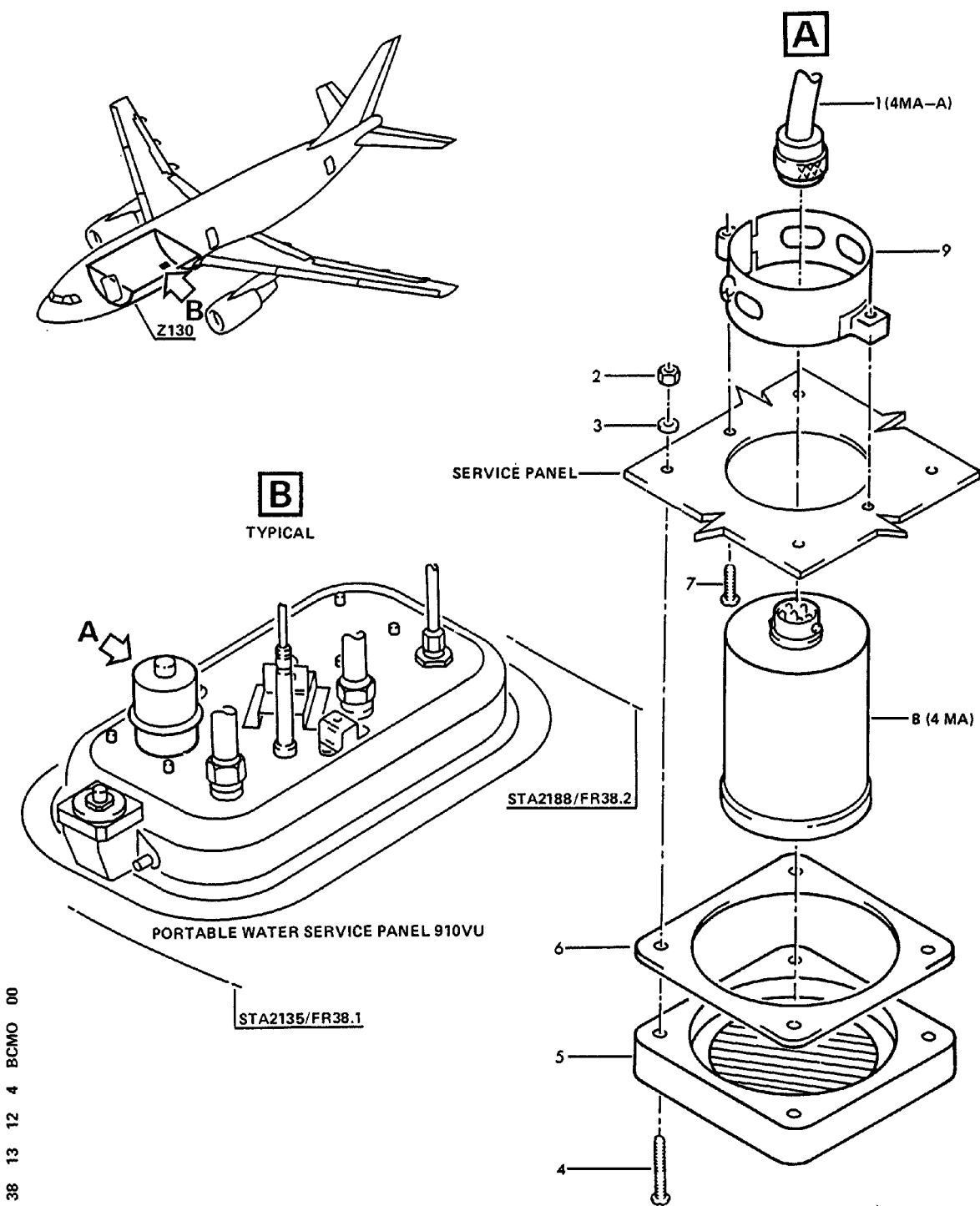
Combi Gage 22MA
Figure 401

R EFFECTIVITY: ALL

KSSU

38-13-12

Page 403
Dec 01/95



Quantity Gage 4MA
Figure 402

R EFFECTIVITY: ALL

KSSU

38-13-12

Page 404
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

- (a) Position combi gage 22MA (8) and install washers (6), bolts (5) and nuts (7) to purser's panel 863VU.
- (b) Remove cap and connect electrical connector 22MA-A (4) to combi gage 22MA.
- (c) Install tinted acrylic cover (3) and tighten screws (2).
NOTE : Tinted acrylic cover (3) is fragile.
- (d) Install knob (9) and secure with set screw (10).
- (e) Close access panel (1) at purser's station.
- (2) Install quantity gage 4MA to potable water service panel 910VU.
(Ref. Fig. 402)
 - (a) Apply sealant (Mat. No. 09-002) to quantity gage 4MA.
 - (b) Position quantity gage 4MA (8) with clamp (9) and install screws (7).
 - (c) Position new seal (6) and flange (5).
 - 1 Install bolts (4), washers (3) and nuts (2) to potable water service panel 910VU.
 - (d) Remove cap and connect electrical connector 4MA-A (1).

R

D. Test

- (1) Carry out functional test of quantity indicating system
(Ref. 38-13-00, P. Block 501).

E. Close-Up

R

- (1) Remove safety clip and tag and close circuit breaker 1MA.

R

- (2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R

- (2) Close service panel (136BR) and access panel (136AR).
- (3) Remove access platform.

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38-13-12

Page 405
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

WATER QUANTITY PRESELECTION - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.3 m (7.5 ft.)
B.	Ty-wraps
C.	Blanking Caps

R

D.	Circuit Breaker Safety Clip and Tag
----	-------------------------------------

R

Referenced Procedures	
- 20-28-11, P. Block 1	Electrical Bonding

R

- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
--------------------------	-------------------------------

R

- 38-13-00, P. Block 501	Quantity Indication
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

R

2. Procedure

A. Job Set-Up

R

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R

- (1)Position access platform under FWD cargo compartment door (Z811).
(2)Open FWD cargo compartment door (Z811) and secure with safety lock
(Ref. 52-30-00, P. Block 301).

R

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KSSU

38-13-14

Page 401
Dec 01/95

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- (3) Remove FWD cargo compartment ceiling panel (132GC)
(Ref. 25-54-10, P. Block 201).

R

B. Removal

R

(Ref. Fig. 401)

R

(Ref. Fig. 402)

R

- (1) Preselection Control Unit (15MA)
(a) Disconnect and cap electrical connector (5).
(b) Remove nuts (1), washers (2) and bolts (3). Disconnect bonding strap (6).
(c) Remove preselection control unit (4) (15MA).

R

- (2) Preselection Switch (16MA)
(a) Open access panel (1) at fwd purser station.
(b) Release setscrew (2) and remove knob (3).
NOTE : The smoke detector selector knob must also be removed, if fitted.
(c) Remove bolts (4) and tinted acrylic cover (5).
NOTE : Tinted acrylic cover is fragile.
(d) Disconnect plug (5800VC-A) of purser's panel (863VU).
(e) Remove preselection switch wiring pins (P, Q, R, S, T) from plug (5800VC-A).
(f) Remove nut (6) and preselection switch (7) (16MA).

R

C. Installation

NOTE : For electrical bonding procedure refer to 20-28-11, P. Block 1.

R

(Ref. Fig. 401)

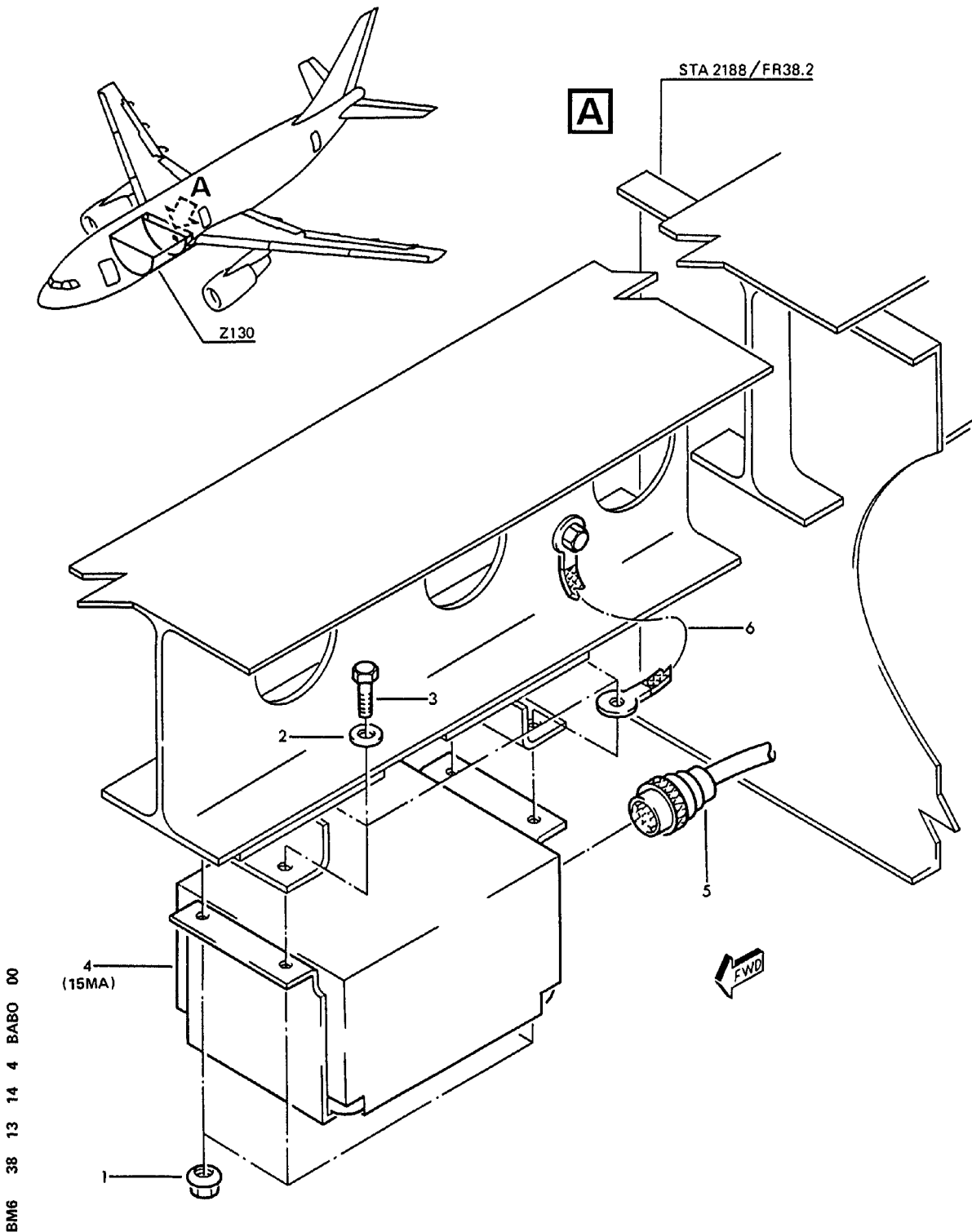
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(Ref. Fig. 402)

EFFECTIVITY: ALL

KSSU

38-13-14Page 402
Dec 01/95



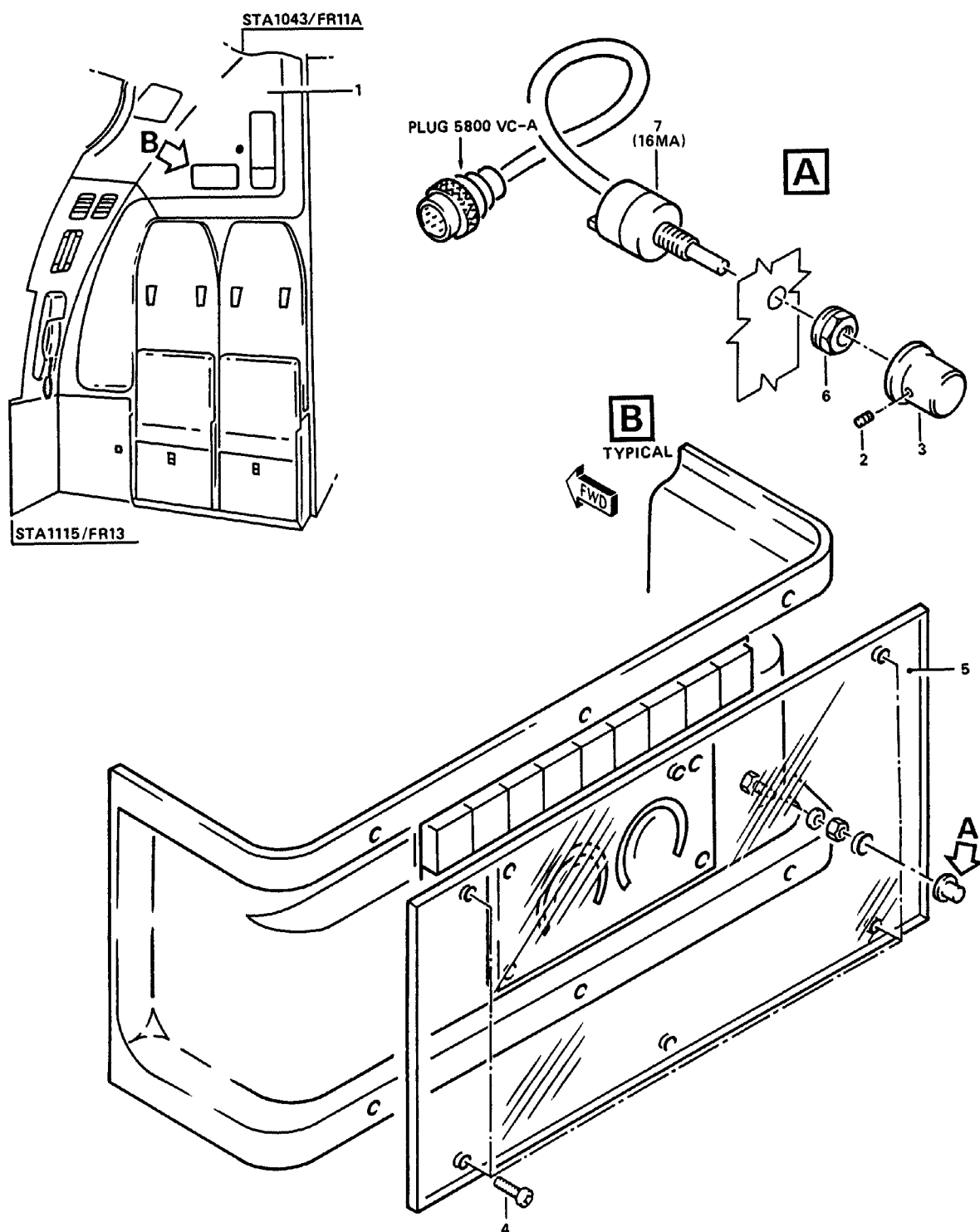
Preselection-Control Unit (15MA)
Figure 401

R EFFECTIVITY: ALL

KSSU

38-13-14

Page 403
Dec 01/95



Preselection Switch (16MA)
Figure 402

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R EFFECTIVITY: ALL

KSSU

38-13-14

Page 404
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

R

(1)Preselection Control Unit (15MA)

- (a)Position preselection control unit (4) (15MA) and bonding strap (6) and install bolts (3), washers (2) and nuts (1).
- (b)Remove cap and connect electrical connector (5).
- (c)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

R

(2)Preselection Switch (16MA)

- (a)Install preselection switch (7) (16MA) and secure with nut (6).
- (b)Install preselection switch wiring pins (P, Q, R, S, T) in plug (5800VC-A).
- (c)Connect plug (5800VC-A) of purser's panel (863VU).
- (d)Install tinted acrylic cover (5) and secure with bolts (4).

NOTE : Tinted acrylic cover is fragile.

- (e)Install knob (3) and secure with setscrew (2).

NOTE : The smoke detector selector knob must also be installed, if removed.

- (f)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.
- (g)Close access panel (1) at fwd purser station.

R

D. Test

- (1)Carry out functional test of water quantity indication system (Ref. 38-13-00, P. Block 501).

E. Close-Up

R

- (1)Remove safety clip and tag and close circuit breaker 1MA.

R

- (2)Install FWD cargo compartment ceiling panel (132GC) (Ref. 25-54-10, P. Block 201).

R

- (3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4)Remove access platform.
- (5)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R

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KSSU

38-13-14

Page 405
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

WATER DRAINING (DUMP) - DESCRIPTION AND OPERATION

1. General

The potable water system can be drained via the fill/overflow and drain valve (18MA), located above the potable water service panel in zone 136 and through the motorized drain valve (6MP), located above the potable water drain panel in zone 153.

2. Component Location (Ref. Fig. 001)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R 18MA	VALVE-FILL/OVERFLOW AND DRAIN		136		38-14-11
2MP	LIGHT-INDICATOR		136	136BR	
4MP	SWITCH-LIMIT		136		38-42-13
R 6MP	VALVE-MOTORIZED DRAIN		153		38-14-12
7MP	RELAY		136		
1	PANEL-POTABLE WATER SERVICE		136	136BR	
2	PANEL-POTABLE WATER DRAIN		153	153AL	
3	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	
4	HANDLE-DRAIN VALVE CONTROL		153	153AL	
5	PORT-POTABLE WATER FILL/DRAIN		136	136BR	
6	PORT-DRAIN		153	153AL	

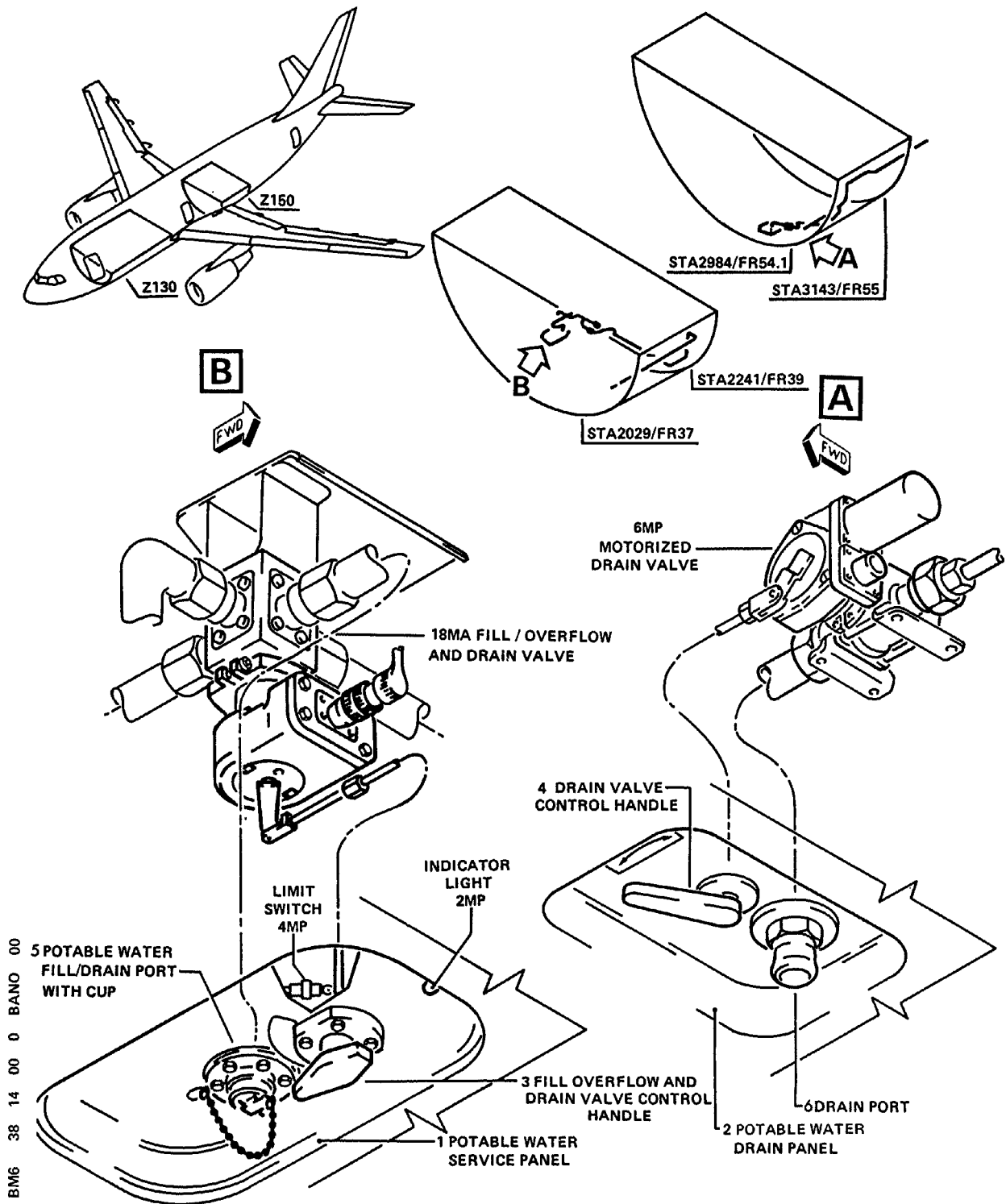
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38-14-00

Page 1
Jun 01/14

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Component Location
Figure 001

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KSSU

38-14-00

Page 2
Jun 01/90



AIRCRAFT MAINTENANCE MANUAL

3. Description

The opening and closing of the drain ports is controlled by the fill/overflow and drain valve (18MA) which is manually operated and by the motorized drain valve (6MP) which can be operated manually or electrically.

4. Operation

(Ref. Fig. 002, 003)

For draining, the fill/overflow and drain valve control handle is to be turned from **NORMAL** to **DRAIN** position. This opens the 'fill/drain' and 'overflow' ports of the valve. Furthermore, the limit switch (4MP), located at the potable water service panel is activated, to open the motorized drain valve (6MP) at the potable water drain panel. While draining, the relay (7MP), activated by limit switch (4MP), controls the electrical MD and MA systems. The drain valve (6MP) in zone 153 can be opened by the control handle at the potable water drain panel. The open position of the drain valve is indicated by the control light (2MP) located on the potable water service panel.

After completion of draining, the fill/overflow and drain valve control handle is to be turned back to **NORMAL** position. This action closes both the motorized drain valve (6MP) and the fill/overflow and drain valve (18MA). The indicator light (2MP) at the potable water service panel goes off.

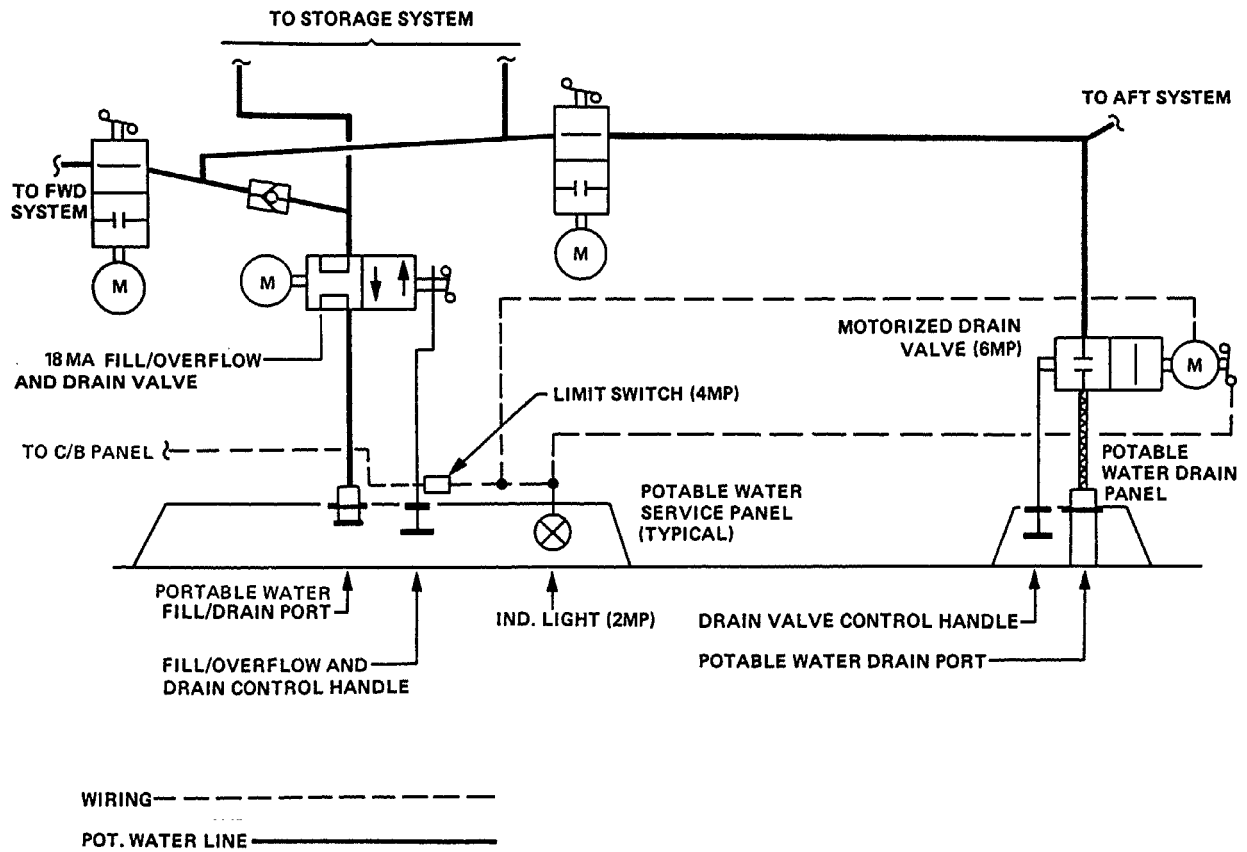
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KSSU

38-14-00

Page 3
Dec 01/89

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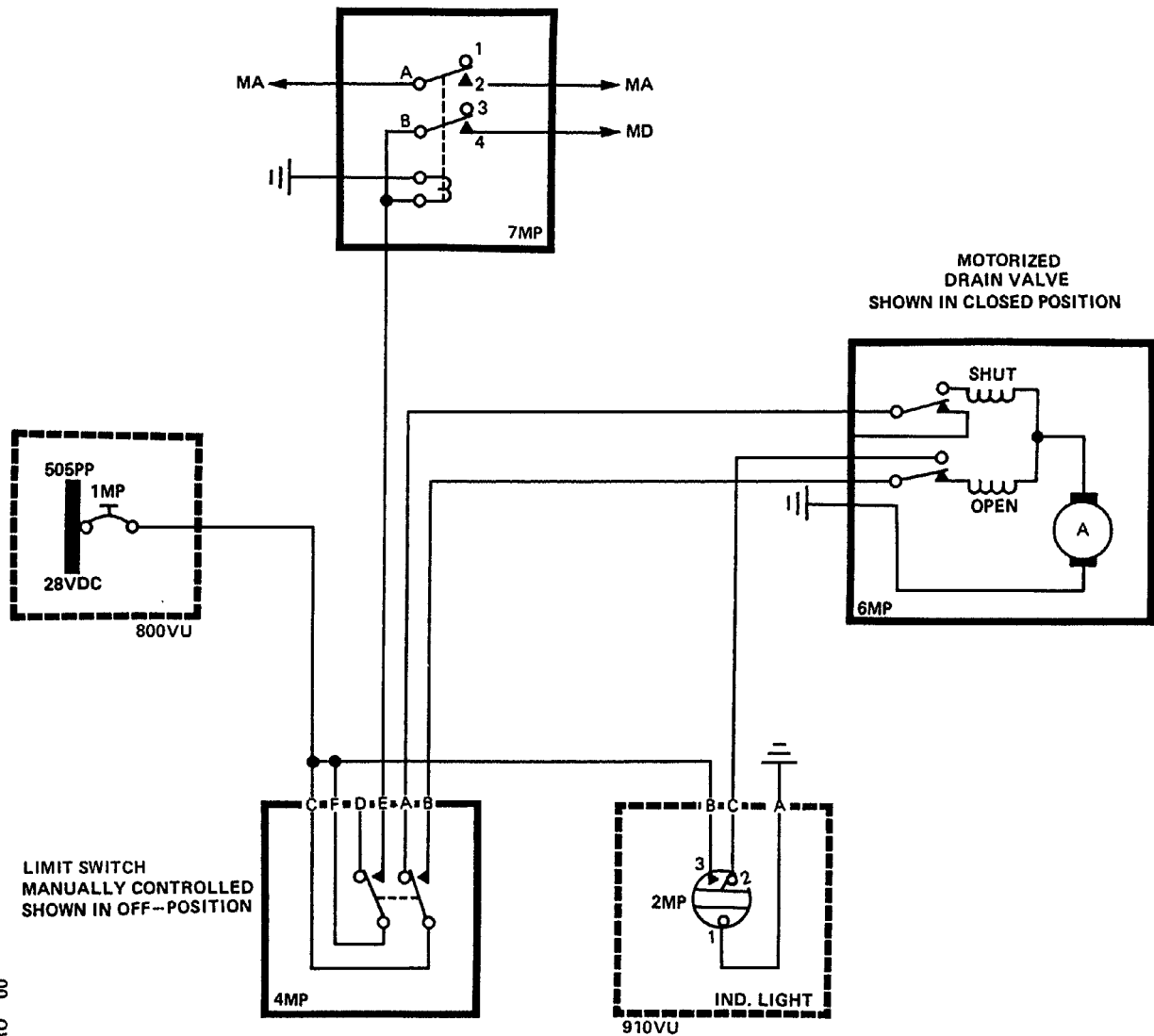
Functional Diagram
Figure 002

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38-14-00



Electrical Schematic
Figure 003

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38-14-00



AIRCRAFT MAINTENANCE MANUAL

DRAINAGE - ADJUSTMENT/TEST

1. System Functional Test

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
(2)	Two containers (capacity to suit water charged into system).
(3)	Two Access Platforms 1 m (3 ft.)
(4)	Two Drain Hoses 25.4 mm (1 in.) dia.

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- Position access platforms and open potable water service panel access door (136BR) and the drain panel access door (153AL).
- Place water containers under drain ports.
- Release cap from fill/drain port.
- Connect drain hoses to drain ports and place free ends into the respective container.
- Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make certain that electronics racks ventilation is correct.
- Make certain that the following circuit breaker is closed:

R

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MP	H7

R

- Replenish potable water system (Ref. 12-15-38, P. Block 1).

NOTE : For test purposes, it is not necessary to fill storage system to max. capacity.

- Pressurize potable water system (Ref. 38-40-00, P. Block 301).
- Make certain FWD and AFT main shutoff valves (17MD and 18MD) are open.

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KSSU

38-14-00

Page 501
Dec 01/95

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(2)Test

ACTION	RESULT
(a)On potable water service panel: - Turn and pull fill/overflow and drain valve control handle from NORMAL to DRAIN position.	In A/C Zone 130: - Fill/overflow and drain valve opens. In A/C Zone 150: - Motorized drain valve (6MP) opens, activated by limit switch (4MP). On potable water service panel: - Motorized drain valve indicator light (2MP) comes on. At potable water service panel and drain panel: - Water drains via drain ports. NOTE : Do not allow potable water system to drain completely.
(b)On potable water service panel: - Push control handle and lock in NORMAL position.	In A/C Zone 130: - Fill/overflow and drain valve closes. In A/C Zone 150: - Motorized drain valve (6MP) closes, activated by limit switch (4MP). On potable water service panel: - Motorized drain valve indicator light (2MP) goes off. At potable water service panel and drain panel: - Water discharge at drain ports stops.
(c)On circuit breaker panel (800VU): - Pull WATER SYSTEM circuit breaker (1MP) into the open position.	In A/C Zone 150: - Motorized drain valve (6MP) is electrically isolated.
(d)On drain panel: - Place drain valve control handle into the OPEN position.	In A/C Zone 150: - Motorized drain valve (6MP) is opened manually. - Water drains via drain port.
(e)On drain panel: - Place drain valve control handle into the SHUT position.	In A/C Zone 150: - Motorized drain valve (6MP) is closed manually. On drain panel: - Water discharge at drain port stops.
(f)On circuit breaker panel (800VU): - Push WATER SYSTEM circuit breaker (1MP) into the closed position.	In A/C Zone 150: - Motorized drain valve (6MP) is electrically re-energized.

EFFECTIVITY: ALL

R

KSSU

38-14-00

Page 502
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

(3) Close-Up

- (a) Drain potable water system completely (Ref. 12-24-38, P. Block 1).
- (b) Disconnect hoses at drain ports.
- (c) Secure cap to fill/drain port.
- (d) Wipe dry potable water service panel, drain panel and adjacent areas.
- (e) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (f) Close potable water service panel access door (136BR) and the drain panel access door (153AL).
- (g) Remove access platforms and containers.
- (h) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

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KSSU

38-14-00

Page 503
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

FILL/OVERFLOW AND DRAIN VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-14-13, P. Block 401	Control Cable - Fill/Overflow and Drain Valve
- 38-13-00, P. Block 501	Quantity Indicating
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Remove access door 136AR.
- (3) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R B. Removal (Ref. Fig. 401)

- R (1) Disconnect electrical connector (10).
- R (2) Install blanking caps to electrical connections.
- R (3) Disconnect unions (3, 4, 11, 12).
- R (4) Disconnect control cable (7) at valve (5).
- R (a) Remove and discard cotter pin (9).
- R (b) Remove washer (8) and pin (6).
- R (5) Remove nuts (15) and screws (16) from console (1).
- R (6) Remove nuts (2) and bolts (13).
- R (7) Remove mounting brackets (14).
- R (8) Remove fill/overflow and drain valve (5).
- R (9) Install blanking caps and plugs to all openings.

C. Preparation for Installation

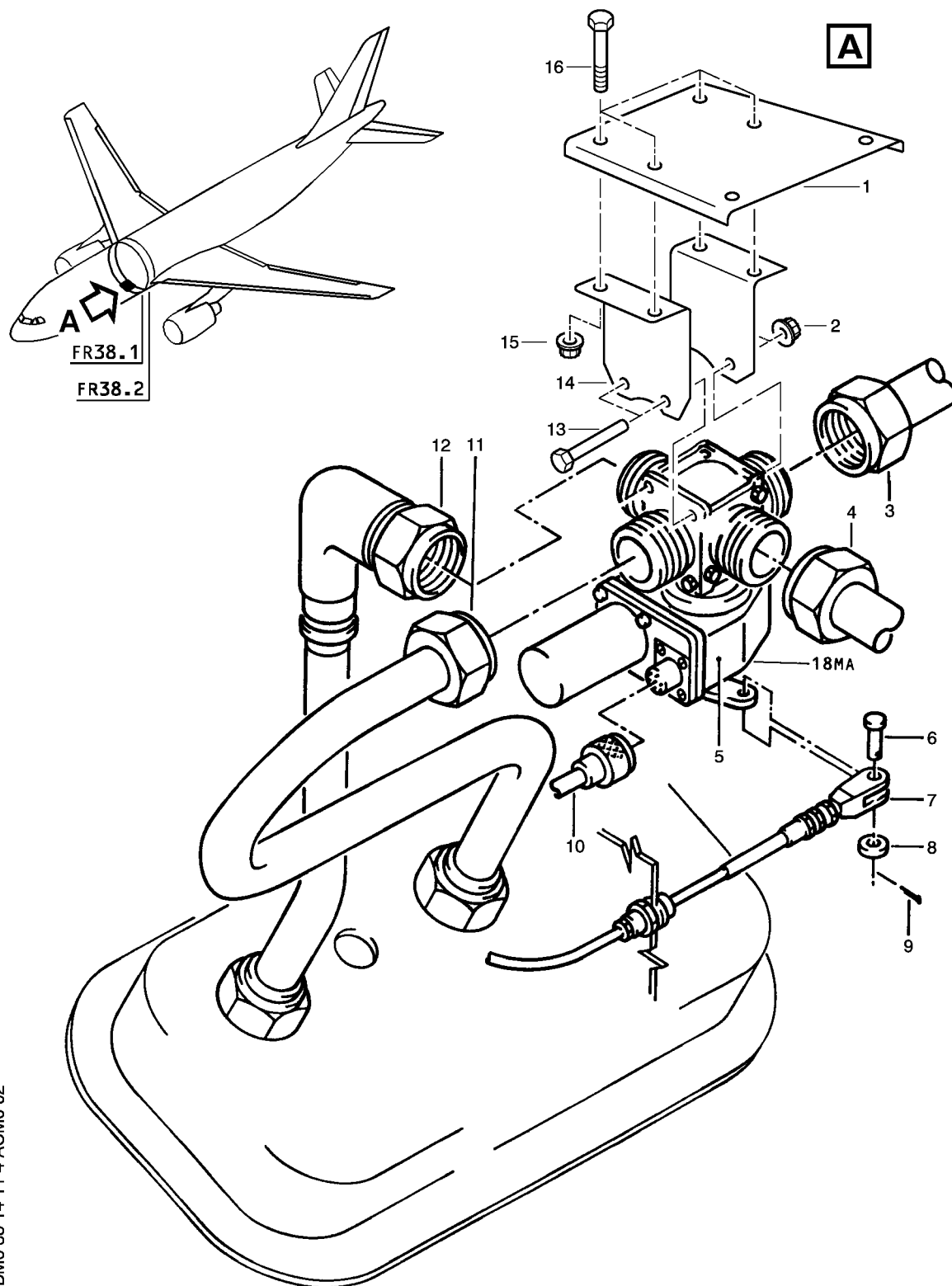
- (1) Remove old sealing tape from fittings.
- (2) Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
- R (3) Make certain that fill/overflow and drain valve (5) is clean and no external damage is visible.
- (4) Remove all blanking caps and plugs from openings and electrical

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KSSU

38-14-11

Page 401
Jun 01/15



Fill/Overflow and Drain Valve
Figure 401

BM6 38 14 11 4 ACM0 02

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KSSU

38-14-11

Page 402
Jun 01/15

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connections.

R D. Installation (Ref. Fig. 401)

- R (1)Put fill/overflow and drain valve (5) in position.
- R (2)Install mounting brackets (14).
- R (3)Install bolts (13) and nuts (2).
- R (4)Position the mounting brackets (14) on the console (1).
- R (5)Install screws (16) and nuts (15).
- R (6)Connect control cable (7) at valve (5).
- R (a)Install pin (6), washer (8) and cotter pin (9).
- R (b)Check operation of control cable and adjust, if necessary
(Ref. 38-14-13, P. Block 401).
- R (7)Connect unions (3, 4, 11, 12).
- R (8)Connect electrical connector (10).

E. Test

- (1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
- (3)Check all connections for leakage.
NOTE : Leakage is not permissible.
- (4)Remove safety clips and tags and close circuit breakers 1MA.
- (5)Check shutoff function of fill/overflow and drain valve (Ref. 38-13-00, P. Block 501).

F. Close-Up

- (1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2)Install access door 136AR.
- (3)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

EFFECTIVITY: ALL

KSSU

38-14-11

Page 403
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

MOTORIZED DRAIN VALVE (6MP) - REMOVAL/INSTALLATION

R

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-33, P. Block 401	AFT Cargo Compartment Floor Panels

**ON A/C ALL

R Post SB 38-2013 For A/C ALL

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-55-10, P. Block 201	AFT Cargo Compartment Linings
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

R **ON A/C ALL

A. Job Set-Up

EFFECTIVITY: ALL

KSSU

38-14-12

Page 401
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Open AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
- (3) Remove cargo compartment floor panels 151AF and 151BF (Ref. 53-10-33, P. Block 401).
- (4) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MP	H 7

****ON A/C ALL**

R Post SB 38-2013 For A/C ALL

A. Job Set-Up

- (1) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (2) Open AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
- (3) Remove cargo compartment sidewall panel 151FW (Ref. 25-55-10, P. Block 201).
- (4) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MP	H 7

R ****ON A/C ALL**

B. Removal (Ref. Fig. 401)

- (1) Disconnect electrical connector (1).
- (2) Install blanking caps to electrical connections.
- (3) Disconnect link (6) at lever (5).
 - (a) Remove cotter pin (2), washers (3) and pin (4).
 - (b) Discard cotter pin (2).
- (4) Disconnect unions (7, 8).
- (5) Remove the screws (10), and the washers (11).
- (6) Remove the insulating plates (12), the insulation sleeve (13) and the spacers (14).
- (7) Remove drain valve (9) (6MP).
- (8) Install blanking caps and plugs to all openings.

****ON A/C ALL**

R Post SB 38-2013 For A/C ALL

EFFECTIVITY: ALL

KSSU

38-14-12

Page 402
Jun 01/13

B. Removal (Ref. Fig. 402)

- (1) Disconnect electrical connector (1).
- (2) Install blanking caps to electrical connections.
- (3) Disconnect control cable (5) at lever (3).
 - (a) Remove cotter pin (7), washer (6) and pin (4).
 - (b) Discard cotter pin (7).
- (4) Disconnect unions (8, 11).
- (5) Remove screws (13), washers (12), insulating plates (10) and spacers (9).
- (6) Remove drain valve (2) (6MP).
- (7) Install blanking caps and plugs to all openings.

****ON A/C ALL****C. Preparation for Installation**

- (1) Remove old sealing tape from fittings.
- (2) Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
- (3) Make certain that drain valve is clean and no external damage is visible.
- (4) Remove all blanking caps and plugs from openings and electrical connections.

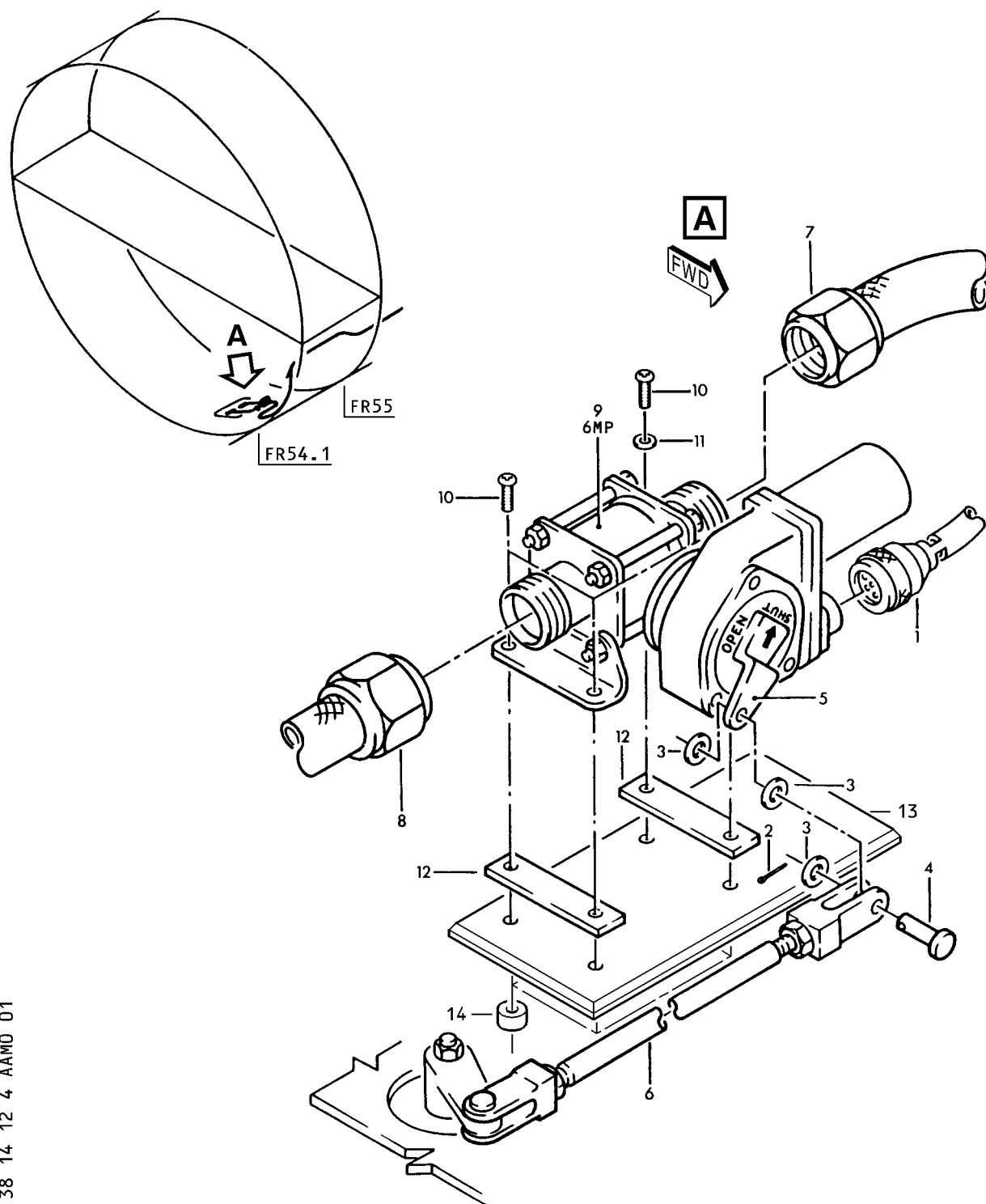
R**D. Installation (Ref. Fig. 401)**

- (1) Put the spacers (14), the insulation sleeve (13) and insulating plates (12) in position.
- (2) Put drain valve (9) (6MP) in position on insulating plates (12).
- (3) Install screws (10) and washers (11).
- (4) Connect unions (7, 8).
- (5) Connect link (6) at lever (5).
 - (a) Put link (6) in position on lever (5).
 - (b) Install washers (3), pin (4) and cotter pin (2).
- (6) Connect electrical connector (1).

****ON A/C ALL****R Post SB 38-2013 For A/C ALL****D. Installation (Ref. Fig. 402)**

- (1) Put spacers (9) and insulating plates (12) in position.
- (2) Put drain valve (2) (6MP) in position on insulating plates (10).
- (3) Install screws (13) and washers (12).
- (4) Connect unions (8, 11).
- (5) Connect control cable (5) to lever (3).
 - (a) Put control cable (5) in position on lever (3).
 - (b) Install pin (4), washer (6) and cotter pin (7).
- (6) Connect electrical connector (1).

EFFECTIVITY: ALL**KSSU****38-14-12**Page 403
Jun 01/13



Motorized Drain Valve
Figure 401

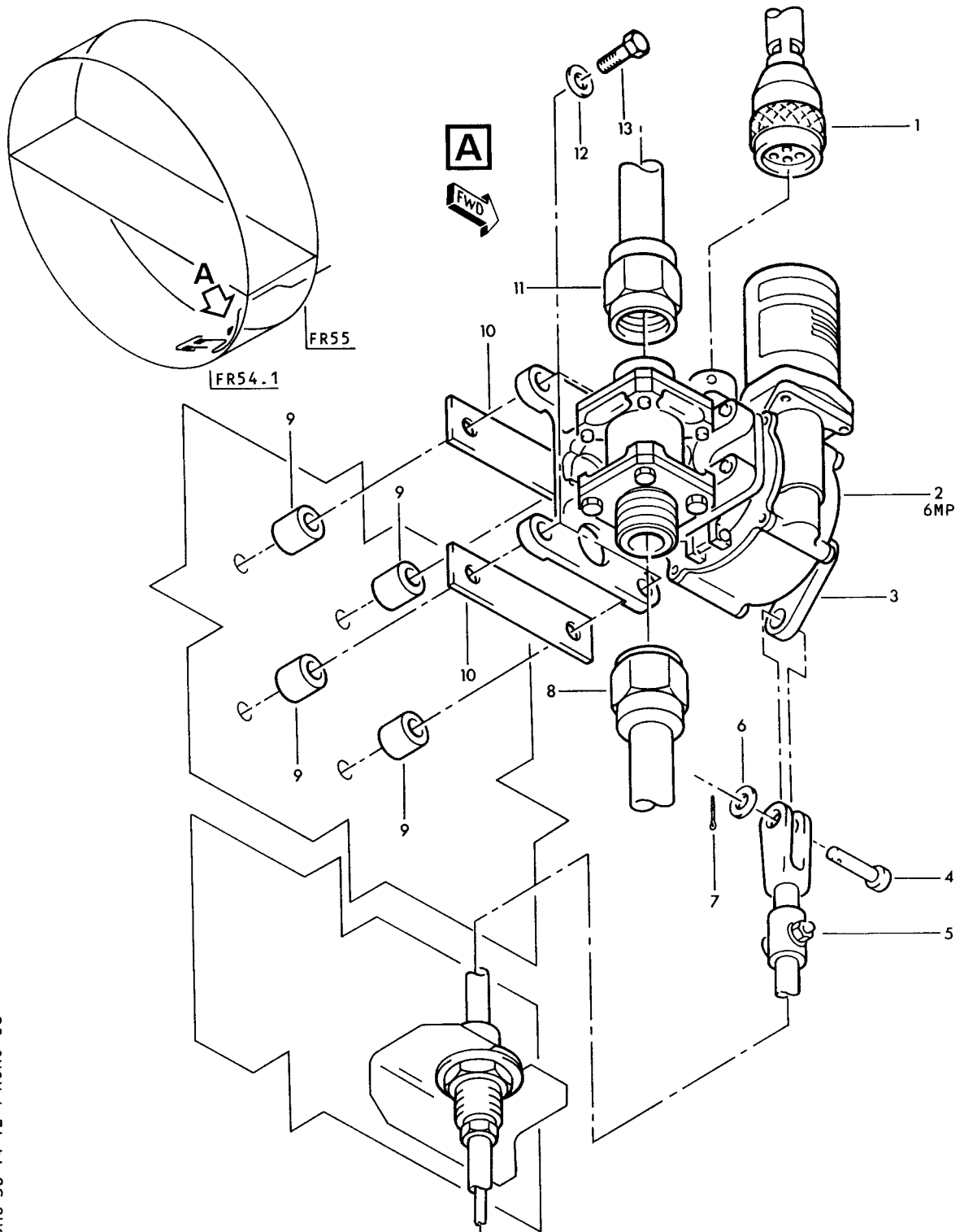
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KSSU

38-14-12

Page 404
Jun 01/13



Motorized Drain Valve
Figure 402

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KSSU

38-14-12

Page 405
Jun 01/02

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**ON A/C ALL

E. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
- (3) Check all connections for leakage.
NOTE : Leakage is not permissible.
- (4) Open water service panel 136BR and water drain panel 153AL.
- (5) Remove safety clips and tags and close circuit breaker 1MP.
- (6) Start electrical draining (Ref. 12-24-38, P. Block 1).
- (7) Make sure that water drains out of the water service panel 136BR drain port and the drain panel 153AL drain port.
- (8) Stop electrical draining (Ref. 12-24-38, P. Block 1).
- (9) Make sure that waterflow stops at both drain ports.
- (10) At drain panel 153AL turn drain valve control handle from SHUT to OPEN position.
- (11) Make sure that water drains out of the drain panel 153AL drain port.
- (12) At drain panel 153AL turn drain valve control handle from OPEN to SHUT position.
- (13) Make sure that waterflow stops at drain port.

R

F. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install cargo compartment floor panels 151AF and 151BF (Ref. 53-10-33, P. Block 401).
- (3) Close AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
- (4) Close water service panel 136BR and water drain panel 153AL.
- (5) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

**ON A/C ALL

R Post SB 38-2013 For A/C ALL

F. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install cargo compartment sidewall panel 151FW (Ref. 25-55-10, P. Block 201).
- (3) Close AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
- (4) Close water service panel 136BR and water drain panel 153AL.

EFFECTIVITY: ALL

KSSU

38-14-12Page 406
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

(5) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

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EFFECTIVITY: ALL

KSSU

38-14-12

Page 407
Jun 01/02

CONTROL CABLE - FILL/OVERFLOW AND DRAIN VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 1.0 m.daN (88.5 lbf.in.)
B.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
C.	Cotterpin
D.	Access Platform, 2.7 m (9 ft.)
E.	Access Platform, 1.0 m (3 ft.)
F. Material No. 04-004	Common Greases (Ref. 20-31-00)
G. Material No. 05-020	Special Materials (Ref. 20-31-00)
H. Material No. 09-002	Sealants (Ref. 20-31-00)
J. Material No. 09-007	Sealants (Ref. 20-31-00)

Referenced Procedures

- | | |
|--------------------------|-------------------------------------|
| - 12-15-38, P. Block 1 | Replenishing Potable Water |
| - 12-24-38, P. Block 1 | Potable Water System - Draining |
| - 52-30-00, P. Block 301 | FWD and AFT Cargo Compartment Doors |

2. Procedure

A. Job Set-Up

- (1) Position access platform at FWD cargo compartment door.
- (2) Position access platform at potable water service access door.
- (3) Open potable water service access door 136BR.
- (4) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (5) Open FWD cargo compartment door (Ref. 52-30-00, P. Block 301).
- (6) Remove floor panels 132WF, 132ZF and 132YF.

B. Removal (Ref. Fig. 401)

- (1) At fill/overflow and drain valve:
 - (a) Remove cotter pin (1) and discard.
 - (b) Remove washer (2) and pin (3).
 - (c) Remove nut (5).
 - (d) Disconnect clevis (4) by rotating clockwise.

NOTE : The clevis (4) has a left-hand thread.

- (e) Remove the bolt (6).
- (2) At water service panel:
 - (a) Remove nuts (8), washers (9) and bolts (10).
 - (b) Release nut (11), pull handle (12) with cable (7) out of tube.
- (3) Removal of tube (16).
 - (a) Release nut (15) and remove tube (16).
 - (b) Remove lockwire, release locknuts (13).

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C. Preparation for Installation

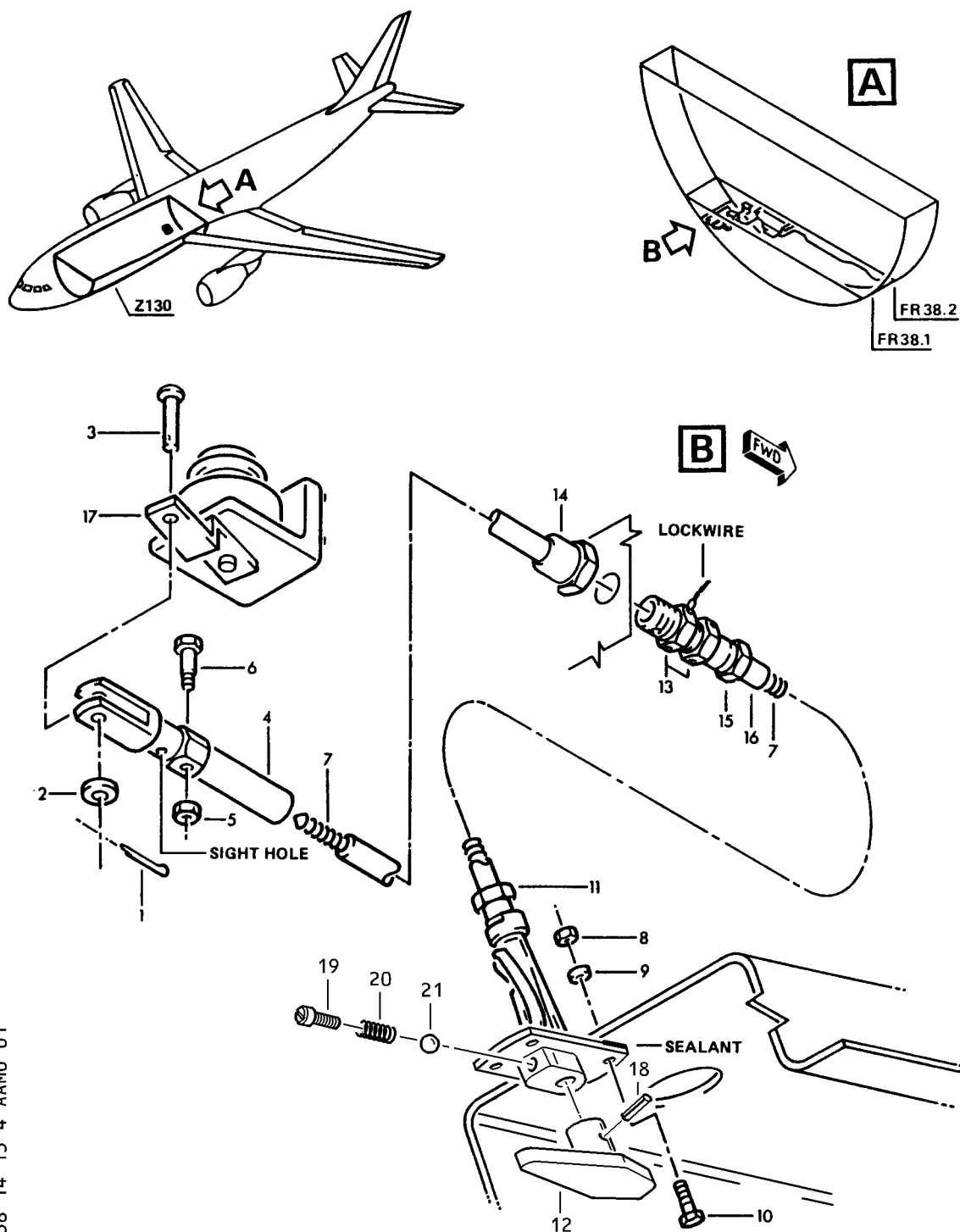
- (1) Remove old sealant from potable water service panel.
- (2) Apply release agent (Mat. No. 05-020) to base of handle.

EFFECTIVITY: ALL

KSSU

38-14-13

Page 401
Jun 01/02



Fill/Overflow and Drain Valve Control Cable
Figure 401

EFFECTIVITY: ALL

KSSU

38-14-13

Page 402
Jun 01/02

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- (3) Make sure that the control cable is not kinked or broken.
- (4) Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation (Ref. Fig. 401)

- R
- (1) Installation of tube (16).
 - (a) Install sleeve (14), secure with locknuts (13) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
 - (b) Install tube (16) and hand tighten nut (15).
 - (2) At water service panel:
 - (a) Install cable (7) with handle (12) in tube (16).
 - (b) Install bolts (10), washers (9) and nuts (8).

NOTE : Make sure that handle (12) is turned to Flight position and pushed fully in.
 - (c) Hand tighten nut (11).
 - (3) At fill/overflow and drain valve:
 - (a) Insert bolt (6) in clevis (4).
 - (b) Screw clevis (4) onto cable (7) by rotating it counterclockwise until cable end is visible through the sight hole.

NOTE : The clevis (4) has a left-hand thread.
 - (c) Install nut (5) and hand tighten it.
 - (4) Adjustment
 - (a) Using pin (3), temporarily connect clevis (4) to valve lever (17).
 - (b) Operate handle and make certain that fill/overflow and drain valve opens and closes fully. If required, adjust cable by rotating clevis (4).

NOTE : When valve is fully open, handle must extend approx. 37 mm (1.45 in.).
 - (c) Move handle to fully closed position.
 - (d) Disconnect clevis (4) from valve lever (17) by removing pin (3).
 - (e) Try to move valve lever (17) manually further to the closed position.

NOTE : It shall not be possible to move the valve lever any further.
 - (f) Using pin (3), temporarily connect clevis (4) to valve lever (17).
 - (g) Move handle to fully open position.
 - (h) Disconnect clevis (4) from valve lever (17) by removing pin (3).
 - (j) Try to move valve lever (17) manually further to the open position.

NOTE : It shall not be possible to move the valve lever any further.
 - (k) Secure clevis to lever (17) with pin (3), washer (2) and new cotter pin (1).
 - (l) TORQUE nut (11) and (15) to 0.8 m.daN (70.8 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
 - (m) Apply a fillet of sealant (Mat. No. 09-007) around base of handle (12), when dry coat over with sealant (Mat. No. 09-002).

E. Close-Up

- (1) Replenish potable water system (Ref. 12-15-38, P. Block 1).
- (2) Install panels 132WF, 132ZF and 132YF.
- (3) Close FWD cargo compartment door (Ref. 52-30-00, P. Block 301).
- (4) Remove access platforms.
- (5) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

KSSU

38-14-13

Page 403
Jun 01/02



AIRCRAFT MAINTENANCE MANUAL

****0N A/C ALL**

R Post SB 38-2013 For A/C ALL

CONTROL CABLE - MOTORIZED DRAIN VALVE - REMOVAL/INSTALLATION

****0N A/C ALL**

R Post SB 38-2013 For A/C ALL

1. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 2.0 m.daN (177 lbf.in.)
B.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
C.	Cotter pins
D.	Access Platform, 2.7 m (9 ft.)
E.	Access Platform, 1.0 m (3 ft.)
F. Material No. 04-004	Common Greases (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 25-55-10, P. Block 201	AFT Cargo Compartment - Linings
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-33, P. Block 401	AFT Cargo Compartment Floor Panels

****0N A/C ALL**

R Post SB 38-2013 For A/C ALL

2. Procedure

A. Job Set-Up

- (1) Position access platform at AFT cargo compartment door.
- (2) Position access platform at motorized drain valve access door.
- (3) Open motorized drain valve access door 153AL.
- (4) Drain potable water system (Ref. 12-24-38, P. Block 1).
- (5) Open AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
- (6) Remove cargo compartment floor panels 151AF and 151BF (Ref. 53-10-33, P. Block. 401).
- (7) Remove cargo compartment sidewall panel 151FW (Ref. 25-55-10, P. Block. 201).

EFFECTIVITY: ALL

KSSU

38-14-14

Page 401
Jun 01/13

****0N A/C ALL**

R Post SB 38-2013 For A/C ALL

B. Removal (Ref. Fig. 401)

(1) At motorized and drain valve:

- (a) Remove cotter pin (4) and discard.
- (b) Remove washer (3) and pin (2).
- (c) Remove nut (7) and washer (6).
- (d) Disconnect sliding end (8) by rotating clockwise.
NOTE : The sliding end (8) has a left-hand thread.
- (e) Remove screw (5).

(2) At motorized drain valve access panel:

- (a) Remove cotter pin (18) and discard.
- (b) Remove washer (19) and pin (21).
- (c) Cut the lockwire and release nut (17).
- (d) Remove clevis (20) and nut (17) from cable (9).
- (e) Pull cable (9) from casing (13).

(3) Removal of casing (13).

- (a) Release nuts (12) and (14).
- (b) Turn swivel ends (10) and (16) until casing (13) is free.
- (c) Remove casing (13).
- (d) Remove swivel ends (10) and (16), washers (11) and (15) and nuts (12) and (14).

****0N A/C ALL**

R Post SB 38-2013 For A/C ALL

C. Preparation for Installation

- (1) Make sure that the control cable is not kinked or broken.
- (2) Apply grease (Mat. No. 04-004) to all end fittings and threads.

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R Post SB 38-2013 For A/C ALL

D. Installation (Ref. Fig. 401)

(1) Installation of casing (13).

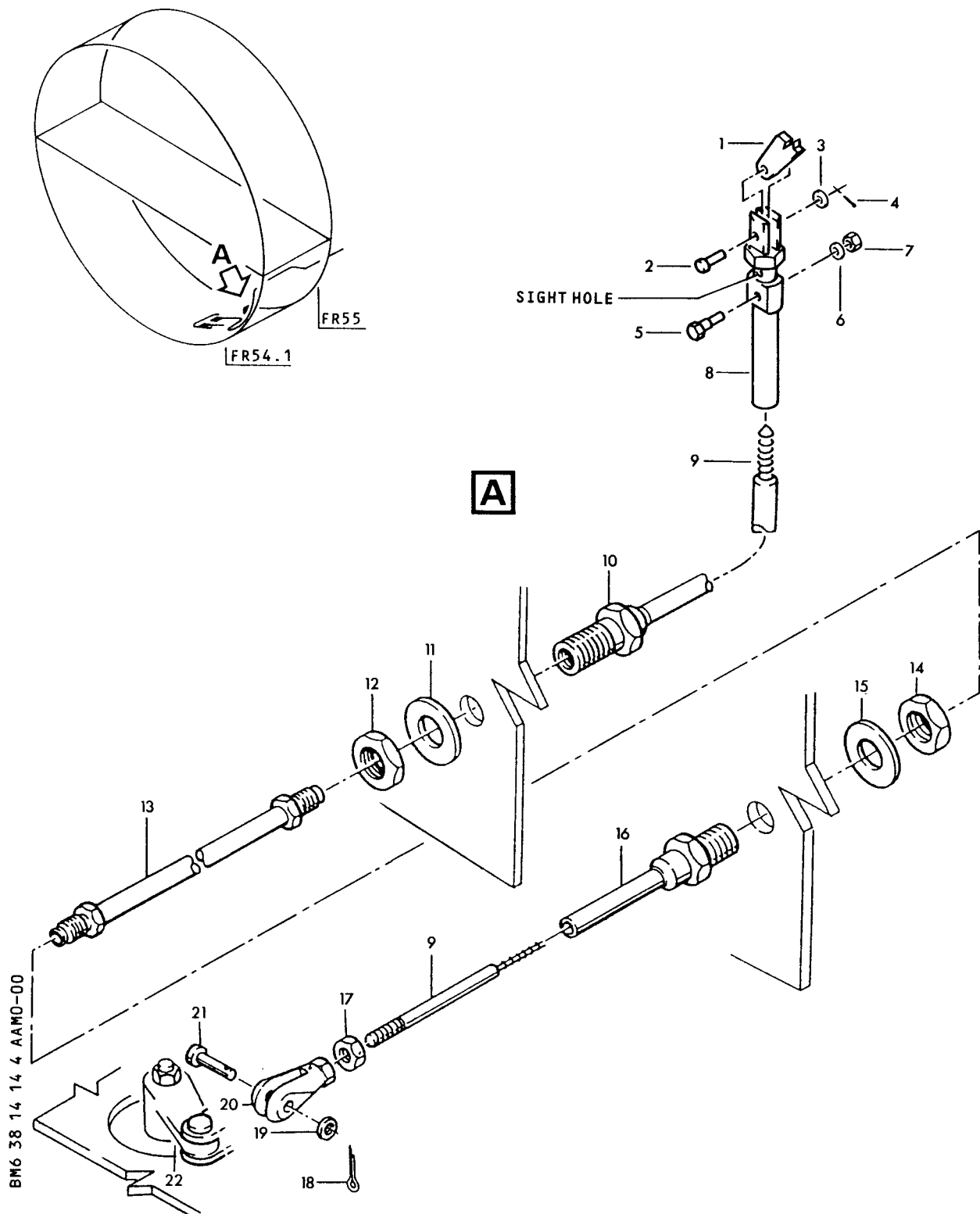
- (a) Put swivel ends (10) and (16) in position.
- (b) Install washers (11) and (15) and nuts (12) and (14) but do not tighten
- (c) Install casing (13).
- (d) **TORQUE** tighten casing (13) to 0.7 to 0.8 m.daN (62 to 71 lbf.in.).
- (e) **TORQUE** tighten nuts (12) and (14) to 1.9 to 2.0 m.daN

EFFECTIVITY: ALL

KSSU

38-14-14

Page 402
Jun 01/13



Motorized Drain Valve Control Cable
Figure 401

R EFFECTIVITY: ALL

KSSU

38-14-14

Page 403
Jun 01/02



AIRCRAFT MAINTENANCE MANUAL

- (168 to 177 lbf.in.).
- (f) Insert cable (9) into casing (13).
- (2) At motorized drain valve access panel:
- (a) Install nut (17) and clevis (20) on cable (9), but do not tighten.
- NOTE** : Make sure that handle (22) is turned to CLOSED position.
- (3) At motorized and drain valve:
- (a) Install screw (5), washer (6) and nut (7), but do not tighten.
- (b) Screw sliding end (8) onto cable (9) by rotating it counterclockwise until cable end is visible through the sight hole.
- NOTE** : The sliding end (8) has a left-hand thread.
- (c) **TORQUE** tighten nut (7) to between 0.2 to 0.3 m.daN (18 to 27 lbf.in.).
- (4) Adjustment
- (a) Using pin (2), temporarily connect sliding end (8) to valve lever (1).
- (b) Using pin (21), temporarily connect clevis (20) to lever (22).
- (c) Operate handle and make certain that motorized drain valve opens and closes fully. If required, adjust cable by rotating clevis (20).
- (d) Move handle to fully closed position.
- (e) Disconnect sliding end (8) from valve lever (1) by removing pin (2).
- (f) Try to move valve lever (1) manually further to the closed position.
- NOTE** : It shall not be possible to move the valve lever any further.
- (g) Using pin (2), temporarily connect sliding end (8) to valve lever (1).
- (h) Move handle to fully open position.
- (j) Disconnect sliding end (8) from valve lever (1) by removing pin (2).
- (k) Try to move valve lever (1) manually further to the open position.
- NOTE** : It shall not be possible to move the valve lever any further.
- (l) Secure sliding end (8) to lever (1) with pin (2), washer (3) and new cotter pin (4).
- (m) **TORQUE** nut (17) to 0.6 to 0.7 m.daN (53 to 62 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
- (n) Secure clevis (20) to lever (22) with pin (21), washer (19) and new cotter pin (18).

****ON A/C ALL**

R Post SB 38-2013 For A/C ALL

E. Close-Up

- (1) Install cargo compartment floor panels 151AF and 151BF (Ref. 53-10-33, P. Block 401).
- (2) Install cargo compartment sidewall panel 151WF (Ref. 25-55-10, P. Block 201).
- (3) Close AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
- (4) Replenish potable water system (Ref. 12-15-38, P. Block 1).
- (5) Close motorized drain valve access door 153AL.
- (6) Remove access platforms.
- (7) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

KSSU

38-14-14

Page 404
Jun 01/13

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WASTE DISPOSAL - DESCRIPTION AND OPERATION

****0N A/C 226-226, 229-249, 401-401,**

1. General

Disposal of waste from galleys and lavatories is achieved by the following subsystems of the waste disposal system:

- Toilet System (38-31-00)
- Waste Water Drain (38-32-00)

2. Description

R **0N A/C 404-500,

1. General

Disposal of waste matter and fluids from galleys and lavatories is achieved by the following subsystems of the waste disposal system:

- Waste Water Drain (38-32-00)
- Vacuum Toilet System (38-35-00)

2. Description

****0N A/C 226-226, 229-249, 401-401,**

(Ref. Fig. 001)

R **0N A/C 404-500,

(Ref. Fig. 002)

****0N A/C 226-226, 229-249, 401-401,**

A. Toilet System

Toilet system collects waste in waste tanks during flight. On ground the tanks are emptied, cleaned and filled with a prescribed amount of flush fluid.

B. Waste Water Drain

The waste water drain conveys waste water from lavatory washbasins and galley sinks overboard via heated drain masts.

R **0N A/C 404-500,

A. Vacuum Toilet System

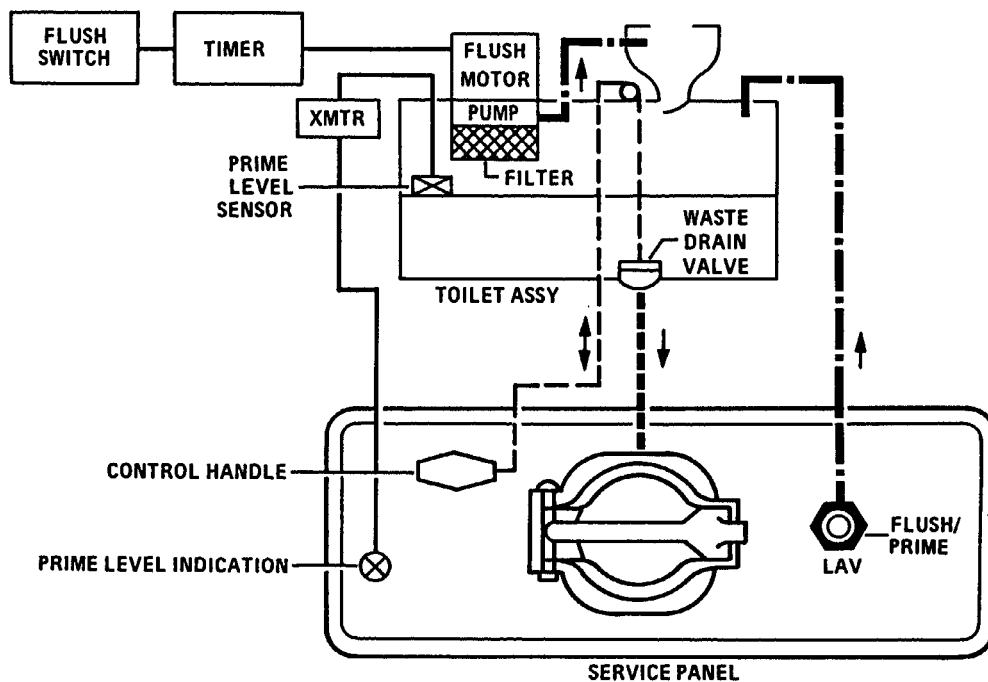
The toilet system collects waste matter in two waste tanks, located in the rear aircraft underfloor section, by vacuum draining. The tanks are emptied and cleaned during ground service.

EFFECTIVITY: ALL

KSSU

38-30-00

Page 1
Jun 01/13



Functional Diagram
Figure 001

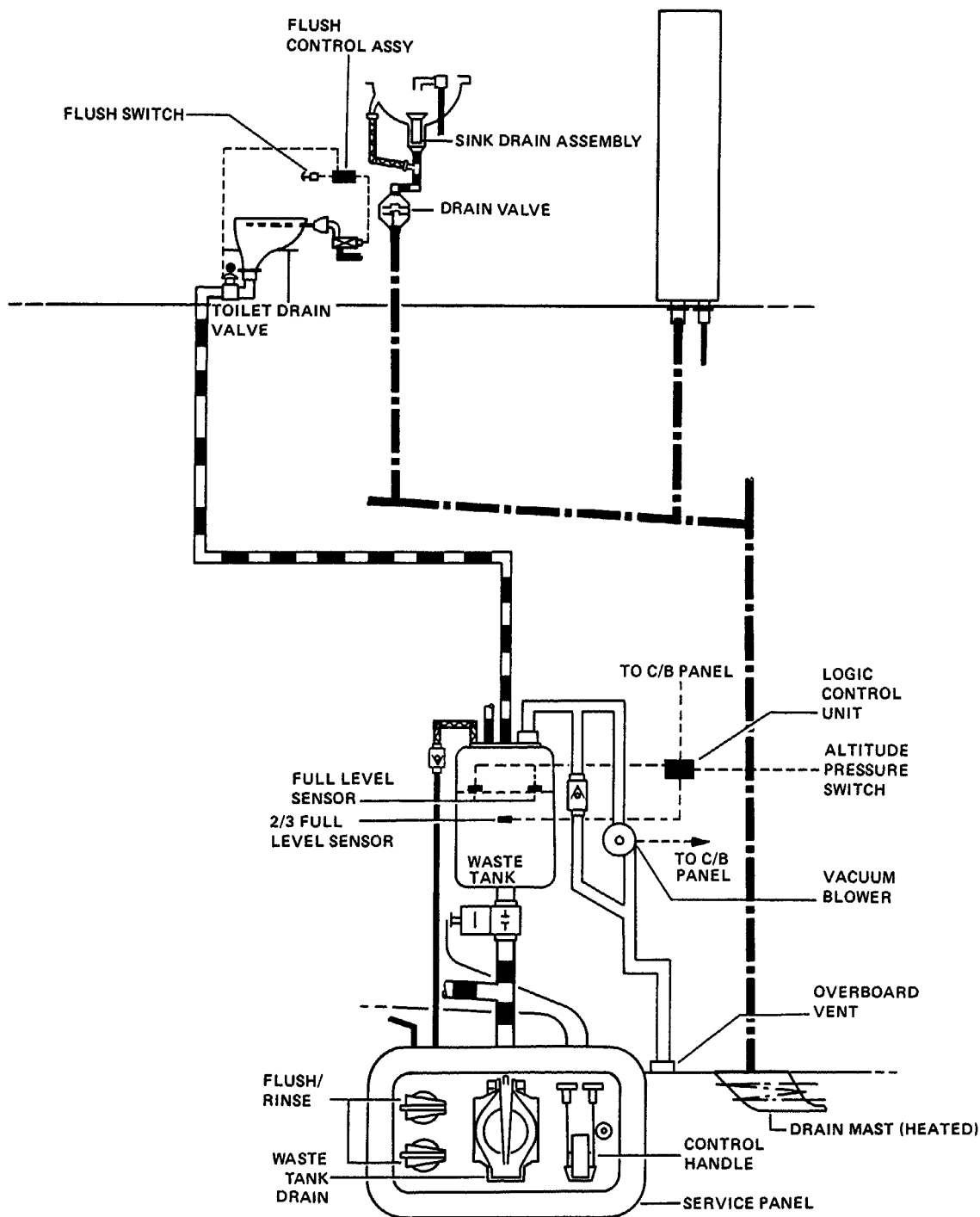
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38-30-00

Page 2
Jun 01/07



Functional Diagram
Figure 002

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R EFFECTIVITY: 404-500,

KSSU

38-30-00

Page 3
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

B. Waste Water Drain

The waste water drain conveys waste water from lavatory washbasins and galley sinks overboard via heated drain masts.
Drain valves are installed to avoid cabin pressure loss via waste water drain lines.

R EFFECTIVITY: 404-500,

KSSU

38-30-00

Page 4
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

TOILET SYSTEM - DESCRIPTION AND OPERATION

R

1. General

The toilet system is provided for the convenience of the passengers and crew. It comprises three individual subsystems - FWD, MID and AFT. Each subsystem contains toilet units, lines, valves and service panels, and has a waste tank flushing facility.

R

2. Component Location

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.

Lavatory J					
12MV	TRANSMITTER		231		38-33-11
5MG2	MOTOR-FLUSH		231		38-31-15
6MG2	TIMER-TOILET		231		38-31-13
19MG6	SWITCH-FLUSH		231		
383698	TOILET ASSY		231		38-31-11
Lavatory N					
21MV	TRANSMITTER		232		38-33-11
5MG6	MOTOR-FLUSH		232		38-31-15
6MG6	TIMER-TOILET		232		38-31-13
19MG10	SWITCH-FLUSH		232		
383734	TOILET ASSY		232		38-31-11
**ON A/C 226-226, 229-249,					
Lavatory H					
15MV	TRANSMITTER		231		38-33-11
5MG3	MOTOR-FLUSH		231		38-31-15
6MG3	TIMER-TOILET		231		38-31-13
19MG7	SWITCH-FLUSH		231		
383703	TOILET ASSY		231		38-31-11
Lavatory K					
16MV	TRANSMITTER		232		38-33-11
5MG4	MOTOR-FLUSH		232		38-31-15
6MG4	TIMER-TOILET		232		38-31-13
19MG8	SWITCH-FLUSH		232		
383699	TOILET ASSY		232		38-31-11

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-00

Page 1
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
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**0N A/C 226-226, 229-249, 401-401,

Lavatory V

19MV	TRANSMITTER		251		38-33-11
5MG11	MOTOR-FLUSH		251		38-31-15
6MG11	TIMER-TOILET		251		38-31-13
19MG17	SWITCH-FLUSH		251		
383691	TOILET ASSY		251		38-31-11

Lavatory U

14MV	TRANSMITTER		252		38-33-11
5MG10	MOTOR-FLUSH		252		38-31-15
6MG10	TIMER-TOILET		252		38-31-13
19MG16	SWITCH-FLUSH		252		
383690	TOILET ASSY		252		38-31-11

**0N A/C 401-401,

Post COCAUA-DA25-072 For A/C 401-401,

Lavatory Y

25MV	TRANSMITTER		251		38-33-11
5MG9	MOTOR-FLUSH		251		38-31-15
6MG9	TIMER-TOILET		251		38-31-13
19MG15	SWITCH-FLUSH		251		
383692	TOILET ASSY		251		38-31-11

**0N A/C 401-401,

Lavatory Z

26MV	TRANSMITTER		252		38-33-11
5MG8	MOTOR-FLUSH		252		38-31-15
6MG8	TIMER-TOILET		252		38-31-13
19MG14	SWITCH-FLUSH		252		
383693	TOILET ASSY		252		38-31-11

**0N A/C 226-226, 229-249,

(Ref. Fig. 001)

**0N A/C 401-401,

Post COCAUA-DA25-072 For A/C 401-401,

(Ref. Fig. 002)

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EFFECTIVITY: 226-226, 229-249, 401-401,

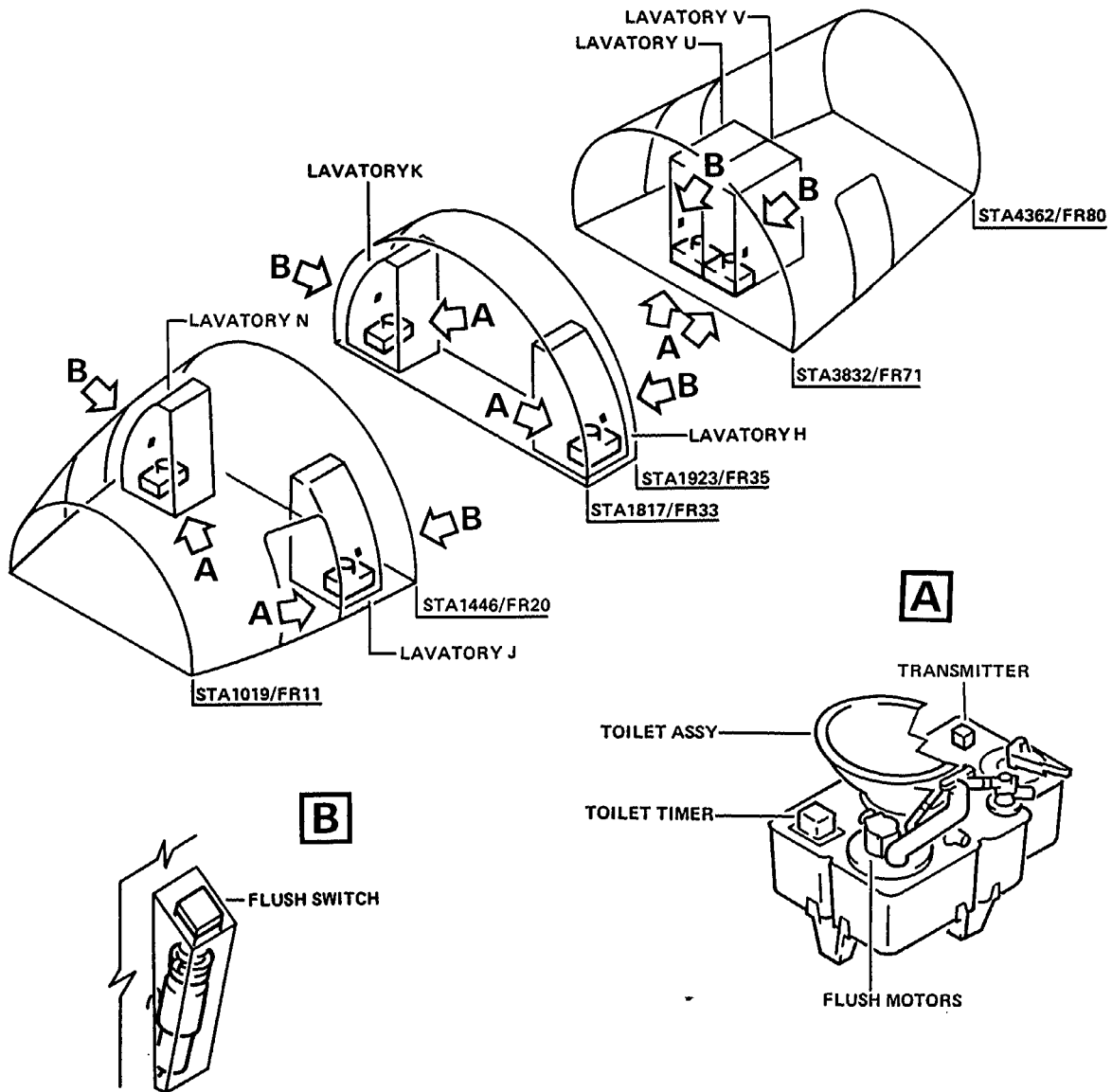
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KSSU

38-31-00

Page 2
Jun 01/07

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LAVATORY	N	J	K	H	V	U
MOTOR-FLUSH	5MG6	5MG2	5MG4	5MG3	5MG11	5MG10
TIMER-TOILET	6MG6	6MG2	6MG4	6MG3	6MG11	6MG10
SWITCH-FLUSH	19MG10	19MG6	19MG8	19MG7	19MG7	19MG6
TRANSMITTER	21MV	12MV	16MV	15MV	19MV	14MV
TOILET ASSY	383734	383698	383699	383703	383691	383690

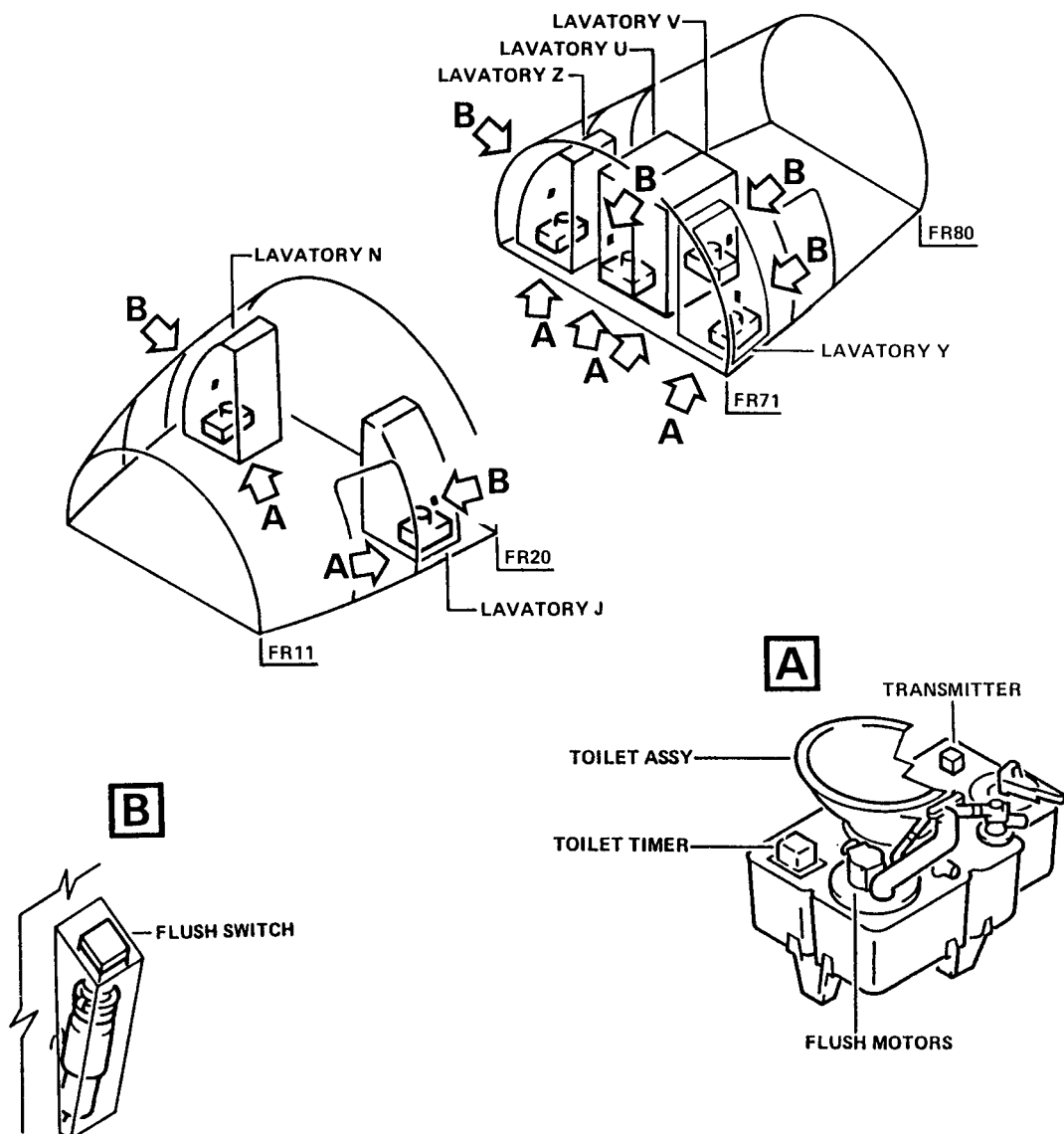
Component Location
Figure 001

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-31-00

Page 3
Jun 01/07



LAVATORY	N	J	Y	Z	V	U
MOTOR-FLUSH	5MG6	5MG2	5MG9	5MG8	5MG11	5MG10
TIMER-TOILET	6MG6	6MG2	6MG9	6MG8	6MG11	6MG10
SWITCH-FLUSH	19MG10	19MG6	19MG15	19MG14	19MG7	19MG6
TRANSMITTER	21MV	12MV	25MV	26MV	19MV	14MV
TOILET ASSY	383734	383698	383692	383693	383691	383690

Component Location
Figure 002

*

R EFFECTIVITY: 401-401,

KSSU

38-31-00

Page 4
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

****ON A/C 226-226, 229-249, 401-401,**

- A. Each lavatory contains a toilet unit which consists basically of a waste tank with quick-disconnect toilet bowl, separator, flush motor and timer, check valve, vent fitting, control cables and toilet drain valve. The single toilet units are secured with hold-down rods to the lavatory floor.
A toilet shroud is installed in each lavatory to cover the waste tank.

R

B. Leading Particulars, Toilet Unit

Electrical power rating:	115/200 V, 400 Hz 3-Phase, 2.3 Amp/Phase (max.) Operation current 1.0 Amp/Phase
Flush Cycle:	10 sec.
Delay between cycles:	6 sec.
Flush pump capacity:	8 l (2 US gal.)/flush cycle
Single toilet prime charge:	9.5 l max. (2.5 US gal.)
Double toilet prime charge:	19 l max. (5 US gal.)

Single toilet waste tank capacity:	47 l (12.4 US gal.) nominal 51.0 l (13.4 US gal.)
------------------------------------	---------------------------------------------------

R

(Ref. Fig. 003)

3. Component Description

A. Waste Tank

The tank assembly consists of a carbon fiber tank with molded-in structural reinforcement and a top.

B. Toilet Bowl

The toilet bowl is made of polished stainless steel. A stainless steel flapper type separator assembly is hinged at the bottom of the bowl. The separator assembly provides an effective seal against tank odors and fluid splash from the tank in the bowl. The bowl is V-clamp mounted on top of the tank.

C. Flush Motor

The flush motor is mounted by a V-clamp on the tank with the filter and the pump submerged in the flushing fluid.

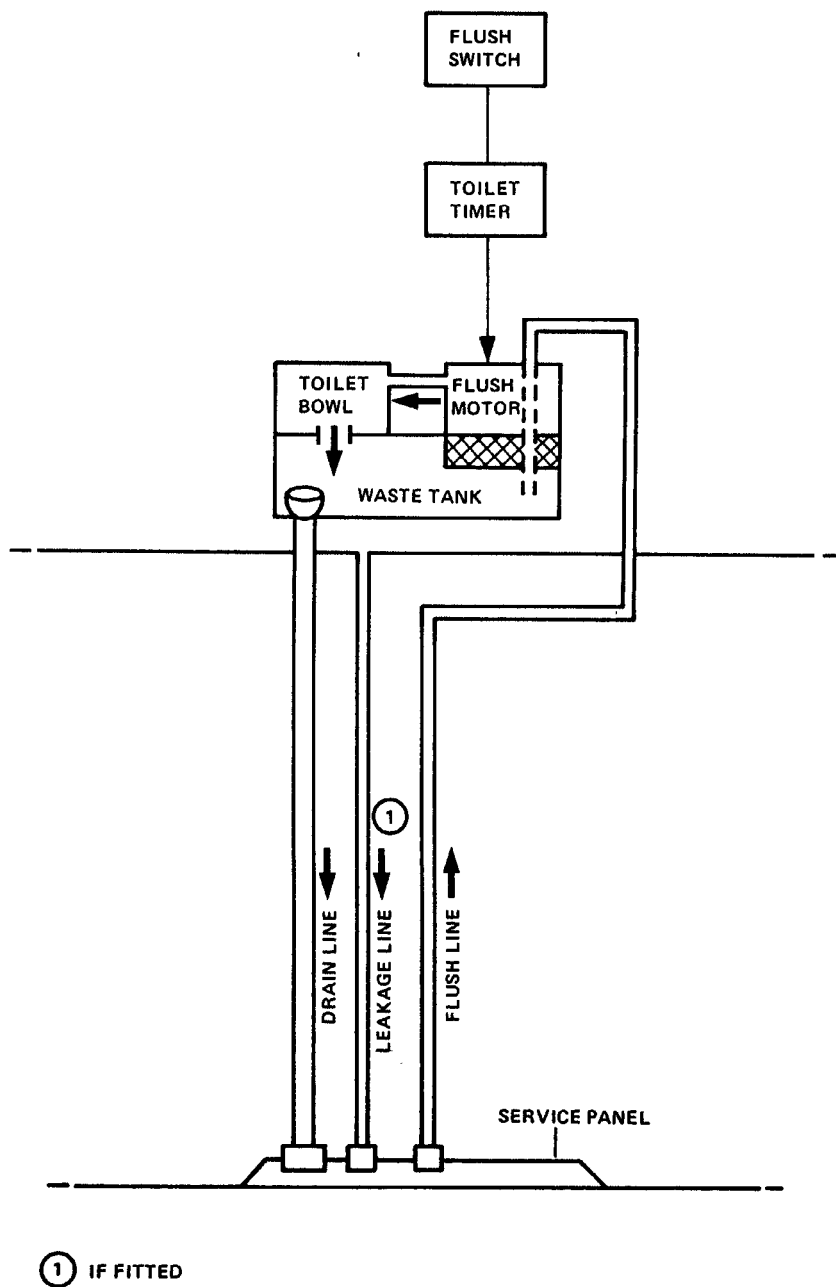
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KSSU

38-31-00

Page 5
Jun 01/07



Toilet System - Block Diagram
Figure 003

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KSSU

38-31-00

Page 6
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

D. Toilet Drain Valve

A spring-loaded, cable-actuated drain valve seals the tank to prevent leakage of fluid and waste, and permits draining and cleaning of the toilet unit during ground servicing. The drain valve is encased in a cone shaped, collapsible boot of molded elastomer.

E. Toilet Timer

A timer, which controls the operation of the flush motor, is located on the top of the tank.

F. Control Cable

The control cable is connected with the toilet service panel and the toilet drain valve.

G. Prime Level Indicating System

For servicing, the toilet system is provided with a prime level indicating system. Indication lights come on when prime level has been attained.

H. Waste Dump Valve

The manually operated waste dump valve prevents leakage from waste drain line outlet.

4. Operation

A. Flush Cycle

****ON A/C 226-226, 229-249,**

(Ref. Fig. 004)

****ON A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

(Ref. Fig. 005)

*

****ON A/C 226-226, 229-249,**

(Ref. Fig. 006)

****ON A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

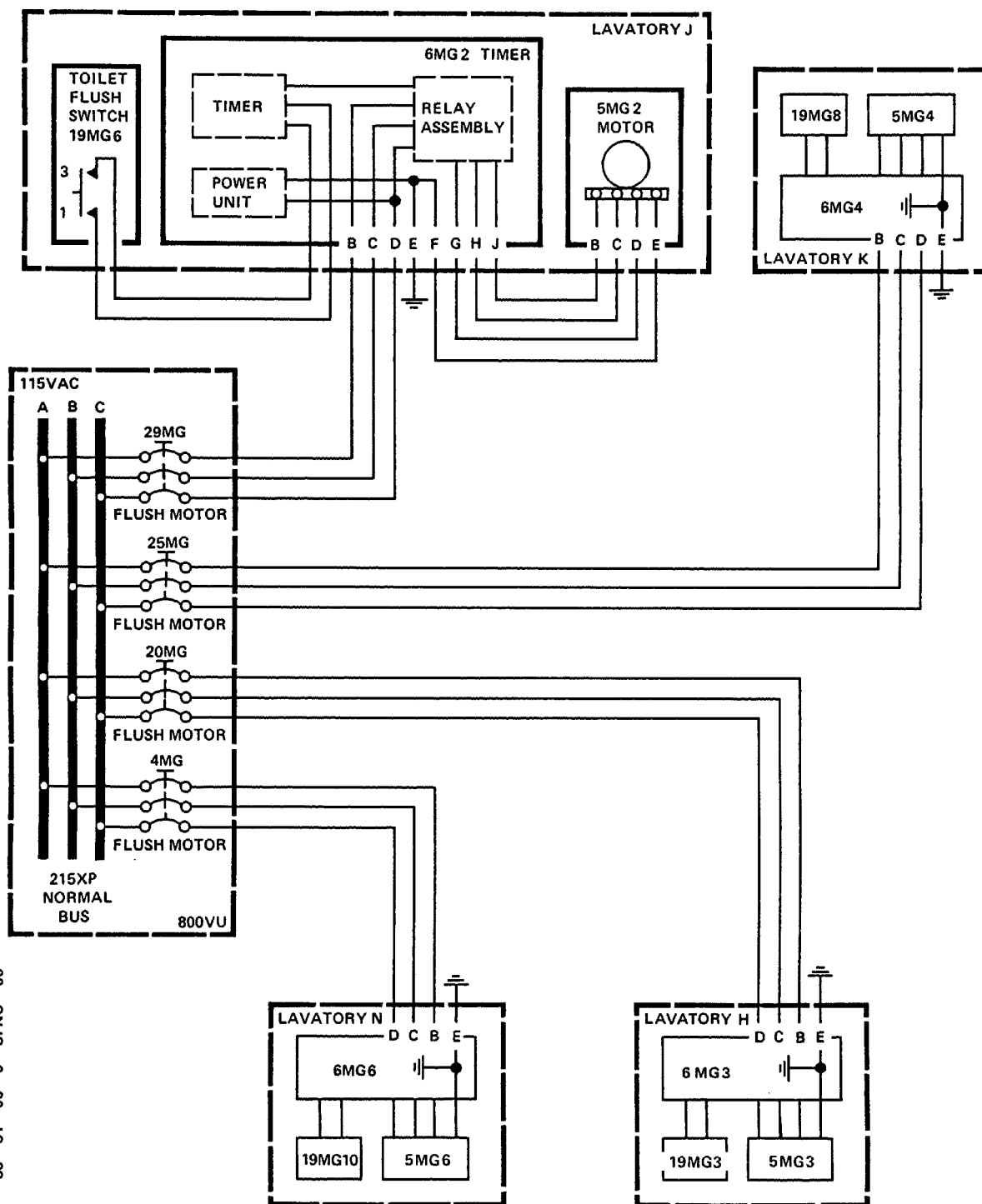
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KSSU

38-31-00

Page 7
Jun 01/07

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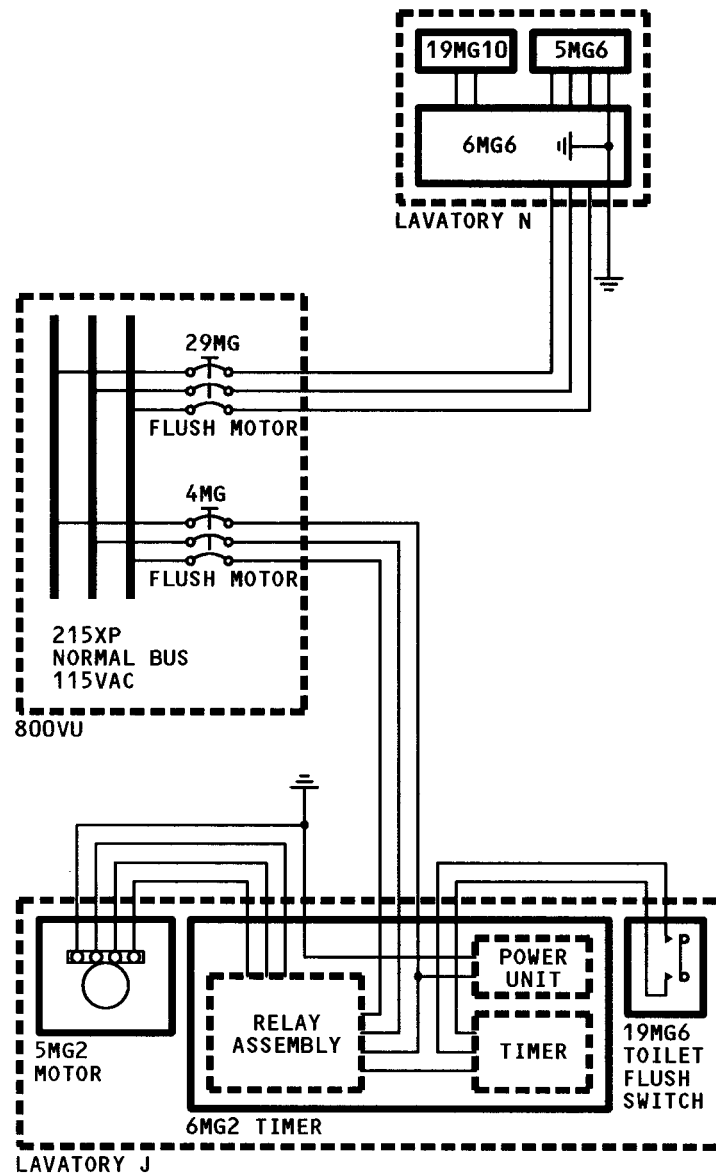
Electrical - Schematic
Figure 004

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-31-00

Page 8
Jun 01/07



BM6 38 31 00 0 CUEO 00

Electrical - Schematic
Figure 005

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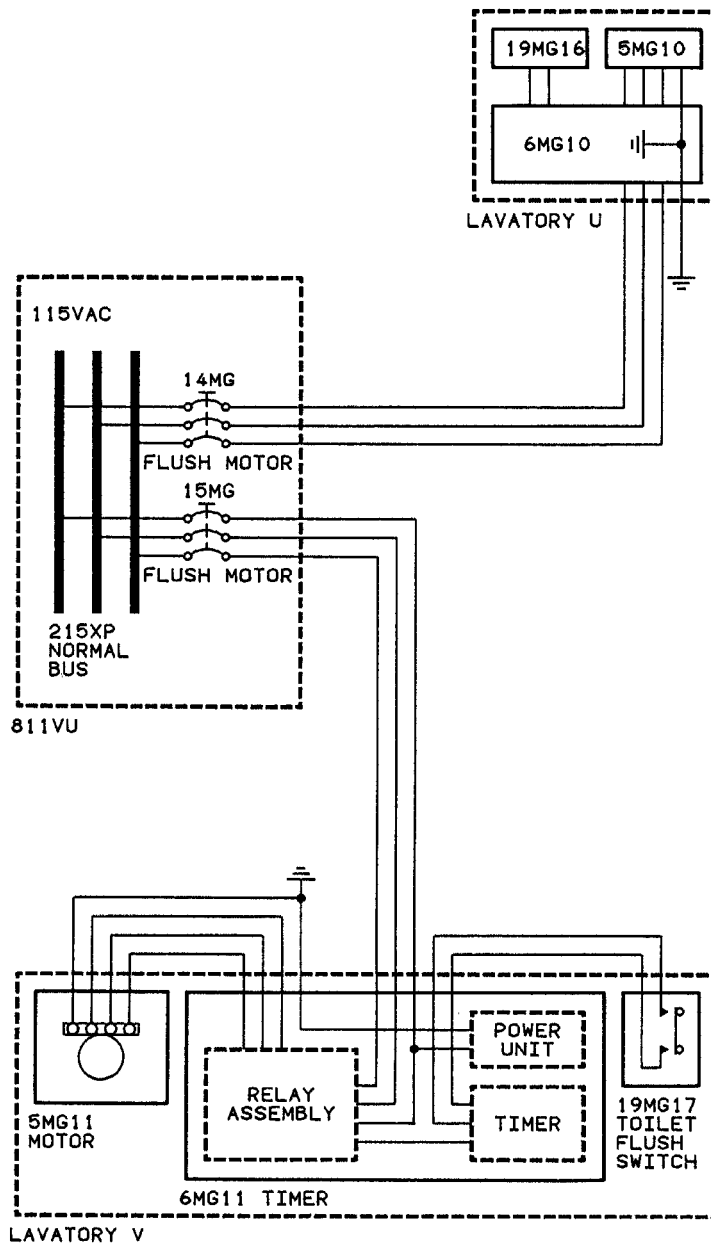
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KSSU

38-31-00

Page 9
Jun 01/07

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Electrical - Schematic
Figure 006

B M 6 38 31 00 0 CEPO 00

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38-31-00

Page 10
Jun 01/07

(Ref. Fig. 007)

*

R **0N A/C 226-226, 229-249, 401-401,

Each toilet subsystem is equipped with a service panel.

The service panels are equipped with the following:

- Flush/Fill Connection
- Leakage Drain
- Lavatory (Toilet) Drain Connection
- Cable Control Handle (for toilet drain valve)
- Cable Control Handle (for waste dump valve)

Placards are installed on each service panel stating priming-precharge quantities, max. pressure fill and drain procedures. To close the service panel doors, the cable control handles and caps must be closed and locked in position.

R **0N A/C 226-226, 229-249,

A. Flush Cycle

The flush cycle is initiated by pressing the flush switch in the lavatory compartment. The pump, begins to pump the fluid through a spray channel, located under the upper rim of the toilet bowl, and a vigorous flushing of the toilet bowl takes place. The static filter basket prevents clogging of the pump. The automatic reset timer regulates the duration of the flush cycle.

B. Waste Tank Draining and Rinsing

During servicing, the flush/fill and drain connections are connected to the toilet service vehicle and the spring-loaded toilet drain valve is opened. After completion of drainage, the tank is rinsed by water with a max. pressure of 35 psi (2.42 bar). The drain valve of the toilet unit is closed again when the rinsing procedure is completed and the toilet tank is pre-charged with the prescribed amount of flush fluid.

C. Waste Tank Ventilation

The waste tank vent fitting is connected to the air extraction duct of the galley and lavatory ventilation system by a pipe. Extracted air is discharged overboard.

D. Prime Level Indicating System (Ref. 38-33-00)

With power supply on, and the prime flushing fluid served, the prime level sensor in the waste tank gives signal and the indicator light illuminates in the service panel when the required level is attained.

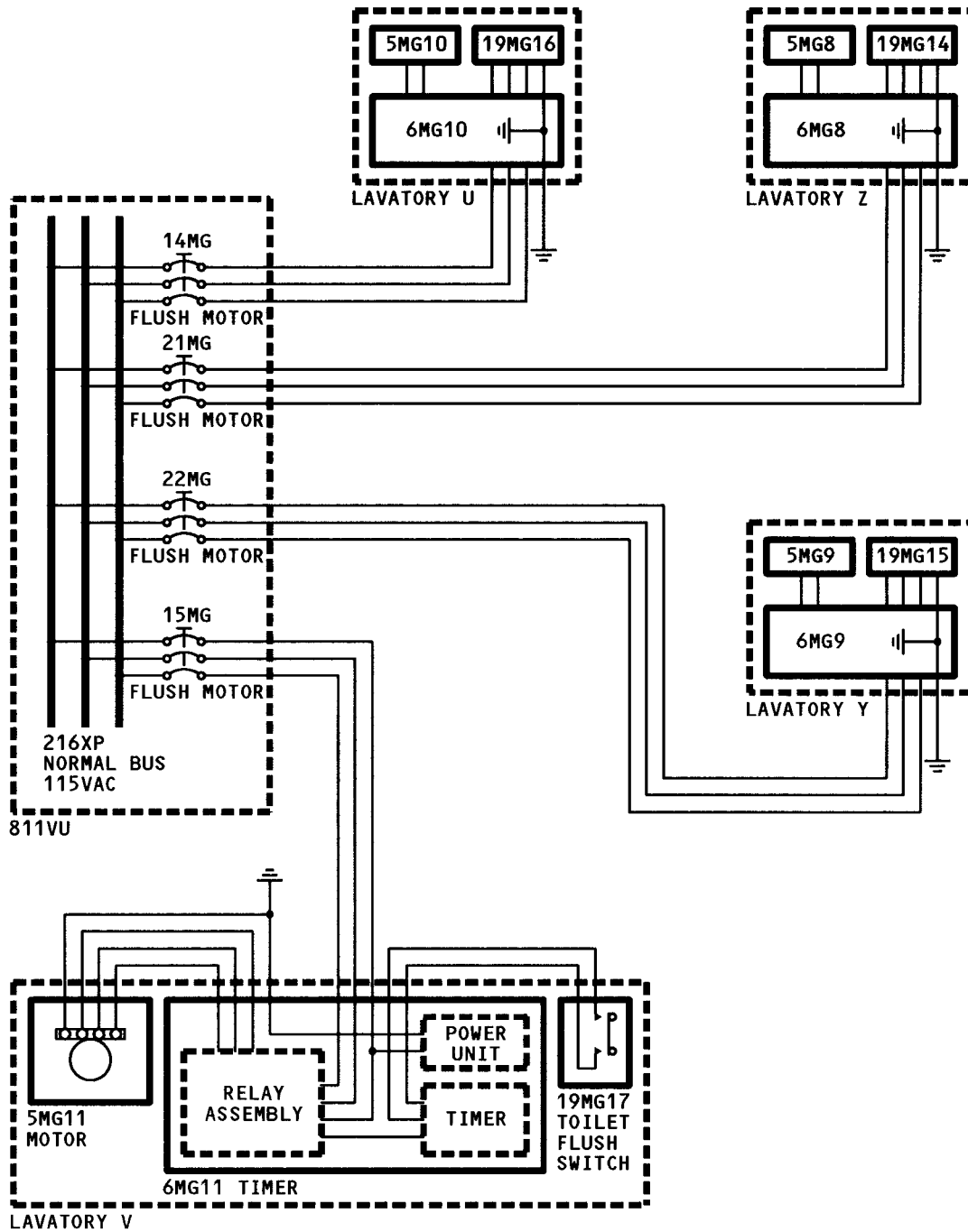
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R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-00Page 11
Jun 01/07

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Electrical - Schematic
Figure 007

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R EFFECTIVITY: 401-401,

KSSU

38-31-00

Page 12
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

A. Flush Cycle

The flush cycle is initiated by pressing the flush switch in the lavatory compartment. The pump, begins to pump the fluid through a spray channel, located under the upper rim of the toilet bowl, and a vigorous flushing of the toilet bowl takes place. The static filter basket prevents clogging of the pump. The automatic reset timer regulates the duration of the flush cycle.

B. Waste Tank Draining and Rinsing

During servicing, the flush/fill and drain connections are connected to the toilet service vehicle and the spring-loaded toilet drain valve is opened. After completion of drainage, the tank is rinsed by water with a max. pressure of 35 psi (2.42 bar). The drain valve of the toilet unit is closed again when the rinsing procedure is completed and the toilet tank is pre-charged with the prescribed amount of flush fluid.

C. Toilet Bowl Ventilation

The toilet bowl vent is connected to the air extraction duct of the galley and lavatory ventilation system by a pipe. Extracted air is discharged overboard.

D. Prime Level Indicating System (Ref. 38-33-00)

With power supply on, and the prime flushing fluid served, the prime level sensor in the waste tank gives signal and the indicator light illuminates in the service panel when the required level is attained.

EFFECTIVITY: 401-401,

R

KSSU

38-31-00

Page 13
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET SYSTEM - ADJUSTMENT/TEST

1. Functional Test of System

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Toilet Service Vehicle
(2)	Containers, Capacity 50 l (13.2 US gal.)
(3)	Electrical Ground Power Unit - 3-phase, 115/200 V AC, 400 Hz
(4)	Access Platform, 2.3 m (7.5 ft.)

Referenced Procedures

- | | |
|--------------------------|---------------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 24-41-00, P. Block 301 | AC External Power Control |

B. Procedure

(1) Job Set-Up

R

- (a) Position access platform and open toilet service panel access door (121DL, 136CR or 172AR), as required.

R

- (b) Open caps of drain outlet port and of flush/fill port.
(c) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).
NOTE : Do not prime waste tank at this stage.
(d) Position containers under waste outlets.
(e) Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(f) Make certain that electronics racks ventilation is correct.
(g) Make certain that the following circuit breakers are closed:

****ON A/C 401-401,**

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH-MOTORS/FWD J	20MG	J 2
800VU	FLUSH-MOTORS/FWD N	25MG	J 5
800VU	FLUSH-MOTORS/MID H	29MG	J 9
800VU	FLUSH-MOTORS/MID K	30MG	J12
811VU	FLUSH-MOTORS/RH/U	14MG	C 5
811VU	FLUSH-MOTORS/LH/V	15MG	C 8
811VU	FLUSH-MOTORS/RH/Z	21MG	C 2

R

EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-00

Page 501
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

****0N A/C 226-226, 229-249,**

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH-MOTORS/FRONT J	20MG	J 2
800VU	FLUSH-MOTORS/FRONT N	25MG	J 5
800VU	FLUSH-MOTORS/MIDDLE H	29MG	J 9
800VU	FLUSH-MOTORS/MIDDLE K	30MG	J12
811VU	FLUSH-MOTORS/RH/U	14MG	C 5
811VU	FLUSH-MOTORS/LH/V	15MG	C 8

R

800VU LAVATORY FRONT & MIDDLE - WASTE PNL 1MV G 9

****0N A/C 401-401,**

800VU LAVATORY FWD & MID - WASTE PNL 1MV G 9

R ****0N A/C 226-226, 229-249,**

811VU LAVATORY REAR - WASTE PNL 2MV B 8

****0N A/C 401-401,**

811VU LAVATORY AFT - WASTE PNL 2MV B 8

R ****0N A/C 226-226, 229-249, 401-401,**

(2)Test

ACTION	RESULT
1. On toilet service panel: - press prime level indicator in.	On toilet service panel: - prime level indicator light comes on.
2. On toilet service panel: - release prime level indicator.	On toilet service panel: - prime level indicator light goes off.

R

3. On toilet service panel:
- connect service vehicle water supply hose to flush/fill port and fill waste tank (Ref. 12-16-38, P. Block 1).
NOTE : Waste tank of single toilet unit is to be filled with 10 l (2.64 US gal.).
- On toilet service panel:
- prime level indicator light comes on when prime level is reached.
NOTE : Prime level indicator light for single toilet unit waste tank comes on at 9.5 l (2.5 US gal.).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-00

Page 502
Jun 01/07

ACTION	RESULT
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R

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>4. In lavatory:</p> <ul style="list-style-type: none"> - press flush switch to activate flush cycle. <p>5. On toilet service panel:</p> <ul style="list-style-type: none"> - open waste dump valve. - open associated toilet drain valve. <p>6. On toilet service panel:</p> <ul style="list-style-type: none"> - close toilet drain valve. - close waste dump valve. <p>7. On toilet service panel:</p> <ul style="list-style-type: none"> - drain toilet system completely (Ref. 12-16-38, P. Block 1). <p>(3)Close-Up</p> <ul style="list-style-type: none"> (a)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301). (b)Close caps of drain outlet and flush/fill ports. (c)Remove containers under waste outlets. (d)Wipe dry toilet service panel and adjacent area. | <p>In lavatory:</p> <ul style="list-style-type: none"> - flush motor starts and runs for approx. 10 seconds. - water flows through toilet bowl into the waste tank. <p>On toilet service panel:</p> <ul style="list-style-type: none"> - water drains via waste outlet. - prime level indicator light goes off. <p>On toilet service panel:</p> <ul style="list-style-type: none"> - water flow stops. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

R

- (e)Close toilet service panel access doors (121DL, 136CR or 172AR) as required.

R

- (f)Remove access platform.
- (g)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-00

Page 503
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET SYSTEM - INSPECTION/CHECK

1. Reason for the Job

- To check that the drain and filler caps of the service panels are correctly installed and the seals are serviceable,
- General visual inspection of waste tanks and drain pipes.

A. Equipment and Material

ITEM	DESIGNATION
(1)	Access Platform 2 m (6 ft. 7 in.)

R **0N A/C 226-226, 229-249, 401-401,

R B. Procedure

- R (1)Job Set-up
- R (a)Position the access platform at the relevant service panel.
- R (2)Check of the water service panel (Ref. Fig. 601)
- R (a)Open the water service access door 136BR.
- R (b)Remove the filler cap (4).
- R (c)Make sure that the seal inside the filler cap (4) is not worn or damaged.
- R (d)Make sure that the chain (5) is not damaged or missing.
- R (e)Install the filler cap (4).
- R (f)Close the water service access door 136BR.

R **0N A/C 404-500,

R B. Procedure

- R (1)Job Set-up
- R (a)Position the access platform at the relevant service panel.
- R (2)Check of the water service panel (Ref. Fig. 602)
- R (b)Open the water service access door 136BR.
- R (b)Remove the filler cap (3).
- R (c)Make sure that the seal inside the filler cap (3) is not worn or damaged.
- R (d)Make sure that the chain (4) is not damaged or missing.
- R (e)Install the filler cap (3).
- R (f)Close the water service access door 136BR.

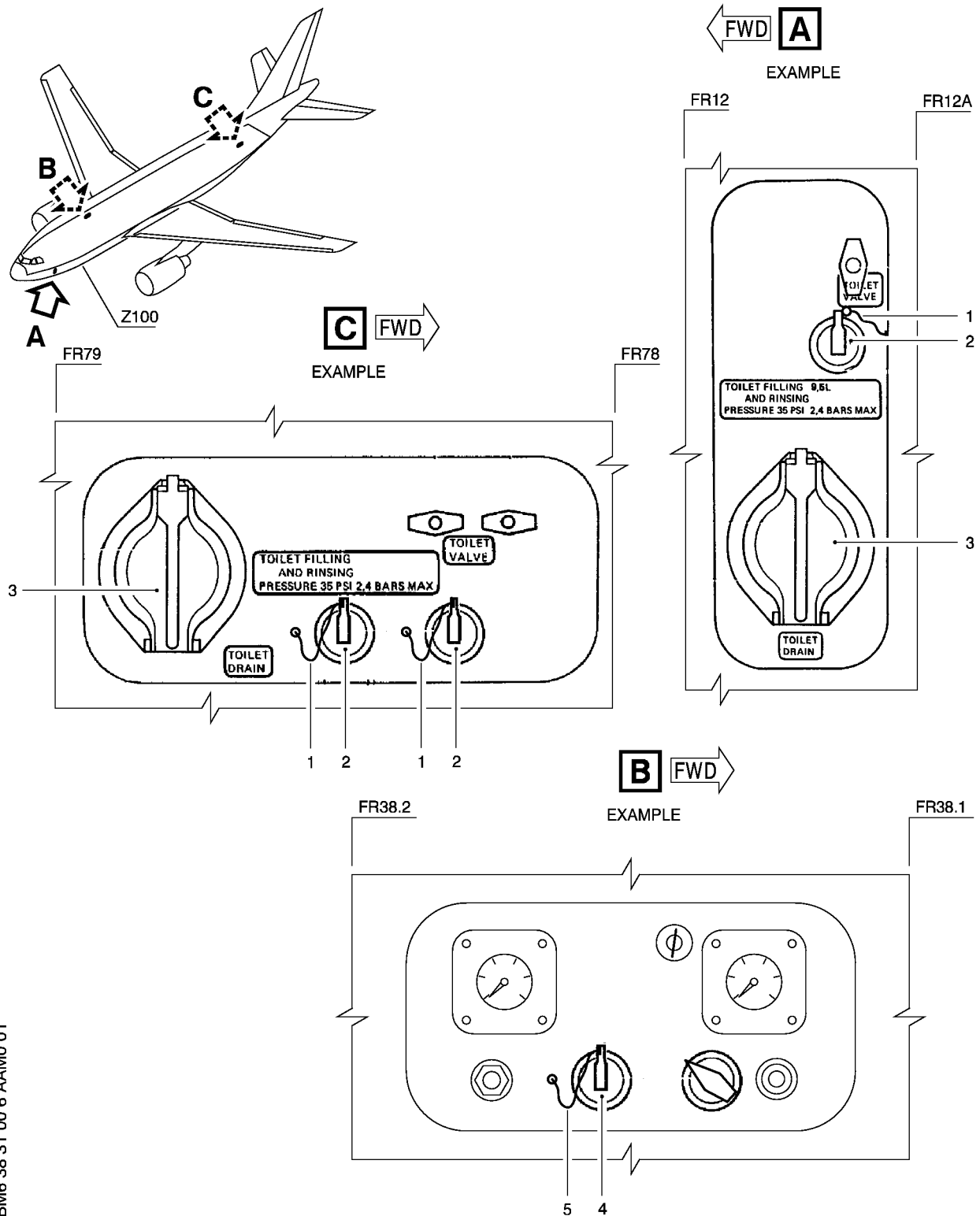
**0N A/C 226-226, 229-249, 401-401,

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38-31-00

Page 601
Jun 01/15



Toilet/Water Service Panels
Figure 601

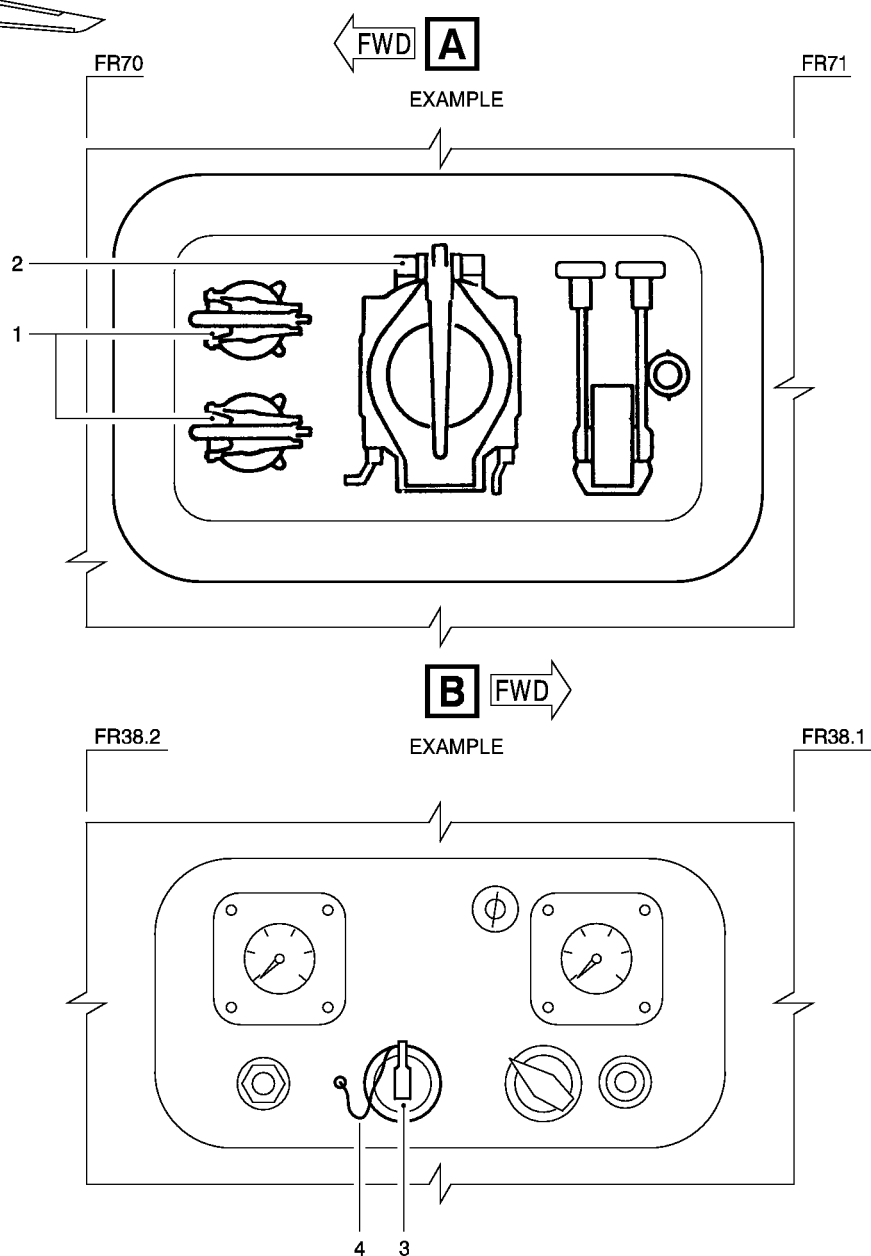
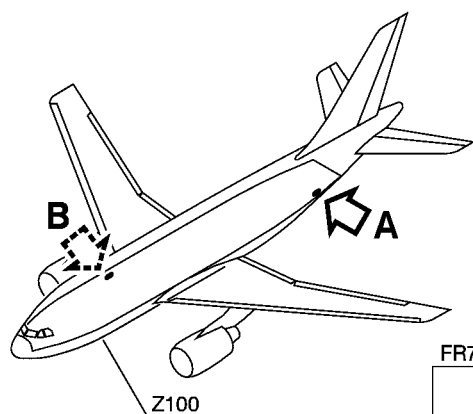
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R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-00

Page 602
Jun 01/15



Toilet/Water Service Panels
Figure 602

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R EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 603
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

- (3) Check of the toilet service panel (Ref. Fig. 601)
- (a) Open the toilet service access door 121DL (172AR if installed).
 - (b) Remove the filler caps (2).
 - (c) Make sure that the seal inside the filler caps is not worn or damaged.
 - (d) Make sure that the chains (1) are not damaged or missing.
 - (e) Install the filler caps (2).
 - (f) Open the toilet drain cap (3).
 - (g) Make sure that the seal inside the toilet drain cap (3) is not worn or damaged.
 - (h) Close the toilet drain cap (3).
 - (e) Close the toilet service access door 121DL (172AR if installed).
- (4) Close-Up
- (a) Make sure that the working area is clean and clear of tools and miscellaneous items of equipment.
 - (b) Remove the access platform.

****ON A/C 404-500,**

- (3) Check of the toilet service panel (Ref. Fig. 602)
- (a) Open the toilet service access door 171BL.
 - (b) Open the filler caps (1).
 - (c) Make sure that the seal inside the filler caps is not worn or damaged.
 - (d) Close the filler caps (1).
 - (e) Open the toilet drain cap (2).
 - (f) Make sure that the seal inside the toilet drain cap (2) is not worn or damaged.
 - (g) Close the toilet drain cap (2).
 - (h) Close the toilet service access door 171BL.
- (4) Close-Up
- (a) Make sure that the working area is clean and clear of tools and miscellaneous items of equipment.
 - (b) Remove the access platform.

****ON A/C ALL**

2. Waste Tanks and Drain Pipes - Inspection/Check

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 2,7 m (9 ft.)
B.	Light Source - Inspection
C.	Mirror - Inspection

Referenced Procedures

- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment
- 25-54-10, P. Block 201 FWD Cargo Compartment Linings

R EFFECTIVITY: ALL

KSSU

38-31-00

Page 604
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

ITEM	DESIGNATION
------	-------------

- | | |
|------------------------------------------|-------------------------------------|
| - 53-10-35, P. Block 401
B. Procedure | Bulk Cargo Compartment Floor Panels |
|------------------------------------------|-------------------------------------|

(1) Job Set-Up

- (a) In sanitary unit cabinets, place all manual shutoff valves in the closed position.
- (b) To gain access to forward and mid drain pipes proceed as follows:
 - 1 Position access platform under FWD cargo compartment door (Z811).
 - 2 Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-30, P. Block 301).
 - 3 Open avionics compartment doors (131AZ and 132AZ) to gain access to forward drain pipes.
 - 4 Remove appropriate FWD cargo compartment ceiling panels to gain access to mid drain pipes (Ref. 25-54-10, P. Block 201).

NOTE : If necessary, remove adjacent sidewall panels to gain additional access (Ref. 25-54-10, P. Block 201).

- (c) To gain access to aft drain pipes, proceed as follows:
 - 1 Position access platform and open BULK cargo compartment door (Z813).
 - 2 Open access door (162AZ) to gain access to aft drain pipes (Ref. 53-10-35, P. Block 401).

(2) General Visual Inspection

- (a) Visually examine the waste tanks and drain pipes for:
 - damages
 - leakage

NOTE : Leakage is not permissible.

- proper attachment.

(3) Close-Up

- (a) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (b) Close avionics compartment doors (131AZ and 132AZ).
- (c) Close appropriate cargo compartment door (Ref. 52-30-00, P. Block 301).
- (d) Remove access platform.

EFFECTIVITY: ALL

R

KSSU

38-31-00

Page 605
Jun 01/15



AIRCRAFT MAINTENANCE MANUAL

TOILET SYSTEM - CLEANING/PAINTING

1. Toilet System

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

WARNING : USE DISINFECTANT (MAT. NO. 14-005) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

WARNING : AVOID A SPILLAGE, ACCUMULATION OR BUILD UP OF CONTAMINATED WATER IN ADJACENT AREA. AN OVERFLOW WILL CAUSE AN ELECTRICAL HAZARD.

A. Reasons for the Job

- (1) To remove obstruction from waste tank.
- (2) To clean waste tank.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Rubber Gloves
(2)	Spray Gun
(3)	Cleaning Rags
(4) Material No. 14-005	Disinfectants
Referenced Procedures	
- 12-16-38, P. Block 1	Replenishing Toilets
- 25-00-00, P. Block 701	Equipment/Furnishings
- 25-45-11, P. Block 401	Toilet Shroud

C. Removal of Obstruction from Waste Tank

(1) Job Set-Up

- (a) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
- (b) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

(2) Cleaning

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

WARNING : USE DISINFECTANT (MAT. NO. 14-005) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

WARNING : AVOID A SPILLAGE, ACCUMULATION OR BUILD UP OF CONTAMINATED WATER IN ADJACENT AREA. AN OVERFLOW WILL CAUSE AN ELECTRICAL HAZARD.

- (a) Disinfect surface of waste tank and attached components with a spray gun and disinfectant (Mat. No. 14-005).
- (b) Clean surface of waste tank and attached components (Ref. 25-00-00, P. Block 701).
- (c) Dry all surfaces of the waste tank and attached components with rags.

(3) Close-Up

- (a) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (b) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R **ON A/C 404-500,

R TOILET SYSTEM - CLEANING/PAINTING

R EFFECTIVITY: 226-226, 229-249, 401-401, 404-500,

KSSU

38-31-00

Page 701
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

R 1. Cleaning of the Toilet Waste Lines with CELESTE Recirculation Cleaning Tool

R **WARNING** : WHEN YOU REMOVE A COMPONENT FROM THE TOILET WASTE SYSTEM, ALWAYS
R DISINFECT THE PART BEFORE YOU PUT IT IN A PLASTIC BAG THEN SEAL THE
R BAG.
R DO NOT PUT DOCUMENTS INTO THE PLASTIC BAG. SEAL THE BAG FIRST, THEN
R ATTACH THE DOCUMENTS TO IT.
R THIS WILL PREVENT INFECTION OR ILLNESS. CONTAMINATION FROM THE WASTE
R CAN BE DANGEROUS TO HEALTH.

R **WARNING** : DO NOT DO WORK ON THE TOILET WASTE SYSTEM AND THE POTABLE WATER
R SYSTEM AT THE SAME TIME. THIS WILL PREVENT CONTAMINATION OF THE
R POTABLE WATER SYSTEM. SUCH CONTAMINATION CAN BE DANGEROUS TO HEALTH.

R **WARNING** : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS
R ONLY WITH A GOOD SUPPLY OF AIR. OBEY THE MANUFACTURER'S INSTRUCTIONS.
R PUT ON PROTECTIVE CLOTHING. DO NOT GET THE MATERIALS IN YOUR MOUTH. DO
R NOT SMOKE. DO NOT BREATHE THE GAS. THESE MATERIALS ARE POISONOUS,
R FLAMMABLE AND SKIN IRRITANTS. GET MEDICAL HELP IF YOUR SKIN OR EYES
R BECOME IRRITATED.

R **CAUTION** : USE ONLY THE SPECIFIED MATERIALS AND OBEY THE MANUFACTURER'S
R INSTRUCTIONS. OTHER MATERIALS CAN CAUSE DAMAGE TO THE SURFACE
R PROTECTION OF THE COMPONENTS AND THE RELATED AREA.

R A. Equipment and Materials

R ITEM	R DESIGNATION
R (1)	Access Platform, 3.0 m (10.0 ft.)
R (2)	Air Source Filtered, Dry
R (3)	Vinyl Bag
R (4)	Plastic Sheets
R (5)	Borescope Dia 25.0 mm (1.0 in.) - Flexible
R (6)	Circuit Breaker Safety Clips and Tags
R (7)	Warning Notices
R (8)	CELESTE Recirculation Cleaning Tool
R (9)Material No. 03FAB1	Lubricants (Ref. 20-31-00)
R 10)Material No. 03HCA4	Lubricants (Ref. 20-31-00)
R 11)Material No. 08AHC1	Cleaner (Ref. 20-31-00)
R 12)Material No. 11CBA1	Disinfectants (Ref. 20-31-00)
R 13)Material No. 11GCA1	Disinfectants (Ref. 20-31-00)
R Referenced Procedures	
R - 12-21-12, P. Block 1	Internal Cleaning
R - 12-16-38, P. Block 1	Replenishing
R - 24-41-00, P. Block 301	AC External Power Control
R - 25-45-11, P. Block 401	Toilet Shroud
R - 38-31-00, P. Block 601	Toilet System
R - 38-35-00, P. Block 501	Vacuum Toilet System
R - 38-35-13, P. Block 401	Toilet Assy
R - 52-30-00, P. Block 1	Cargo Compartment Doors

EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 702
Jun 01/14

- R B. Procedure
- R (1)Job set-up
- R (a)Connect the electrical ground power unit and energize the aircraft
- R electrical network (Ref. 24-41-00, P. Block 301).
- R (b)Make sure that the electronics racks ventilation is correct.
- R (c)Put the warning notices in position on all the toilets to tell persons
- R not to use them.
- R (d)Disinfect the toilet assemblies:

R **WARNING** : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THE SPECIAL

R MATERIALS. THESE MATERIALS ARE DANGEROUS.

- R - Put 4.5 l (1.1887 US gal) of disinfectant (Material No. 11GCA1)
- R in each toilet assembly on the two sides of the aircraft.
- R - Flush the toilet assemblies.
- R - Apply disinfectants (Material No. 11CBA1) to the toilet bowl,
- R the flush valves and other contaminated areas.

R **NOTE** : If a toilet waste line is blocked, it is necessary to remove

R and clean the line before you can continue this procedure.

- R (e)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C5
811VU	VACUUM BLOWER/RH	10MG	C8

R **WARNING** : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING.

- R (f)Position the access platform at the bulk cargo compartment.
- R (g)Open the bulk cargo compartment door (Z813) (Ref. 52-30-00,
- R P. Block 1).
- R (h)Open the access door (162AZ).
- R (j)Get access to the waste system (Ref. Fig. 701)
- R 1 Disconnect the waste line pipes (1) and (2):
- R - Open and remove the clamshells (7) from the waste line pipes
- R (1) and (2),
- R - Move the sleeves (6) to one side.

- R (2)Internal Inspection of the Waste Lines (if necessary) (Ref. Fig. 702)
- R (a)Use a BORESCOPE DIA 25.0 (1.0 IN) - FLEXIBLE to do the inspection
- R of the waste lines.
- R (b)If the contamination is as shown in conditions 1 to 5, cleaning
- R is not necessary.

R **WARNING** : ALWAYS PUT ON RUBBER GLOVES, GOGGLES AND PROTECTIVE

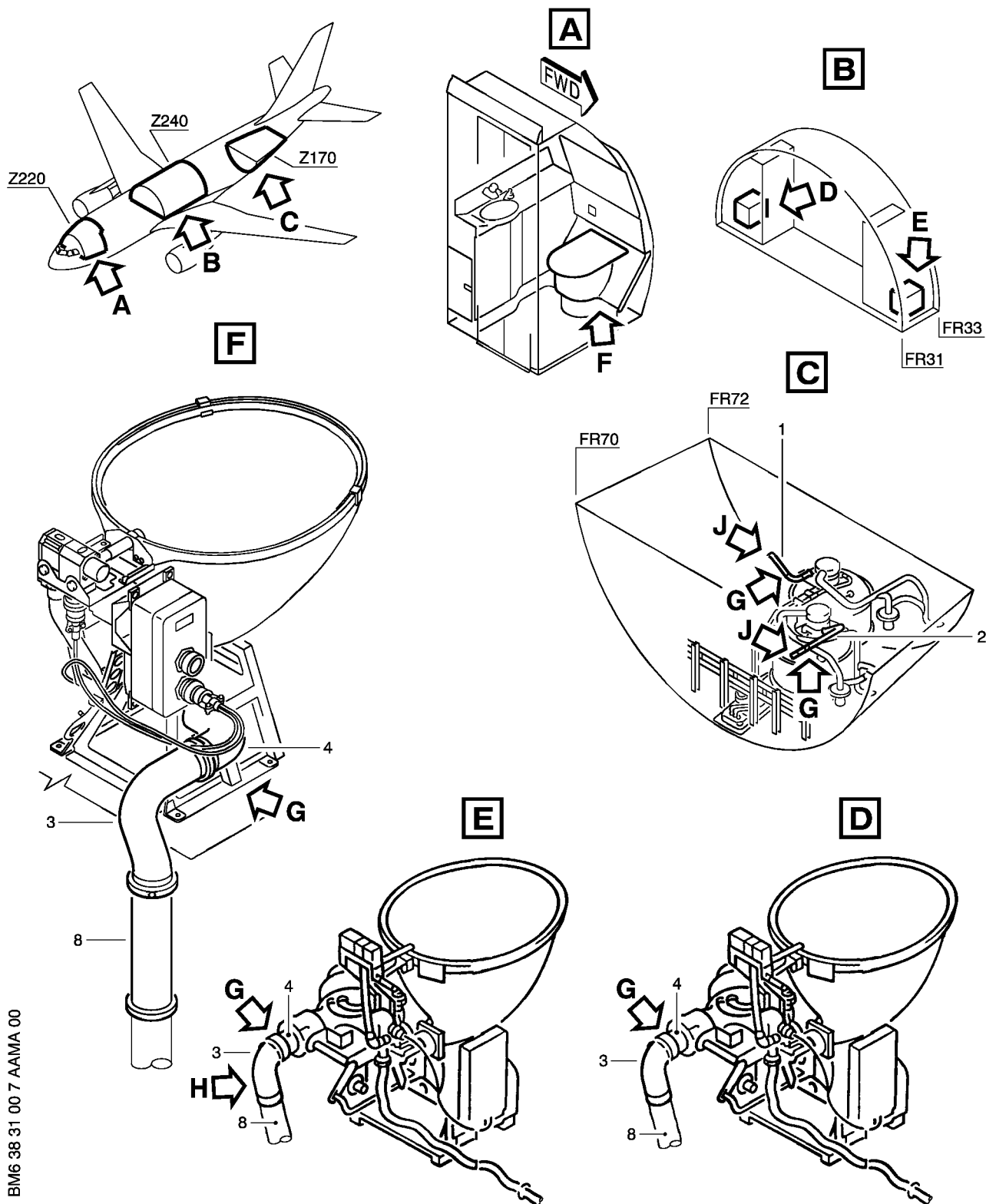
R CLOTHES TO PREVENT INFECTION WHEN YOU DO THIS WORK.

EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 703
Jun 01/14



BM6 38 31 00 7 AAMA 00

Recirculation Cleaning - Adapter Arrangement (Sheet 1/2)
Figure 701

R

EFFECTIVITY: 404-500,

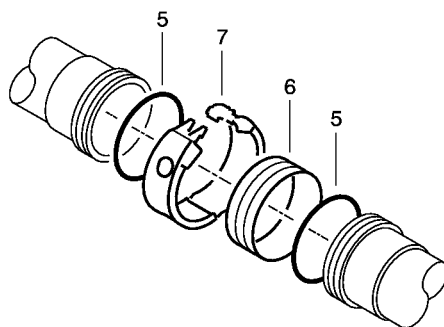
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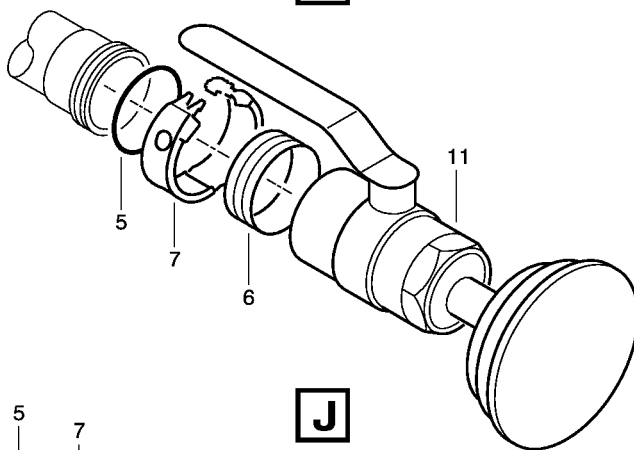
Page 704
Jun 01/14

G

EXAMPLE

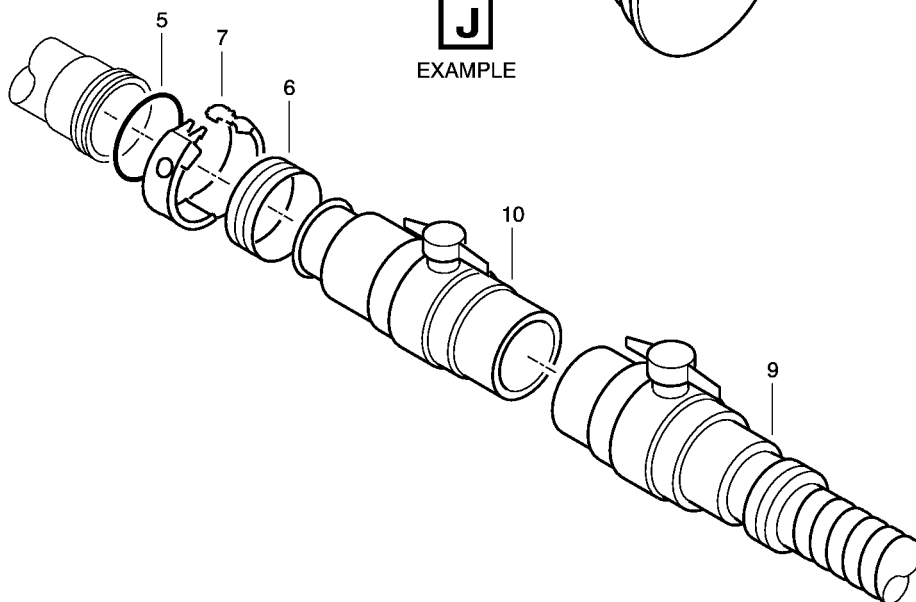


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J

EXAMPLE



BM6 38 31 00 7 AAMM 00

Recirculation Cleaning - Adapter Arrangement (Sheet 2/2)
Figure 701

R

EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 705
Jun 01/14

- R (3)Preparation
- R (a)Do a functional test of the CELESTE RECIRCULATION CLEANING TOOL. Refer
- R to the recirculation cleaning tool user manual.
- R (b)Connect the cleaning kit (Ref. Fig. 701, 703, 704).
- R (c)Prepare the left and right forward toilet assembly:
- R 1 Put plastic sheets on the floor of the lavatory and the adjacent
- R area to give protection to the floor coverings.
- R 2 Remove the toilet shroud (Ref. 25-45-11, P. Block 401).
- R 3 Close the water shutoff valves in the lavatories.
- R 4 Disconnect the toilet assembly:
- R - Remove the clamshell (7) and disconnect the toilet assembly (4)
- R from the elbow (3) of the main vacuum line (8).
- R - Connect the adapter (10) to the elbow (3) with the sleeves (6) and
- R the clamshells (7). If necessary, remove the toilet assembly to get
- R better access (Ref. 38-35-13, P. Block 401).
- R 5 Connect the jumper hose between the left and right forward toilet
- R assembly.
- R (d)Prepare all the other toilet assemblies:
- R 1 Close the water shutoff valves in the lavatories.
- R 2 Remove the toilet shroud (Ref. 25-45-11, P. Block 401).
- R 3 Remove the clamshells (7) and disconnect the toilet assemblies (4)
- R from the elbow (3) of the main vacuum line (8).
- R 4 Install the toilet plug (11) on the elbow (3) with the sleeves (6)
- R and the clamshell (7). If necessary, remove the toilet assembly
- R to get better access (Ref. 38-35-13, P. Block 401).
- R NOTE : You can use a blind socket PN G383-73259 as an alternative.
- R 5 Make sure that the toilet plugs (11) are closed.
- R (e)Connect the adapter (10) to the waste lines (1) and (2) with the sleeve
- R (6) and the clamshell (7).
- R (f)Connect the hose (9) to the adapter (10).
- R (g)Connect additional hoses to extend the hose (9) from the waste tank
- R to the CELESTE RECIRCULATION CLEANING TOOL.
- R (h)Check the connection of the jumper hose between the left and right
- R forward toilet assembly.
- R (j)Connect the hose (9) to aircraft hose connection valves A and B (22).
- R (4)Recirculation/Cleaning: (Ref. Fig. 701, 703, 704)
- R (a)Make sure that the valves (22), (20), (17), (15) and (24) and drain
- R valves (26) below the tank, heater (14) and filter (25) are closed.
- R (b)Make sure that the CELESTE RECIRCULATION CLEANING TOOL is connected
- R to an applicable power supply.
- R (c)Make sure that the CELESTE RECIRCULATION CLEANING TOOL is connected
- R to an applicable dry filtered air source.
- R (d)Set the air pressure regulator (19) to 5.5 bar (79.77 psi).
- R (e)Connect the transfer pump air hose to the transfer pump ON/OFF valve
- R (20).
- R (f)Put the transfer pump (21) into the cleaning fluid container.
- R (g)Connect the transfer pump hose to the transfer pump (21).
- R (h)Remove the tank cover (13).
- R (j)Put the hose of the transfer pump (21) into the tank (12).

- R (k)Open the transfer pump ON/OFF valve (20).
R (l)Use the transfer pump (21) to fill the tank (12) with 320 l (84.53
R US gal) of cleaner (Material No. 08AHC1).
R (m)Close the transfer pump ON/OFF valve (20).
R (n)Remove the transfer pump hose from the tank (12).
R (p)Install the tank cover (13).
R (q)On the control panel (18), turn on the main switch.
R (r)Open all the valves on the hoses (9) and adapters (10).
R (s)Open the valves on the CELESTE RECIRCULATION CLEANING TOOL:
R - The tank outlet line valve (24),
R - The aircraft hose connection valves (20).
R (t)Set the flow direction valve (16) to one of its fully open positions.
R (u)On the control panel (18), push the PUMP start button. The green and
R white PUMP indication lights come on.
R (v)Slowly open the pump speed control-valve (17) until the negative
R pressure pump strokes 2 cycles per second. On the control panel (18),
R the green FLOW light indication flashes.
R (w)Record the start time.
R (x)Make sure that there are no leaks.
R (y)Wait until the fluid returns through the heater (14) and into the
R tank (12).
R NOTE : This takes about 5 minutes.
- R (z)On the control panel (18):
R 1 Push the HEATER start button. The green and white HEATER
R indication lights come on.
R 2 Set the HEATER CONTROLLER to 49 deg.C by using the 'UP' or 'DOWN'
R arrow buttons.
R 3 Set the OUTLET HIGH LIMIT to 55 deg.C by using the 'UP' or 'DOWN'
R arrow buttons.
R 4 Make sure that the fluid temperature increases on the INLET TEMP,
R HEATER CONTROLLER and OUTLET HUGH LIMIT gauges.
R NOTE : All three temperatures should be controlled within a few
R degrees of one another around the heater controller set point.
R NOTE : The heater should reach the set point in 1 hour.
- R (aa)Continue the circulation for 2 hours.
R (ab)Reverse the flow of the cleaning fluid through the aircraft lines by
R turning the flow direction valve (16) 90 degrees from its current
R position.
R NOTE : The flow of fluid through the recirculation cleaning tool will
R not change.
- R (ac)Continue the circulation for 2 more hours.
R (ad)Do steps (ab) thru (ac) two more times.
- R (5)Flushing (Ref. Fig. 703)
R (a)On the control panel (18), push the HEATER stop button. The green and
R white HEATER indication lights go off.
R (b)Close the tank outlet valve (24).
R (c)Slowly open the tank-outlet purge valve (15) about half way.

AIRCRAFT MAINTENANCE MANUAL

- R NOTE : This allows air to replace the liquid throughout the system.
- R NOTE : The liquid should not drain, because the system is in a vacuum.
- R (d)Continue circulation until the tank (12) is back to its original
- R level and very little liquid is observed circulating through the
- R hoses.
- R NOTE : The negative pressure pump will cycle faster when it is
- R pumping mostly air.
- R (e)On the control panel (18), push the PUMP stop button. The green and
- R white PUMP indication lights go off.
- R (f)Remove the tank cover (13).
- R (g)Put the transfer pump (21) into the tank (12).
- R (h)Put the hose of the transfer pump (21) into a disposal container.
- R NOTE : Have a second person monitor the disposal container to prevent
- R overfilling.
- R (j)Open the transfer pump ON/OFF valve (20).
- R (k)Use the transfer pump (21) to pump the contents of the tank (12) into a
- R disposal container.
- R (l)Continue until the tank (12) is empty.
- R (m)Replace the disposal container as needed.
- R (n)When the tank (12) is empty, close the transfer pump ON/OFF valve (20).
- R (p)Remove the transfer pump (21).
- R (q)Close the tank-discharge purge valve (15).
- R (r)Put 320 l (84.53 US gal) of clean water into the tank (12).
- R (s)Install the tank cover (13).
- R (t)Open the tank outlet valve (24).
- R (u)On the control panel (18), push the PUMP start button to start the
- R negative pressure pump (23).
- R (v)Circulate the flush water for 20 minutes.
- R (w)Reverse the flow as many times as possible to dislodge the remaining
- R contamination.
- R (6)Drainage of the vacuum system
- R (a)Do steps (5) (b) thru (p) again to drain the flush water.
- R (b)Do steps (5) (q) thru (w) again to fill tank (12) and flush aircraft
- R lines.
- R (c)Do steps (6) (a) again to the drain flush water.
- R NOTE : Always flush the waste lines and the cleaning tool two times
- R after each use.
- R (d)Close all the valves on the CELESTE RECIRCULATION CLEANING TOOL.
- R (7)Close-up
- R (a)Close all the shutoff valves of the hoses (9) and adapters (10) to
- R prevent contamination by remaining fluids.
- R (b)In the bulk cargo compartment:
- R 1 Remove the hoses (9) from the adapter (10) at the aft end of the
- R main waste lines (1) or (2) and from the CELESTE RECIRCULATION
- R CLEANING TOOL.

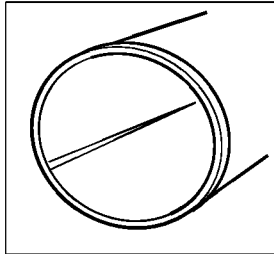
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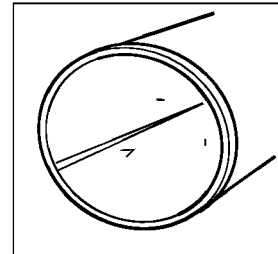
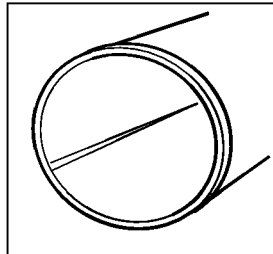
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Page 708
Jun 01/14

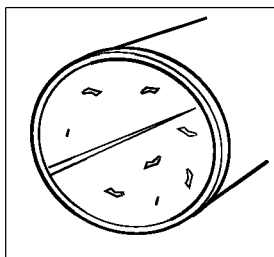
WASTE LINE CONDITIONS



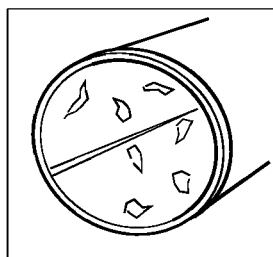
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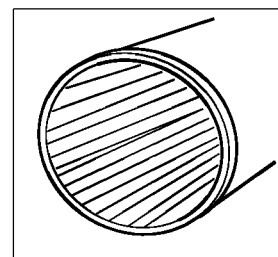
CONDITION 1 / FILM



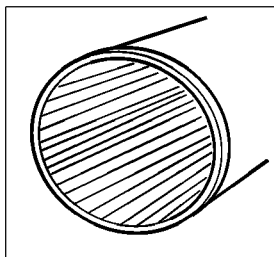
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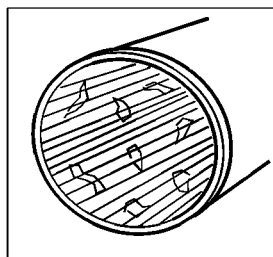
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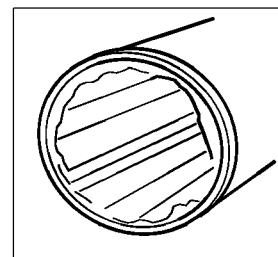
CONDITION 3 THICKER FILM



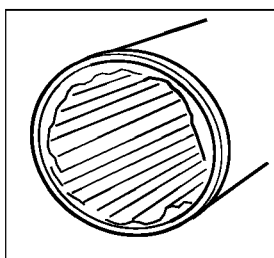
CONDITION 4 CLOSED LAYER



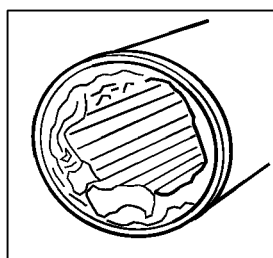
CONDITION 5



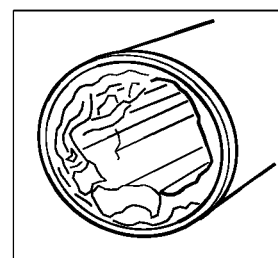
CONDITION 6



CONDITION 7



CONDITION 8



CONDITION 9

BM6 38 31 00 7 ACM0 00

R

Waste-Line Condition - Schematic
Figure 702

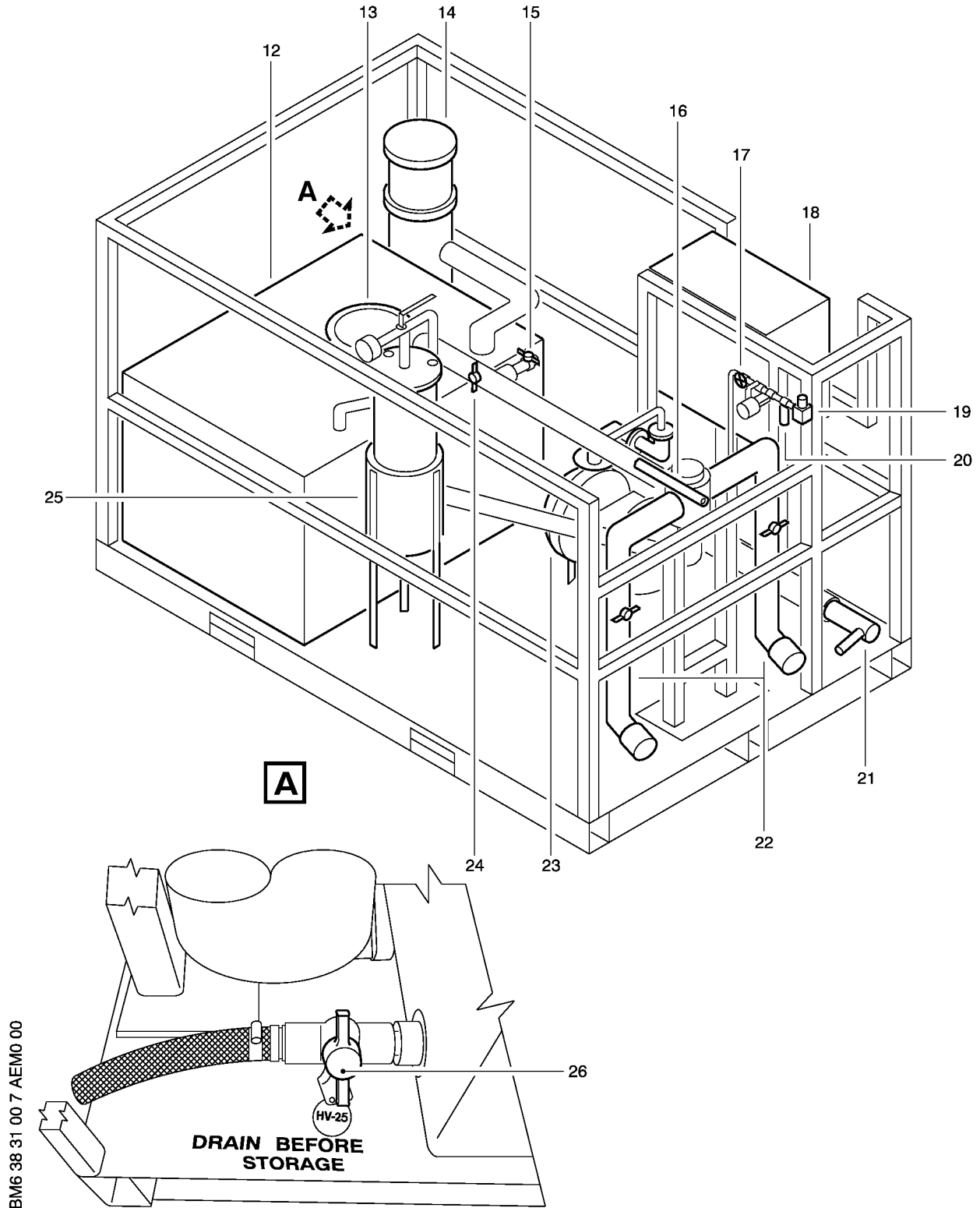
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38-31-00

Page 709
Jun 01/14

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CELESTE Cleaning Tool
Figure 703

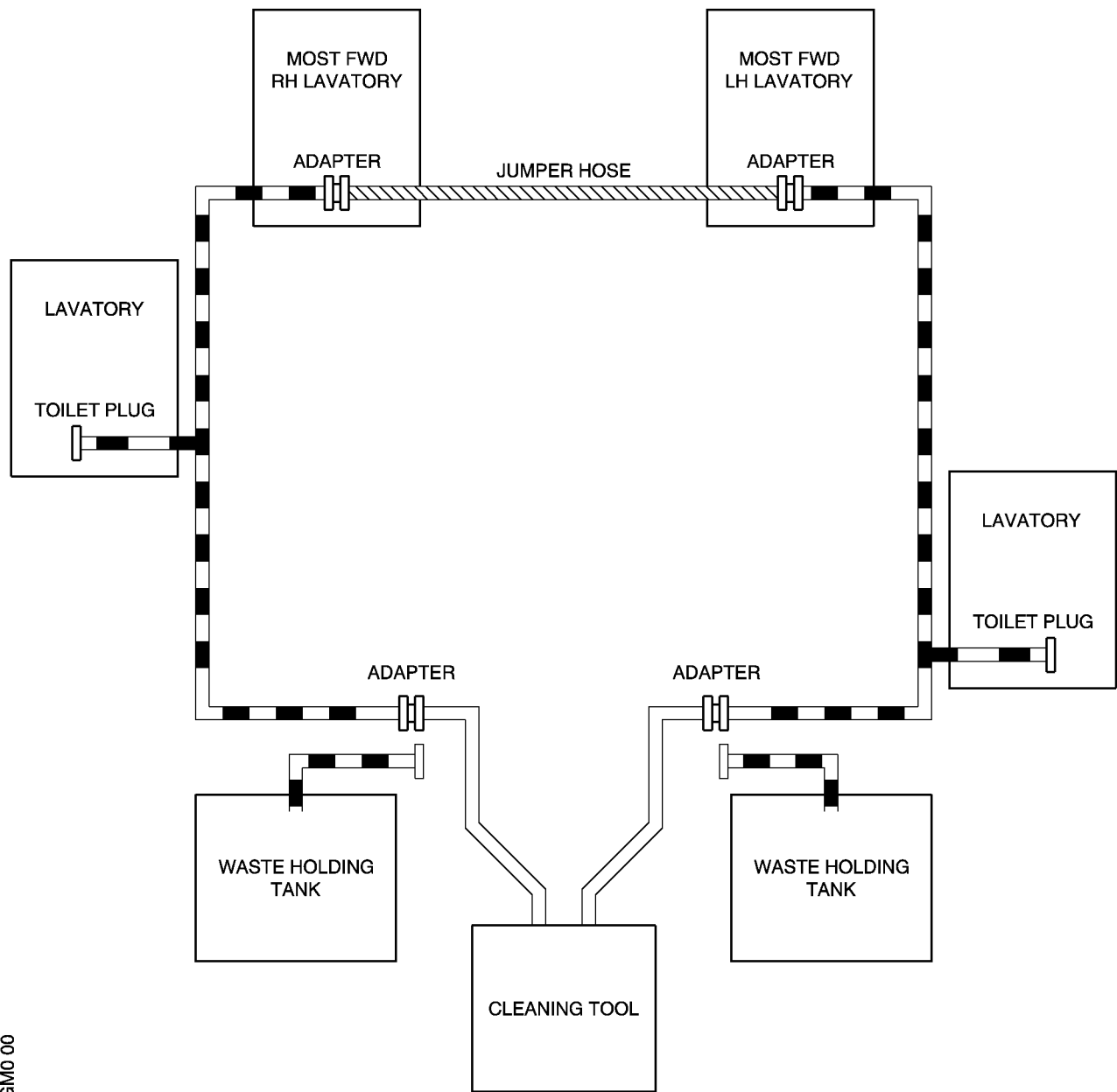
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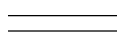
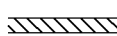
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38-31-00

Page 710
Jun 01/14



NOTE:

-  WASTE DRAIN LINE
-  HOSE
-  JUMPER HOSE

Recirculation Cleaning - Schematic
Figure 704

BM6 38 31 00 7 AGM0 00

R

EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 711
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

- R 2 Install the end caps or plugs on each hose (9).
R 3 Open and remove the clamshell (7).
R 4 Move the sleeves (6) to one side.
R 5 Disconnect the adapters (10) from the waste lines (8).
R 6 Put the adapters (10) into a vinyl bag.
R 7 Use a BORESCOPE DIA 25 MM (1 IN) - FLEXIBLE to do the inspection
R of the waste line.
R 8 If the contamination is as shown in conditions 1 to 5,
R cleaning is necessary.
R 9 Remove and discard the packings (5).
R 10 Apply lubricants (Material No. 03FAB1) or (Material No. 03HCA4) to
R the new packings (5).
R 11 Install the new packings (5) on the waste lines.
R 12 Put the waste line pipes (1) and (2) in their installation
R positions.
R 13 Move the sleeves (6) over the new packings.
R 14 Put the clamshells (7) in their installation positions and close the
R clamshells (7).
R 15 Make sure that the clamshells (7) are locked correctly.
R (c) In the left and right forward toilet assembly:
R 1 Remove the jumper hose from the adapters (10).
R 2 Install the end caps or plugs on the jumper hose.
R 3 Open and remove the clamshells (7).
R 4 Move the sleeves (6) to one side and remove the adapters (10).
R (d) In all the other toilet assemblies:
R 1 Open and remove the clamshells (7).
R 2 Move the sleeves (6) to one side.
R 3 Remove the toilet plugs (11) from the elbows (3).
R (e) Remove and discard the packings (5) on the toilet assemblies (4) and
R elbows (3).
R (f) If removed, install the toilet assembly (Ref. 38-35-13, P. Block 401).
R (g) Apply lubricants (Material No. 03FAB1) or (Material No. 03HCA4) to the
R new packings (5).
R (h) Install the new packings (5) on the toilet assemblies (4).
R (j) Move the sleeves (6) over the packings (5).
R (k) Install the new packings (5) on the elbows (3).
R (l) Install the clamshells (7) to connect the toilet assemblies (4) with
R the elbows (3).
R (m) Open the water shutoff valve in the lavatories.
R (n) Remove the plastic sheets from the floor of the lavatory and the
R adjacent area.
R (p) If there are spills on the floor in the cabin, they must be cleaned
R (Ref. 12-21-12, P. Block 1).
R (q) Remove the safety clips and tags and close circuit breakers 10MG, 11MG,
R 110MG and 111MG.
R (r) Do a leak test of the vacuum system and examine the connections for
R leaks (Ref. 38-35-00, P. Block 501).
R (s) Flush the toilet system a minimum of 10 times to remove all the
R remaining water from the waste lines.
R (t) Install the toilet shrouds (Ref. 25-45-11, P. Block 401).
R (u) Close the access door (162AZ).

EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 712
Jun 01/14

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AIRCRAFT MAINTENANCE MANUAL

- R (v)Close the bulk cargo compartment door (Z813) and remove the access
- R platform.
- R (w)Make sure that the work area is clean and clear of tools and other
- R items.
- R (x)De-energize the aircraft electrical network and disconnect the
- R electrical ground power unit (Ref. 24-41-00, P. Block 301).

EFFECTIVITY: 404-500,

KSSU

38-31-00

Page 713
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

WASTE TANK - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
C. Material No. 05-016	Special Materials (Ref. 20-31-00)
D. Material No. 05-020	Special Materials (Ref. 20-31-00)
E. Material No. 09-016	Sealants (Ref. 20-31-00)
F. Material No. 09-002	Sealants (Ref. 20-31-00)
G. Material No. 08-004	Bonding and Adhesive Compounds (Ref. 20-31-00)
H.	Gasket
J.	Sealing Ring
K.	Packing
L.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

R

- 12-16-38, P. Block 1 Replenishing Toilets
- 20-28-11, P. Block 1 Electrical Bonding
- 24-41-00, P. Block 301 AC External Power Control
- 25-45-11, P. Block 401 Toilet Shroud

R

2. Procedure

A. Job Set-Up

R

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
 - (2) Make certain that electronics racks ventilation is correct.
 - (3) Drain and clean waste tank (Ref. 12-16-38, P. Block 1).
- NOTE** : Do not replenish waste tanks at this stage.
- (4) Remove toilet shrouds (Ref. 25-45-11, P. Block 401).
 - (5) Open, safety and tag the following circuit breakers:

R

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-11

CONF. 01
Page 401
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

PANEL	SERVICE	IDENT.	LOCATION

**0N A/C 226-226, 229-249,			
800VU	FLUSH-MOTORS/FRONT	20MG	J 2
800VU	FLUSH-MOTORS/FRONT	25MG	J 5
800VU	FLUSH-MOTORS/MIDDLE	29MG	J 9
800VU	FLUSH-MOTORS/MIDDLE	30MG	J12
800VU	LAVATORY FRONT & MIDDLE - WASTE PNL	1MV	G 9
811VU	FLUSH-MOTORS/RH	14MG	C 5
811VU	FLUSH-MOTORS/LH	15MG	C 8
811VU	LAVATORY REAR - WASTE PNL	2MV	B 8

**0N A/C 401-401,

Post COCAUA-DA25-072 For A/C 401-401,

800VU	FLUSH-MOTORS/FWD	4MG	J 2	*
800VU	FLUSH-MOTORS/FWD	29MG	J 9	*
800VU	LAVATORY FWD & MID - WASTE PNL	1MV	G 9	*
811VU	FLUSH-MOTORS/RH	14MG	C 5	*
811VU	FLUSH-MOTORS/LH	15MG	C 8	*
811VU	FLUSH-MOTORS/RH	21MG	C 2	*
811VU	FLUSH-MOTORS/LH	22MG	C11	*
811VU	LAVATORY AFT - WASTE PNL	2MV	B 8	*

R **0N A/C 226-226, 229-249, 401-401,

B. Removal

R **0N A/C 226-226, 229-249,

- (1)Remove single waste tank (Ref. Fig. 401)
- (a)Disconnect electrical connectors (1, 2, 7).
- (b)Fit blanking caps to the electrical connectors (1, 2, 7).
- (c)Disconnect control cable at cable connector (8).
- (d)Disconnect bonding strap (4).
- (e)Remove nuts (5) and fold hold-down rods (3) to the side.
- (f)Disconnect vent line (10).
- (g)Fit blanking cap to vent line (10).
- (h)Disconnect flush line (9).
- (j)Fit blanking cap to flush line (9).
- (k)Remove waste tank (6).
- (l)Remove and discard packing (12) and sealing ring (11).
- (m)Fit blanking cap to waste drain line (13).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-11

CONF. 01
Page 402
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

****0N A/C 401-401,**

- (1) Remove single waste tank (Ref. Fig. 402)
 - (a) Disconnect electrical connectors (1, 3, 6).
 - (b) Fit blanking caps to electrical connectors (1, 3, 6).
 - (c) Disconnect control cable at cable connectors (9).
 - (d) Disconnect bonding strap (14).
 - (e) Remove nuts (7) and fold hold-down rods (4) to the side.
 - (f) Release clamps (11) and remove hoses (12).
 - (g) Fit blanking caps to vent line (13).
 - (h) Disconnect flush line (10).
 - (j) Fit blanking cap to flush line (10).
 - (k) Remove waste tank (8).
 - (l) Remove and discard packing (16) and sealing ring (15).
 - (m) Fit blanking cap to waste drain line (17).

R **0N A/C 226-226, 229-249, 401-401,

C. Installation

R **0N A/C 226-226, 229-249,

- (1) Install single waste tank (Ref. Fig. 401).
 - (a) Remove blanking cap from waste drain line (13).
 - (b) Install new packing (12) and sealing ring (11).
 - (c) Put waste tank (6) in position.
 - (d) Position hold-down rods (3) and install nuts (5).
 - (e) Remove blanking cap from flush line (9).
 - (f) Connect flush line (9).
 - (g) Remove blanking cap from vent line (10).
 - (h) Connect vent line (10).
 - (j) Install bonding strap (4) (Ref. 20-28-11, P. Block 1).
 - (k) Remove blanking caps from electrical connectors (1, 2, 7).
 - (l) Connect electrical connectors (1, 2, 7).
 - (m) Connect control cable at cable connector (8).

****0N A/C 401-401,**

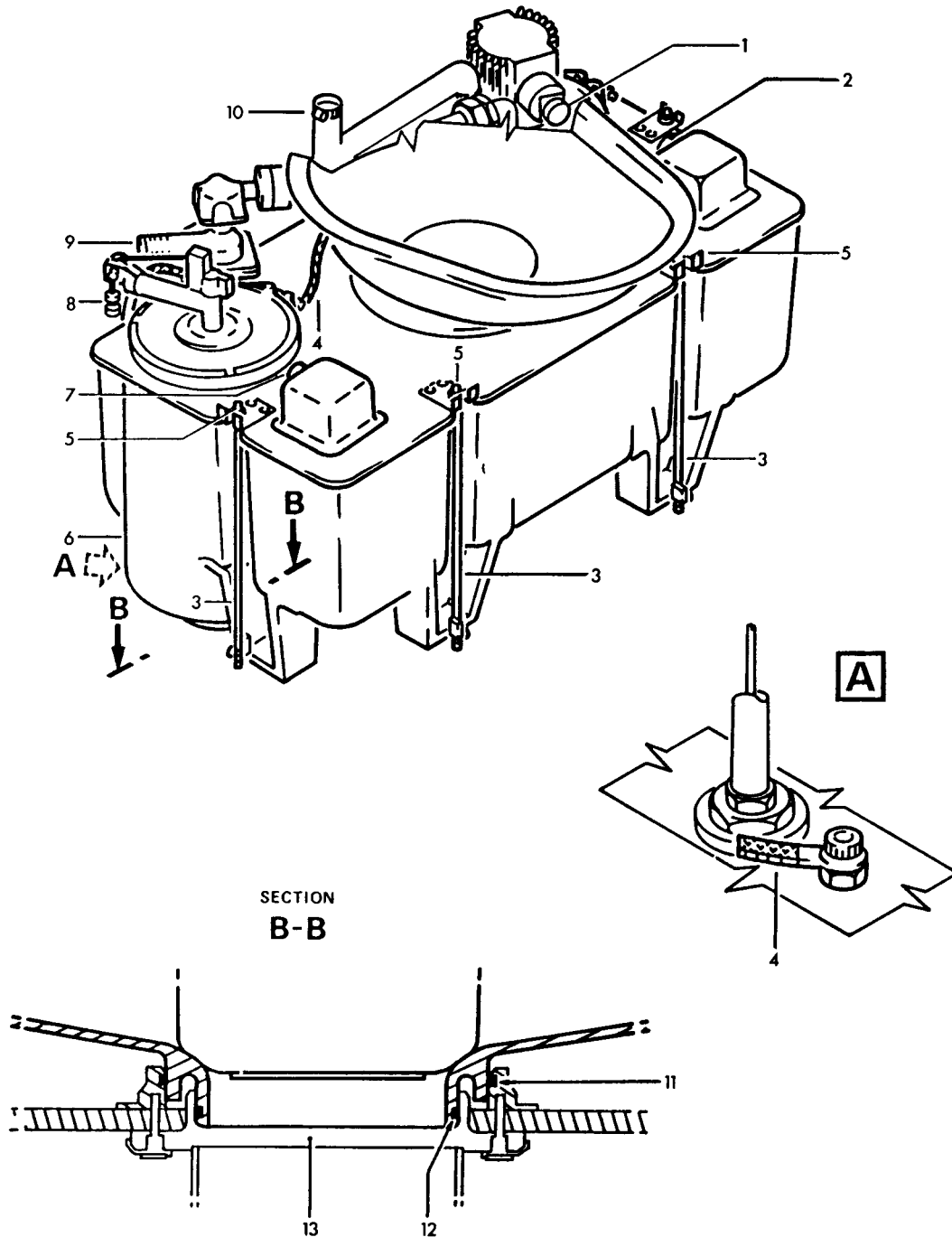
- (1) Install single waste tank (Ref. Fig. 402).
 - (a) Remove blanking cap from waste drain line (17).
 - (b) Install new packing (16) and sealing ring (15).
 - (c) Put waste tank (8) in position.
 - (d) Position hold-down rods (4) and install nuts (7).
 - (e) Remove blanking caps from vent line (13).
 - (f) Put hoses (12) in position between vent line (13) and toilet bowl (2).
 - (g) Install clamps (11).
 - (h) Remove blanking cap from flush line (10).
 - (j) Connect flush line (10).
 - (k) Install bonding strap (14) (Ref. 20-28-11, P. Block 1).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-11

CONF. 01
Page 403
Jun 01/07



Single Waste Tank
Figure 401

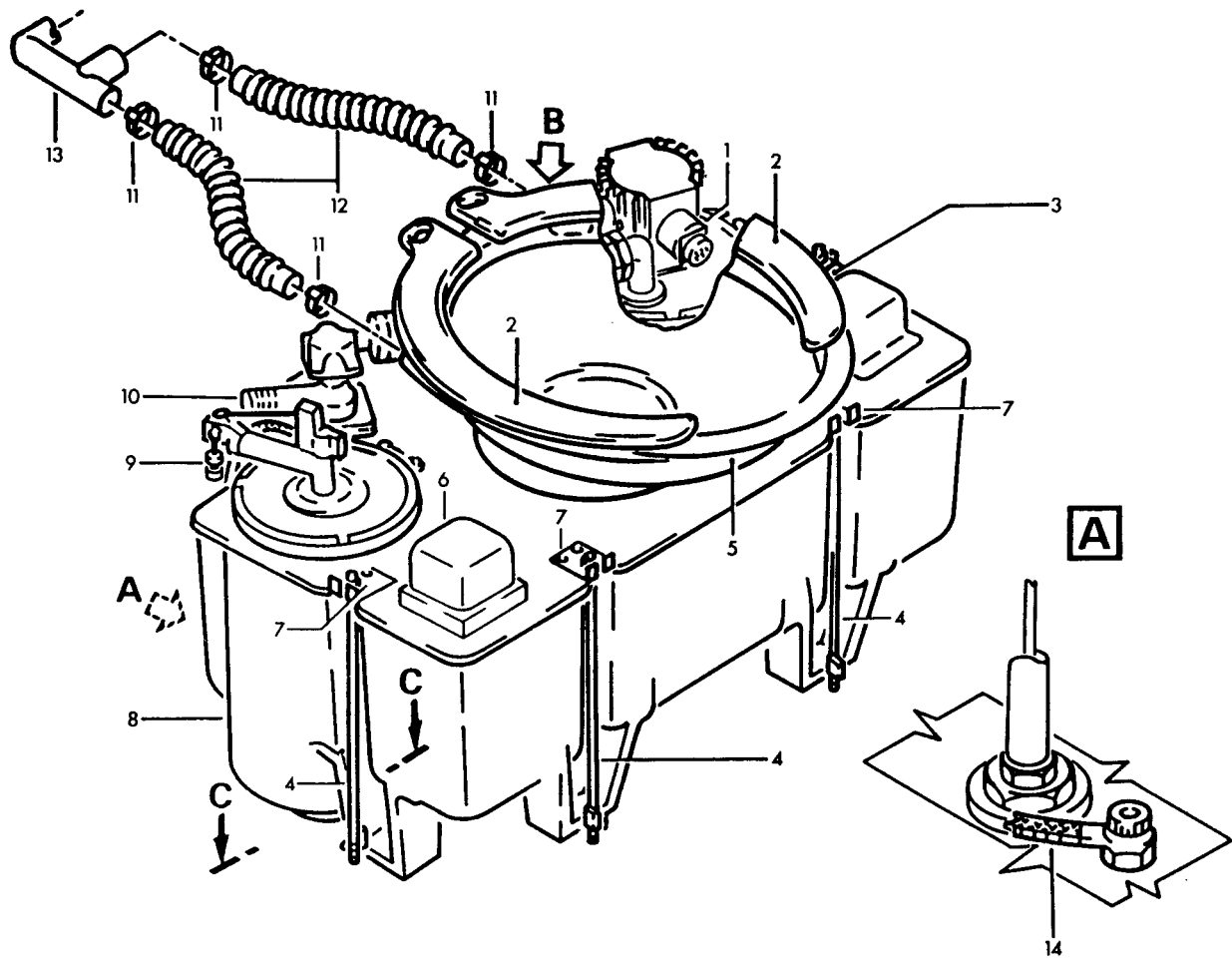
BM6 38 31 11 4 ACMO 01

R EFFECTIVITY: 226-226, 229-249,

KSSU

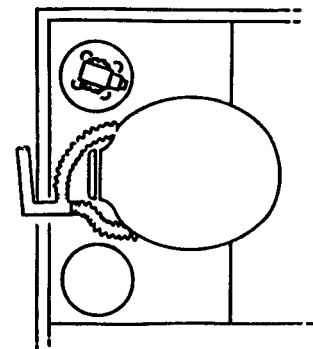
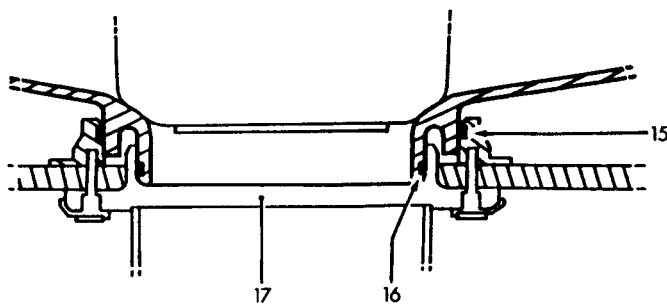
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CONF. 01
Page 404
Jun 01/07



SECTION
C-C

BM6 38 31 11 4 AGMO 01



Single Waste Tank
Figure 402

R EFFECTIVITY: 401-401,

KSSU

38-31-11

CONF. 01
Page 405
Jun 01/05



AIRCRAFT MAINTENANCE MANUAL

- (l) Remove blanking caps from electrical connectors (1, 3, 6).
- (m) Connect electrical connectors (1, 3, 6).
- (n) Connect control cable at cable connector (9).

R **0N A/C 226-226, 229-249, 401-401,

D. Test

**0N A/C 226-226, 229-249,

- (1) Remove safety clips and tags and close circuit breakers 20MG, 25MG, 29MG, 30MG, 1MV, 14MG, 15MG and 2MV.

**0N A/C 401-401,

Post COCAUA-DA25-072 For A/C 401-401,

- (1) Remove safety clips and tags and close circuit breakers 4MG, 1MV, 14MG, 15MG, 21MG, 22MG, 29MG and 2MV. *

R **0N A/C 226-226, 229-249, 401-401,

- (2) Replenish toilets (Ref. 12-16-38, P. Block 1) and check flush line connector and waste tank for leaks.

NOTE: Leaks are not permissible.

- (3) Press FLUSH pushbutton switch and check that flushing action is constant and even around bowl. Wait 30 seconds, repeat the flush and check.

R

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shrouds (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (4) Remove all access equipment and miscellaneous items.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-11

CONF. 01
Page 406
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET BOWL - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
	Sealing Rings
Referenced Procedures	
- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 25-45-11, P. Block 401	Toilet Shroud

2. Procedure

A. Job Set-Up

(1) Drain and clean waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not replenish waste tank at this stage.

(2) Remove toilet shrouds (Ref. 25-45-11, P. Block 401).

****0N A/C 226-226, 229-249,**

(Ref. Fig. 401)

****0N A/C 401-401,**

(Ref. Fig. 402)

R **0N A/C 226-226, 229-249,

B. Removal

(1) Disconnect bonding strap (2).

(2) Remove clamps (1, 3).

(3) Remove bowl (6) complete with separator (5) and sealing ring (4).

(4) Discard sealing ring (4).

****0N A/C 401-401,**

B. Removal

(1) Disconnect bonding strap (2).

(2) Remove clamps (1, 3).

(3) Remove clamps (7) with hoses (8).

(4) Remove bowl (6) complete with separator (5) and sealing ring (4).

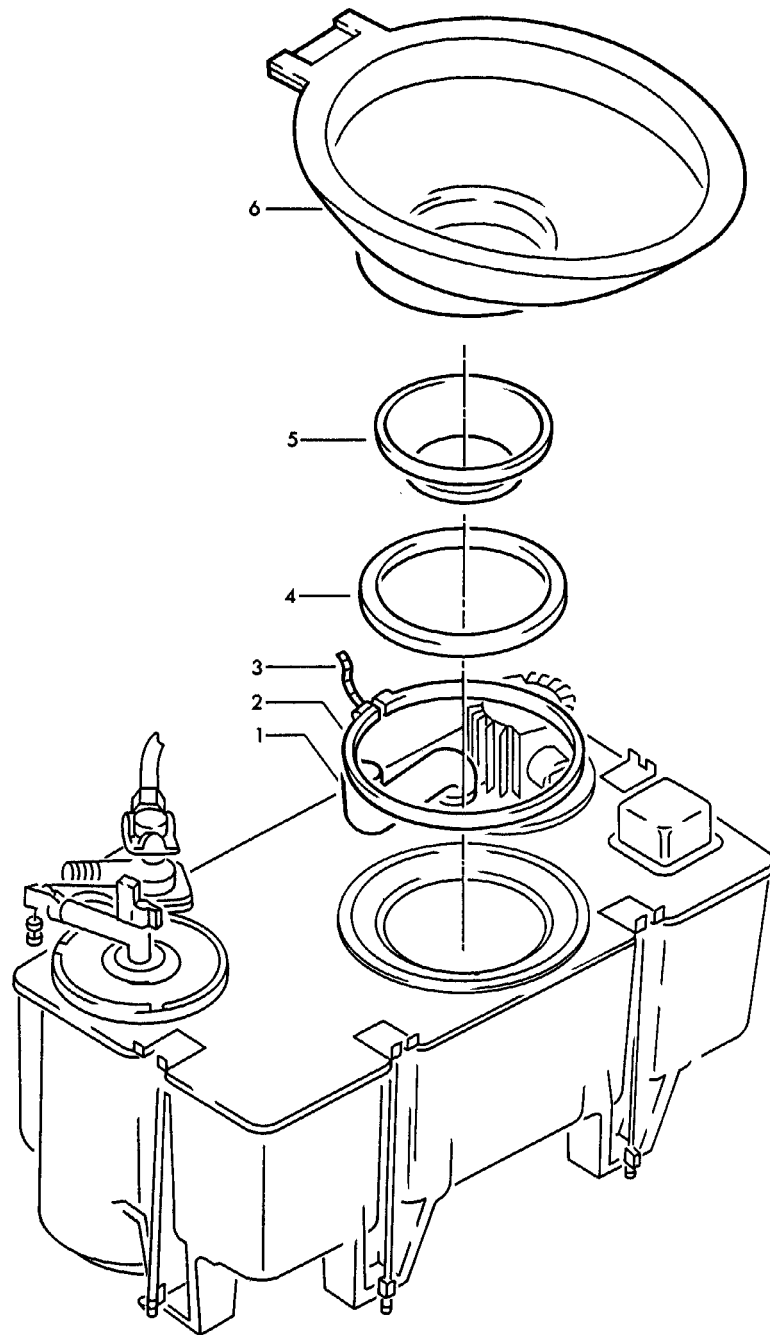
(5) Discard sealing ring (4).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-12

Page 401
Jun 01/07



NOTE: SINGLE UNIT WASTE TANK
(TYPICAL)

Toilet Bowl
Figure 401

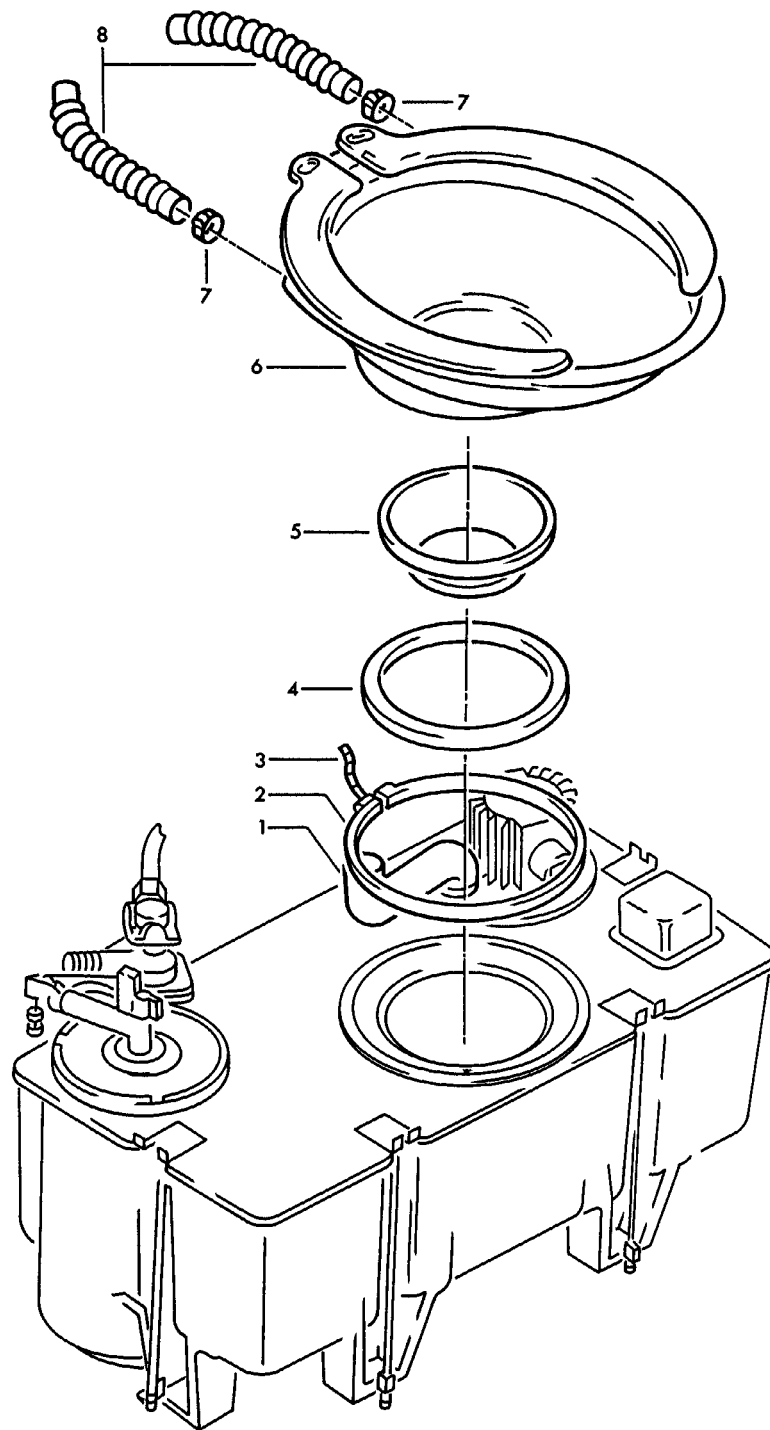
BM6 38 31 12 4 AEMO 00

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-31-12

Page 402
Jun 01/07



**NOTE: SINGLE UNIT WASTE TANK
(TYPICAL)**

Toilet Bowl
Figure 402

BM6 38 31 12 4 AGMO 00

R EFFECTIVITY: 401-401,

KSSU

38-31-12

Page 403
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

****0N A/C 226-226, 229-249,**

C. Installation (Ref. Fig. 401)

****0N A/C 401-401,**

C. Installation (Ref. Fig. 402)

R ****0N A/C 226-226, 229-249,**

- (1)Position bowl (6) complete with separator (5) and new sealing ring (4).
- (2)Install clamps (1, 3).
- (3)Connect bonding strap (2).

****0N A/C 401-401,**

- (1)Position bowl (6) complete with separator (5) and new sealing ring (4).
- (2)Install clamps (1, 3).
- (3)Install hoses (8) with clamps (7).
- (4)Connect bonding strap (2).

R ****0N A/C 226-226, 229-249, 401-401,**

D. Test

- (1)Replenish toilets (Ref. 12-16-38, P. Block 1).
- (2)Flush toilet, and check bowl for leaks.

NOTE: Leaks are not permissible.

E. Close-Up

- (1)Install toilets shrouds (Ref. 25-45-11, P. Block 401).
- (2)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-12

Page 404
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET TIMER - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz

Referenced Procedures

- 24-41-00, P. Block 301 AC External Power Control
- 25-45-11, P. Block 401 Toilet Shroud

2. Procedure

A. Job Set-Up

(1) Remove toilet shrouds (Ref. 25-45-11, P. Block 401).

****ON A/C 226-226, 229-249,**

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH-MOTORS/FRONT J	20MG	J 2
800VU	FLUSH-MOTORS/FRONT N	25MG	J 5
800VU	FLUSH-MOTORS/MIDDLE H	29MG	J 9
800VU	FLUSH-MOTORS/MIDDLE K	30MG	J12
811VU	FLUSH-MOTORS/RH/U	14MG	C 5
811VU	FLUSH-MOTORS/LH/V	15MG	C 8

****ON A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION	
800VU	FLUSH-MOTORS/FWD J	20MG	J 2	*
800VU	FLUSH-MOTORS/FWD N	25MG	J 5	*
811VU	FLUSH-MOTORS/RH/U	14MG	C 5	*
811VU	FLUSH-MOTORS/LH/V	15MG	C 8	*
811VU	FLUSH-MOTORS/RH/Y	22MG	C11	*
811VU	FLUSH-MOTORS/RH/Z	21MG	C 2	*

R ****ON A/C 226-226, 229-249, 401-401,**

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-13

Page 401
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

B. Removal

R

(Ref. Fig. 401)

R

- (1) Disconnect and cap electrical connectors (5).
- (2) Remove nuts (2), washers (3) and bonding strap (6).
- (3) Remove timer (1).

R

C. Installation (Ref. Fig. 401)

R

- (1) Install timer (1) on studs (4) and connect bonding strap (6).
- (2) Secure timer with nuts (2) and washers (3).
- (3) Remove caps and connect electrical connectors (5).

D. Test

- (1) Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

****0N A/C 226-226, 229-249,**

- (2) Remove safety clips and tags and close circuit breaker 14MG, 15MG, 20MG, 25MG, 29MG and 30MG.

****0N A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

- (2) Remove safety clips and tags and close circuit breaker 14MG, 15MG, 20MG, 21MG, 22MG, 25MG and 29MG.

*
*

R ****0N A/C 226-226, 229-249, 401-401,**

- (3) Flush toilet and check that duration of flushing action is between 8 and 12 seconds.

E. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shrouds (Ref. 25-45-11, P. Block 401).
- (3) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

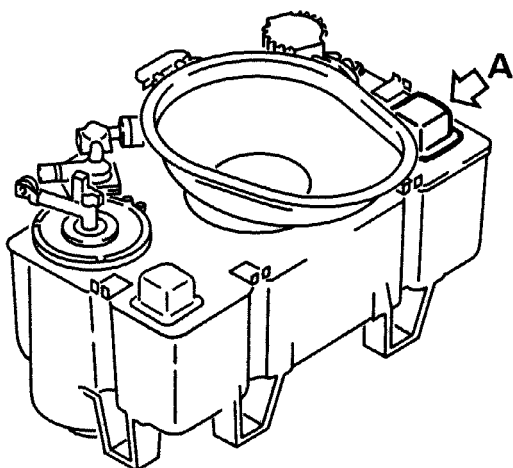
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EFFECTIVITY: 226-226, 229-249, 401-401,

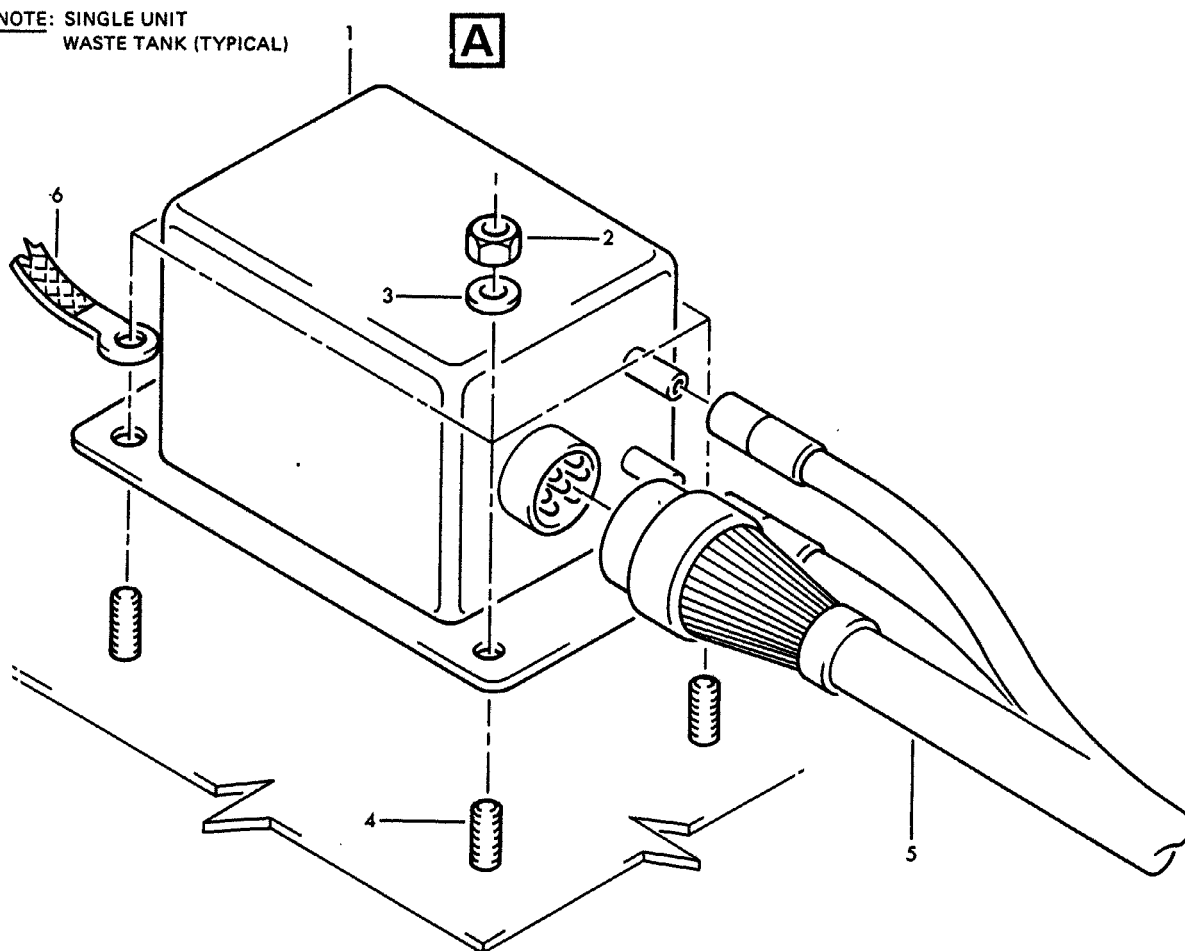
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38-31-13

Page 402
Jun 01/07



NOTE: SINGLE UNIT
WASTE TANK (TYPICAL)



BM 6 38 31 13 4 AE M 0-25

Toilet Timer
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-13

Page 403
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET DRAIN VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Sealing Ring
Referenced Procedures	
- 12-16-38, P. Block 1	Replenishing Toilets
- 25-45-11, P. Block 401	Toilet Shroud

2. Procedure

A. Job Set-Up

(1) Drain and clean waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not replenish waste tank at this stage.

(2) Remove toilet shrouds (Ref. 25-45-11, P. Block 401).

B. Removal

R

(Ref. Fig. 401)

R

(1) Disconnect control cable (1) at cable connector (2).

(2) Release clamp (3) and remove and discard sealing ring (4).

(3) Remove drain valve (5).

R

C. Installation (Ref. Fig. 401)

R

(1) Position new sealing ring (4).

(2) Install drain valve (5) in waste tank (6) and secure with clamp (3).

(3) Connect control cable (1) at cable connector (2).

D. Test

(1) Replenish toilets (Ref. 12-16-38, P. Block 1).

(2) Check drain valve for leaks.

NOTE : Leaks are not permissible.

(3) Check for satisfactory operation of drain valve.

E. Close-Up

(1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(2) Install toilet shroud (Ref. 25-45-11, P. Block 401).

R

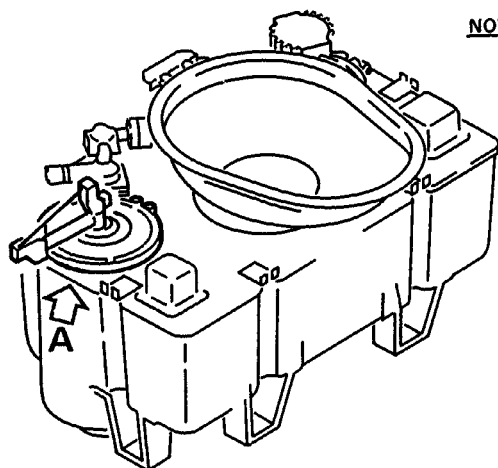
EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

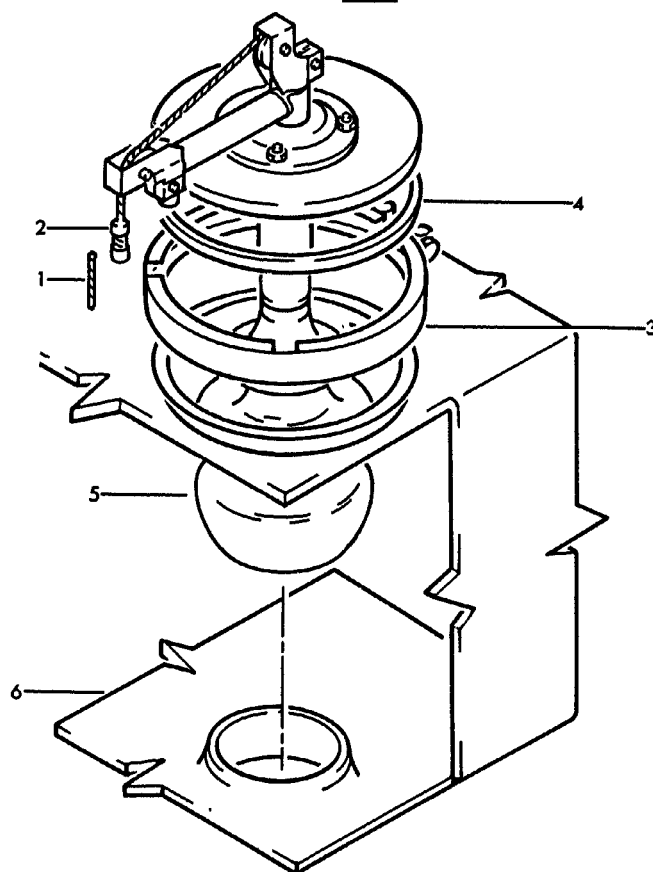
38-31-14

Page 401
Jun 01/07

NOTE: SINGLE UNIT WASTE
TANK (TYPICAL)



A



Toilet Drain Valve
Figure 401

BM6 38 31 14 4 AEMO 00

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-14

Page 402
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

FLUSHING MOTORS - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Sealing Ring
C.	Blanking Caps
D.	Torque Wrench, up to 40 lbf.in. (0.452 m.daN)

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 25-45-11, P. Block 401	Toilet Shroud

2. Procedure

A. Job Set-Up

(1) Drain and clean waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not replenish waste tank at this stage.

(2) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

****ON A/C 226-226, 229-249,**

(3) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH-MOTORS/FRONT J	20MG	J 2
800VU	FLUSH-MOTORS/FRONT N	25MG	J 5
800VU	FLUSH-MOTORS/MIDDLE H	29MG	J 9
800VU	FLUSH-MOTORS/MIDDLE K	30MG	J12
811VU	FLUSH-MOTORS/RH/U	14MG	C 5
811VU	FLUSH-MOTORS/LH/V	15MG	C 8

****ON A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

(3) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION	
800VU	FLUSH-MOTORS/FWD J	20MG	J 2	*
800VU	FLUSH-MOTORS/FWD N	25MG	J 5	*
811VU	FLUSH-MOTORS/RH/U	14MG	C 5	*
811VU	FLUSH-MOTORS/LH/V	15MG	C 8	*
811VU	FLUSH-MOTORS/RH/Y	22MG	C11	*
811VU	FLUSH-MOTORS/RH/Z	21MG	C 2	*

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-15

Page 401
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

R **0N A/C 226-226, 229-249, 401-401,

B. Removal

R

(Ref. Fig. 401)

R

- (1) Disconnect and cap electrical connector (1).
- (2) Disconnect and cap line (7).
- (3) Release clamp (9) and disconnect and cap hose (10).
- (4) Remove bonding jumper (3) from flush motor (2).
- (5) Release clamp (4) and carefully remove flush motor (2).
- (6) Discard sealing ring (6).

R

C. Installation (Ref. Fig. 401)

R

- NOTE** : For electrical bonding procedure, refer to 20-28-11, P. Block 1.
- (1) Position new sealing ring (6).
 - (2) Carefully position flush motor (2) in the correct position on waste tank (5).
 - (3) Install clamp (4) and bonding jumper (3).
 - (4) Loosen tube attachment nuts (8) on flush motor and align tube to line (7).
 - (5) Attach tube and TORQUE nuts (8) to 0.24 - 0.26 m.daN (22 - 23 lbf.in.). (0.249 - 0.260 m.daN).
 - (6) Remove cap and connect line (7).
 - (7) Remove cap and install hose (10).
 - (8) Secure hose (10) with clamp (9).
 - (9) Remove cap and connect electrical connector (1).

D. Test

**0N A/C 226-226, 229-249,

- (1) Remove safety clips and tags and close circuit breaker 14MG, 15MG, 20MG, 25MG, 29MG and 30MG.

**0N A/C 401-401,

Post COCAUA-DA25-072

For A/C 401-401,

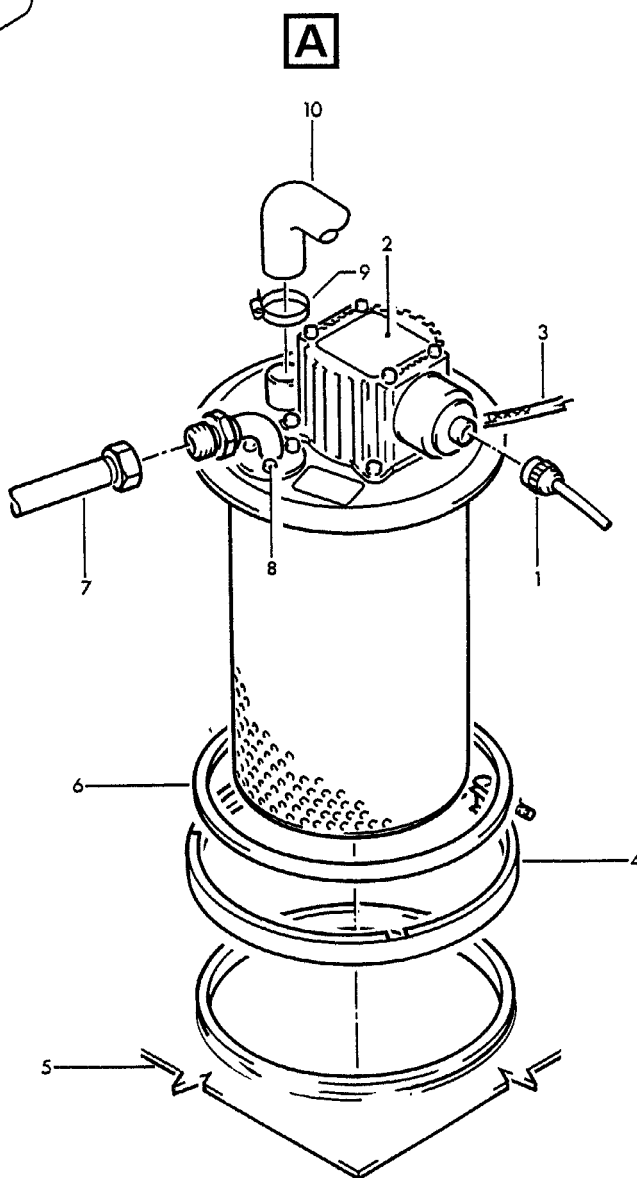
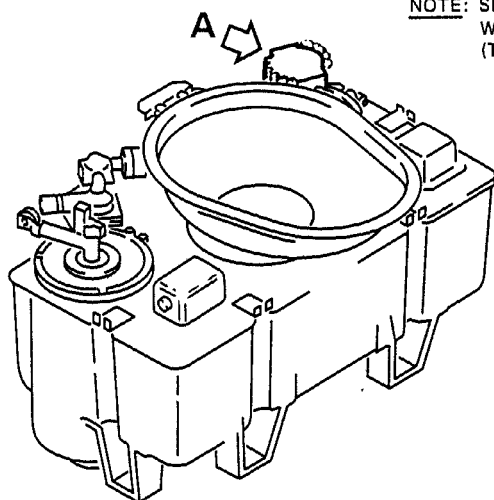
R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-15

Page 402
Jun 01/07

NOTE: SINGLE UNIT
WASTE TANK
(TYPICAL)



BM 6 38 31 15 4 AE M 0-25

Flush Motor
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-15

Page 403
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

- (1) Remove safety clips and tags and close circuit breaker 14MG, 15MG, 20MG, 21MG, 22MG and 25MG. *

*
*

R **ON A/C 226-226, 229-249, 401-401,

- (2) Replenish toilet system (Ref. 12-16-38, P. Block 1).
(3) Press FLUSH pushbutton switch and check for correct flush motor operation and leaks.

NOTE : Leaks are not permissible.

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3) Remove access platform.

EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-15

Page 404
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

CONTROL CABLE - TOILET DRAIN VALVE

1. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 1.0 m.daN (88.5 lbf.in.)
B.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
C.	Access Platform, 2.7 m (9 ft.)
D.	Access Platform, 1.0 m (3 ft.)
E. Material No. 05-020	Special Materials (Ref. 20-31-00)
F. Material No. 09-002	Sealants (Ref. 20-31-00)
F. Material No. 09-007	Sealants (Ref. 20-31-00)

Referenced Procedures

- | | |
|--------------------------|-------------------------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 52-30-00, P. Block 301 | FWD and AFT Cargo Compartment Doors |
| - 25-45-11, P. Block 401 | Toilet Shroud |

2. Procedure

R

A. Job Set-Up

- (1) Position access platform at FWD, MID and AFT toilet service panel (121DL, 134DL and 172AR).
- (2) Position access platform at FWD and AFT cargo compartment doors.
- (3) Open FWD and AFT cargo compartment doors (Ref. 52-30-00, P. Block 301).
- (4) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).
- (5) Remove appropriate toilet shroud (Ref. 25-45-11, P. Block 401).
- (6) To gain access to FWD toilet drain valve control cable open avionics compartment access doors (131AZ and 132AZ), for MID toilet drain valve control cable open floor panels (131QF and 132QF) in FWD cargo compartment and for AFT toilet drain valve control cable open access door (162AZ).

R

B. Removal

- (1) Removal of control cable at single toilet (Ref. Fig. 401)
 - (a) At toilet service panel, remove setscrews (1) and handle (2).
 - (b) Remove locknut (4) and retaining collar (5).
 - (c) Remove split retainer (6) and discard.
 - (d) At waste tank, disconnect cable (7) (ball end) at connector (8).
 - (e) Pull cable (7) upwards until coupling (9) is free from sleeve (19).
 - (f) Disconnect coupling (9) and remove upper cable (7).
 - (g) Pull lower cable (7) upwards out of tube assembly.
 - (h) Remove lockwire, release nuts (11) and remove tubes.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-16

Page 401
Jun 01/07

AIRCRAFT MAINTENANCE MANUAL

- (j) Remove lockwire, release locknuts (12) and setscrew (13), remove washers (14), sleeve (15) with inner shaft (3) and outer shaft (16).
- (k) Remove lockwire, locknut (17), washers (18) and sleeve (19).

R

C. Preparation for Installation

- (1) Make certain that cable is not kinked or broken.
- (2) Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation

- (1) Installation of control cable at single toilet (Ref. Fig. 401)
 - (a) Install sleeve (19), washers (18) and locknut (17) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
 - (b) Install locknuts (12) and one washer (14) on outer shaft (16).
 - (c) Insert assembled parts through hole in toilet service panel.
 - (d) Apply release agent (Mat. No. 05-020) to washer (14) and slide over threads of outer shaft (16).
 - (e) Install sleeve (15) and secure with setscrew (13).
 - (f) **TORQUE** tighten locknuts (12) to 1.2 - 1.3 m.daN (106 - 115 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
 - (g) Insert inner shaft (3) in outer shaft (16).
 - (h) Install tubes and hand tighten nuts (11).
 - (j) Install cable (7).
 - 1 Connect upper and lower cable (7) at coupling (9).
 - 2 Insert cable (7) into sleeve (19) until cable is visible at toilet service panel.
 - 3 Connect cable (ball end) to connector (8).
 - (k) At toilet service panel, pull cable until coupling (9) is in sleeve (19).
 - (l) Install new retainer (6), and slide inner shaft (3) over retainer (6).
 - (m) Install retaining collar (5) so that no play exists between inner shaft and retainer; **TORQUE** to 0.5 - 0.6 m.daN (44 - 53 lbf.in.).
 - (n) Install locknut (4); **TORQUE** to 0.5 - 0.6 m.daN (44 - 53 lbf.in.).
 - (p) If necessary, cut off remaining cable end.
 - (q) Install handle (2) and secure with setscrews (1).
 - NOTE** : Make certain that handle is pushed fully in and placed in closed position.
 - (r) Tighten nuts (11); **TORQUE** to 0.7 - 0.8 m.daN (62 - 71 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
 - (s) Apply a fillet of sealant (Mat. No. 09-007) around washer (14) and, when dry, coat with sealant (Mat. No. 09-002).

R

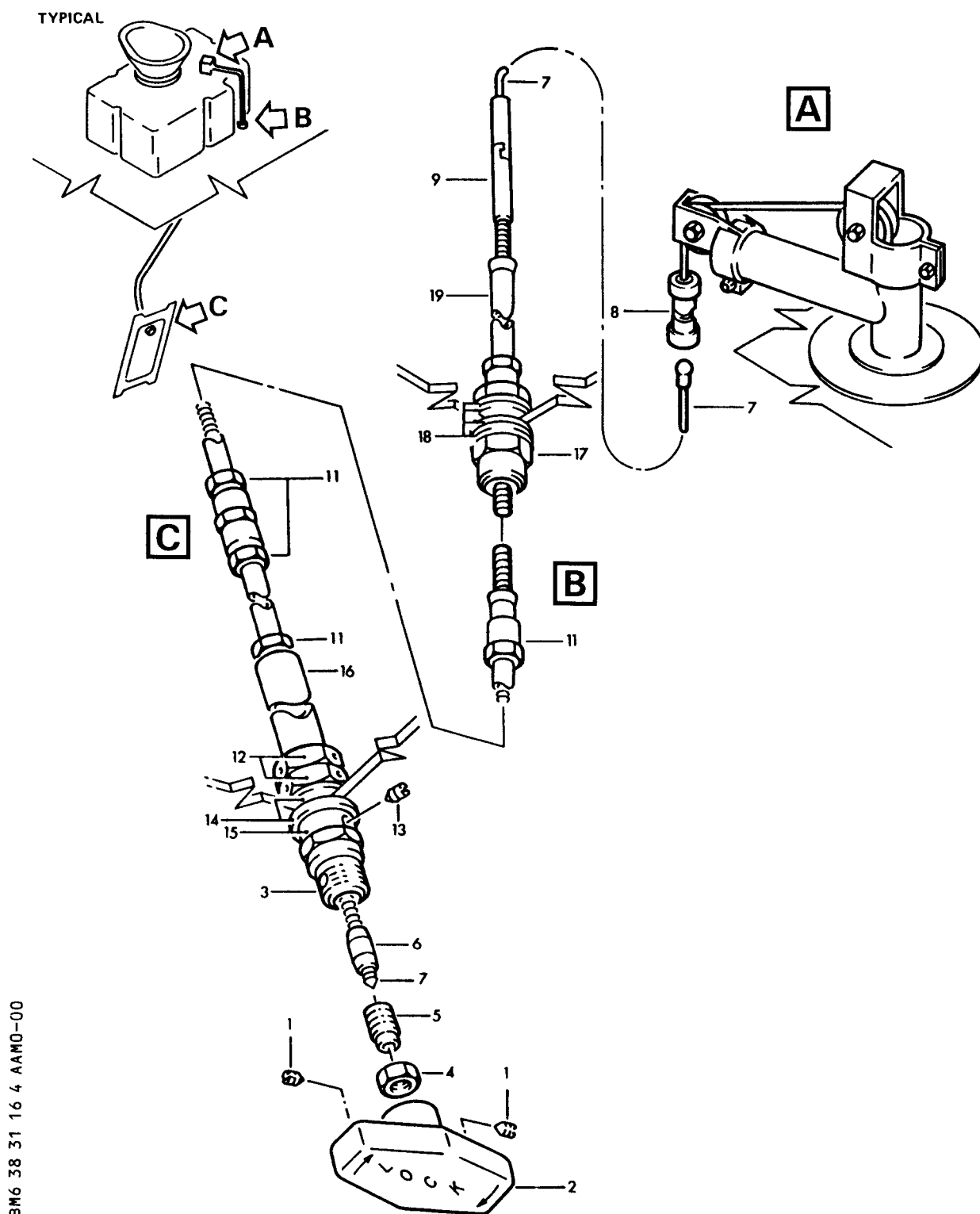
E. Close-Up

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-16

Page 402
Jun 01/07



Toilet Drain Valve Control Cable
Single Toilet
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-16

Page 403
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

R

- (1) In FWD cargo compartment install floor panels (131QF and 132QF).
- (2) Close avionics compartment access doors (131AZ and 132AZ) in FWD cargo compartment and access door (162AZ) in AFT cargo compartment.
- (3) Close cargo compartment doors (Ref. 52-30-00, P. Block 301).
- (4) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (5) Replenish appropriate toilet system (Ref. 12-16-38, P. Block 1).
- (6) Remove access platforms.
- (7) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-16

Page 404
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET DRAIN LINE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.7 m (9 ft.)
B.	Container, 100 l (26 US gal.)
C.	Sealing Rings
D.	Packing
E. Material No. 04-008	Common Greases (Ref. 20-31-00)
Referenced Procedure	
- 12-16-38, P. Block 1	Replenishing Toilets
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up

(1) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).

NOTE : Do not replenish waste tanks at this stage.

(2) Position access platform and open appropriate cargo compartment door (Ref. 52-30-00, P. Block 301).

NOTE : Gain access to toilet drain line.

B. Removal

(1) Remove single toilet drain line (Ref. Fig. 401)

(a) Remove toilet drain line clamps.

1 Remove nuts (1), bolts (3), washers (2) and clamps (4).

(b) Disconnect upper connection.

1 Remove clamps (7) and plates (8).

2 Pull tube segment (10) from flange (5).

3 Remove rubber pads (6).

(c) Disconnect lower connection.

1 Remove nuts (14), bolts (13) and washers (14).

2 Pull tube segment (10) from valve (11).

3 Remove and discard packing (12).

(d) Disassemble toilet drain line.

1 Pull tube segments (10) apart.

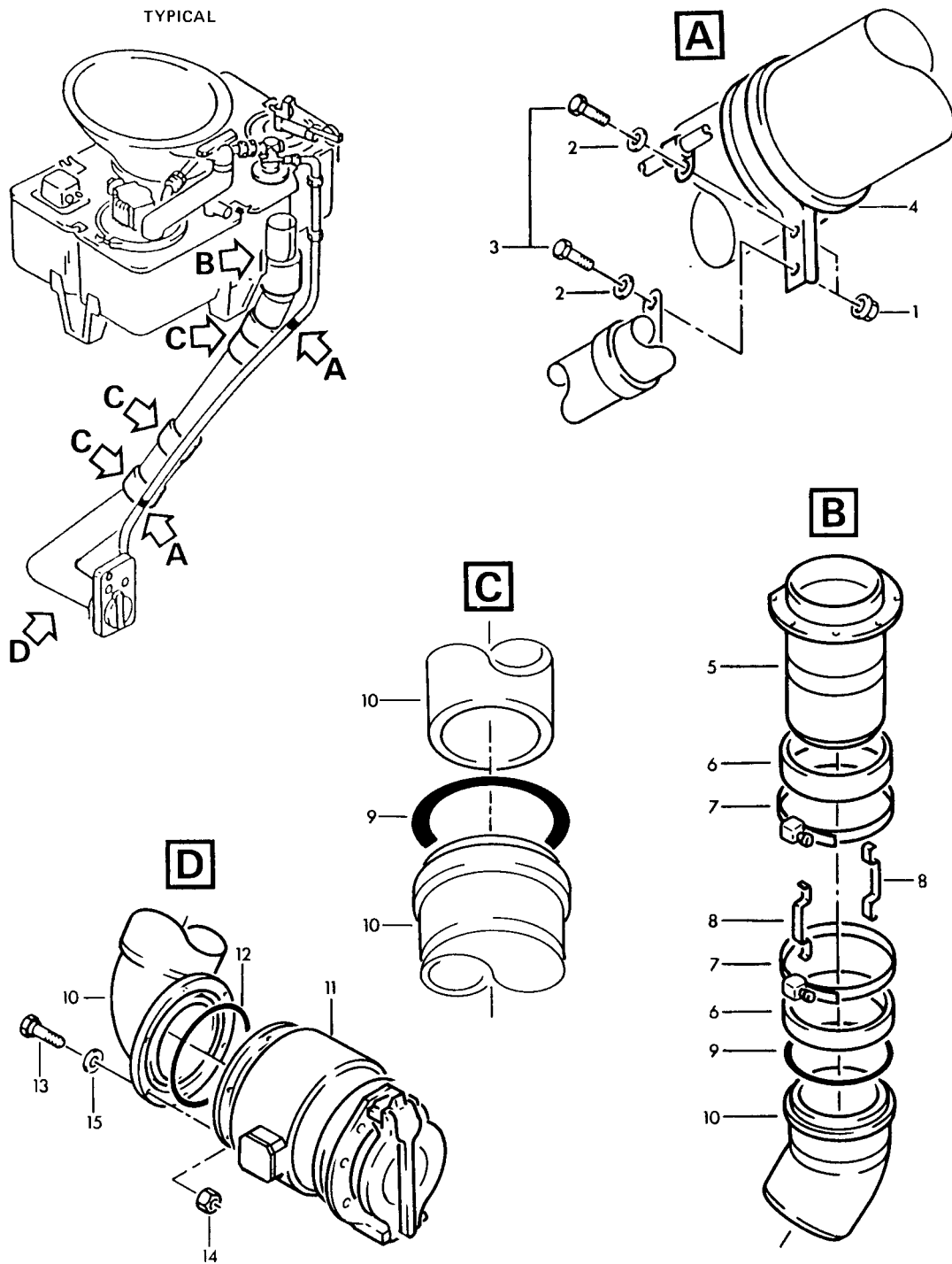
2 Remove and discard sealing rings (9).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-17

Page 401
Jun 01/07



Toilet Drain Line
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-17

Page 402
Jun 01/07

R

C. Preparation for Installation

- (1) Make sure that all tube sections are clean and undamaged.
- (2) Apply grease (Mat. No. 04-008) to all new sealing rings and packings.
- (3) Insert sealing rings and packings into the grooves of the tube sections.
- (4) Make sure that installation area is clean.

C. Installation

- (1) Install single toilet drain line (Ref. Fig. 401)
 - (a) Assemble toilet drain line.
 - 1 Insert tube segments (10) into each other.
 - (b) Connect lower connection.
 - 1 Put tube section (10) in position on valve (11).
 - 1 Install bolts (13), washers (15) and nuts (14).
 - (c) Connect upper connection.
 - 1 Put rubber pads (6) in position.
 - 2 Move tube segment (10) over flange (5).
 - 3 Install plates (8) and clamps (7).
 - (d) Install toilet drain line clamps.
 - 1 Put clamps (4) in position.
 - 2 Install bolts (3), washers (2) and nuts (1).

R

D. Test

- (1) Fill each waste tank with approx. 20 l (5.5 US gal.) of water (Ref. 12-16-38, P. Block 1).
- (2) Pull and turn appropriate toilet drain valve control handle and check that water drains into toilet drain line.
- (3) Check toilet drain line at all connections for leakage.
NOTE : Leakage is not permissible.
- (4) Pull and turn waste dump valve control handle until locked.
- (5) Position container under appropriate toilet service panel; open waste drain outlet and allow water to drain.
- (6) Release appropriate toilet drain valve control handle to close toilet drain valve.
- (7) Release waste dump valve control handle to close valve.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-17Page 403
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

(8)Close appropriate waste drain outlet, wipe dry service panel and adjacent area.

E. Close-Up

- (1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2)Close appropriate cargo compartment door (Ref. 52-30-00, P. Block 301).
- (3)Replenish toilets (Ref. 12-16-38, P. Block 1).
- (4)Remove access platform.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-17

Page 404
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

TOILET FLUSH LINE - REMOVAL/INSTALLATION

WARNING : FLUSHING FLUID IS HAZARDOUS, WEAR APPROPRIATE PROTECTIVE CLOTHING.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Container, 100 l (26 US gal.)
B.	Access Platform, 2.7 m (9 ft.)
C.	Blanking Caps
D. Material No. 05-001	Special Materials (Ref. 20-31-00)
E. Material No. 05-020	Special Materials (Ref. 20-31-00)
F. Material No. 05-022	Special Materials (Ref. 20-31-00)
G. Material No. 09-016	Sealants (Ref. 20-31-00)
H.	O-Rings

Referenced Procedures

- 12-16-38, P. Block 1 Replenishing Toilets
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors
- 25-45-11, P. Block 401 Toilet Shroud

2. Procedure

A. Job Set-Up

WARNING : FLUSHING FLUID IS HAZARDOUS, WEAR APPROPRIATE PROTECTIVE CLOTHING.

(1) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).

NOTES : (a) Do not replenish waste tanks at this stage.

(b) Place 'NO SERVICING' placard on appropriate service panel to ensure that no further servicing takes place during flush line removal.

(2) Position access platform and open appropriate cargo compartment door (Ref. 52-30-00, P. Block 301).

NOTE : Gain Access to toilet flush line.

B. Removal

(1) Remove forward lavatory flush line.

(Ref. Fig. 401)

(a) Disconnect unions (1, 10) and remove flush line (9).

(b) Below floor, remove nuts (11), washers (12), bolts (14) and release clamps (13) from toilet drain line clamps (15).

(c) Below floor, release hose clamps (4) and disconnect protective hose (5) from upper adaptor (3) and lower adaptor (18).

(d) At adaptor (3), remove bolts (6), washers (7) and slide adaptor (3) down flush line (2), and discard O-ring (21).

(e) At adaptor (18), remove nuts (20), washers (17), bolts (16) and move adaptor back on flush line (2) away from mounting (19).

(f) At upper and lower connections disconnect unions (8) and remove flush line (2) together with protective hose (5) and adaptors (3, 18).

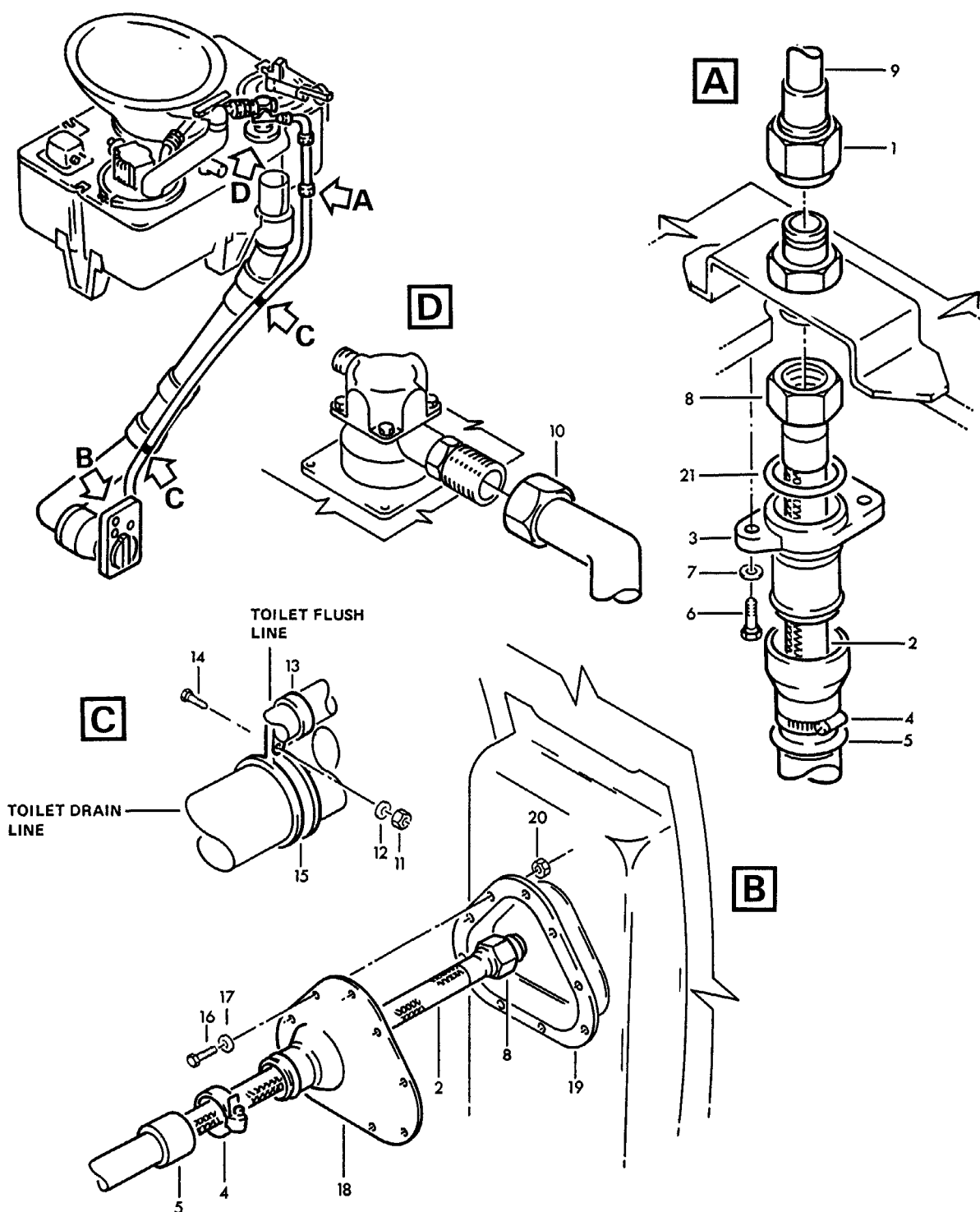
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R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-18

Page 401
Jun 01/07



Toilet Flush Line
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-18

Page 402
Jun 01/07

(2) Remove mid lavatory flush line.

(Ref. Fig. 402)

(a) Disconnect unions (1, 5) and remove flush line (4).

(b) Below floor, remove nuts (6), washers (7), bolts (9) and release clamps (8) from toilet drain line clamps (10).

(c) Disconnect flush line (2) at unions (3, 11).

(d) Disassemble flush line (2) at intermediate pipe to pipe fittings (12) and remove flush line (2).

R

(3) Remove aft lavatory flush line.

(Ref. Fig. 402)

R

(a) Disconnect unions (1, 5) and remove flush line (4).

(b) Below floor, remove nuts (6), washers (7), bolts (9) and release clamps (8) from toilet drain line clamps (10).

(c) Disconnect flush line (2) at unions (3, 11).

(d) Disassemble flush line (2) at intermediate pipe to pipe fittings (12) and remove flush line (2).

R

C. Preparation for Installation

(1) Remove sealant remnants from forward flush line protective hose ends and adaptors.

D. Installation

(1) Install forward lavatory flush line (Ref. Fig. 401).

(a) Position flush line (2) in protective hose (5).

(b) Loosely position adaptors (3, 18) on protective hose (5).

(c) Wrap sealing tape (Mat. No. 05-022) around threads of unions.

(d) Connect flush line (2) at unions (8).

(e) Connect flush line (9) at unions (1, 10).

(f) At this stage carry out test of forward flush line. Refer to Para. 2.E.(1) thru (3).

(g) Install upper adaptor (3), washers (7) and bolts (6).

(h) Install lower adaptor (18), bolts (16), washers (17) and nuts (20).

(j) Apply release agent (Mat. No. 05-020) to protective hose ends, install protective hose (5) and secure with hose clamps (4).

(k) Apply sealant (Mat. No. 09-016) at protective hose to adaptor interface.

(l) Install bolts (14), washers (12), nuts (11) and secure flush line clamps (13) to drain line clamps (15).

R

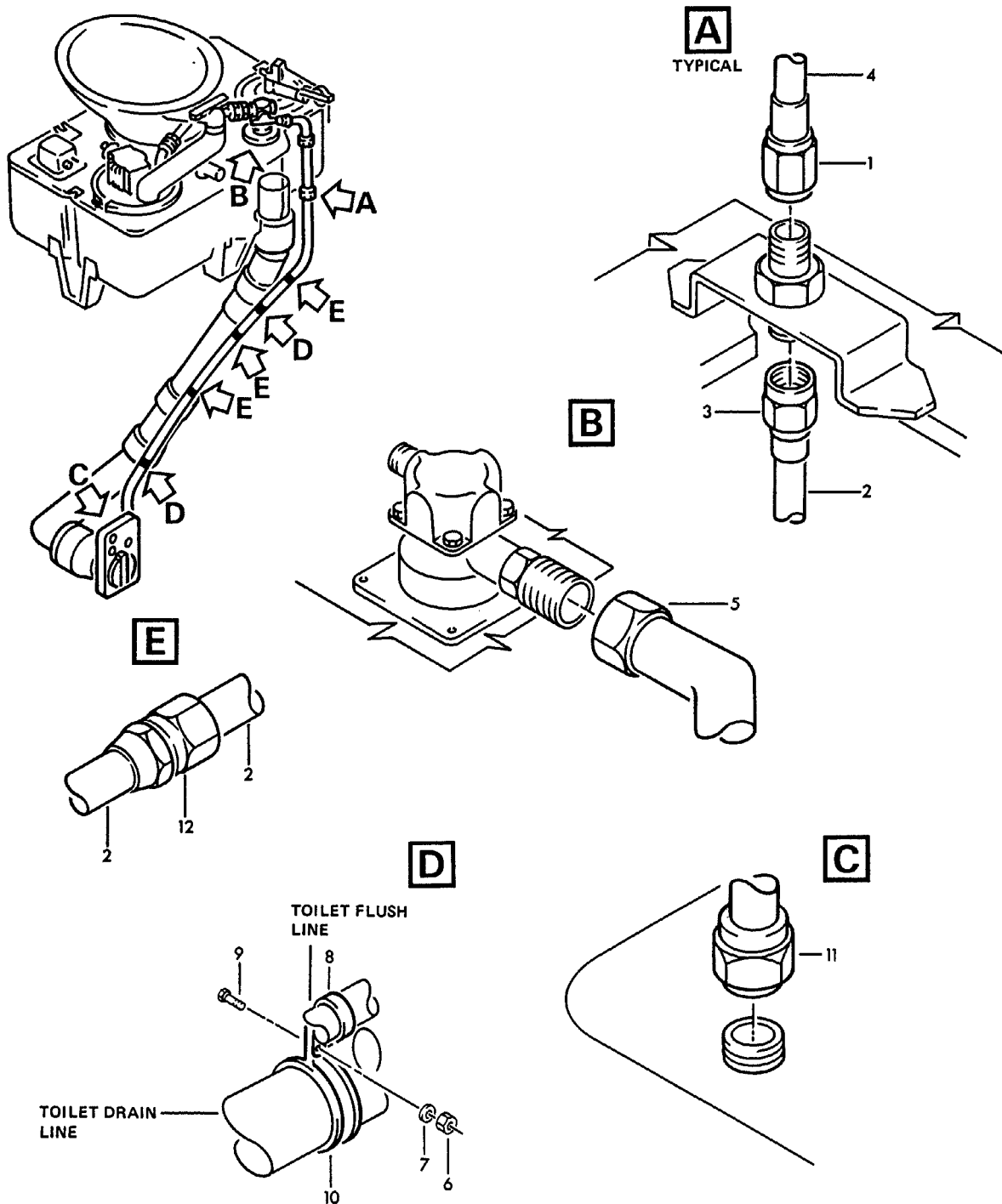
(2) Install mid lavatory flush line (Ref. Fig. 402).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-18

Page 403
Jun 01/07



Toilet Flush Line
Figure 402

BM6 38 31 18 4 ACMO 00

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-18

Page 404
Jun 01/06

AIRCRAFT MAINTENANCE MANUAL

- (a) Wrap sealing tape (Mat. No. 05-022) around threads of unions.
- (b) Assemble flush line (2) and connect at intermediate pipe to pipe fittings (12).
- (c) Connect flush line (2) at unions (3, 11).
- (d) Install bolts (9), washers (7), nuts (6) and secure flush line clamps (8) to drain line clamps (10).
- (e) Connect flush line (4) at unions (1, 5).

R

- (3) Install aft lavatory flush line.
(Ref. Fig. 402)

R

- (a) Wrap sealing tape (Mat. No. 05-022) around threads of unions.
- (b) Assemble flush line (2) and connect at intermediate pipe to pipe fittings (12).
- (c) Connect flush line (2) at unions (3, 11).
- (d) Install bolts (9), washers (7), nuts (6) and secure flush line clamps (8) to drain line clamps (10).
- (e) Connect flush line (4) at unions (1, 5).

R

E. Test

- (1) Fill each waste tank with approx. 20 l (5.3 US gal.) of water (Ref. 12-16-38, P. Block 1) and check lines for leakage.
NOTE : Leaks are not permissible.
- (2) Place container under appropriate toilet service panel, open toilet drain valve and waste dump valve and allow water to drain.

E. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Close FWD and BULK cargo compartment doors (Ref. 52-30-00, P. Block 301).
- (3) Remove 'NO' SERVICING' placard from appropriate service panel.
- (4) Remove access platform.
- WARNING** : FLUSHING FLUID IS HAZARDOUS WEAR APPROPRIATE PROTECTIVE CLOTHING.
- (5) Connect toilet servicing vehicle and replenish waste tanks with prime fluid (Ref. 12-16-38, P. Block 1).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-18

Page 405
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

WASTE DUMP VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.7 m (9 ft.)
B.	Container, 100 l (26 US gal.)
C.	Cotter Pin
D.	Packing
E.	Torque Wrench, up to 0.25 m.daN (22 lbf.in.)

Referenced Procedure

- 12-16-38, P. Block 1 Replenishing Toilets
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up

- (1) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).

NOTE : Do not replenish waste tanks at this stage.

- (2) Position access platform and open cargo doors (Ref. 52-30-00, P. Block 301).

R

NOTE : Access to forward waste dump valve is gained through avionics compartment access doors (131AZ/132AZ), for mid waste dump valve open floor panel (132QF) and aft waste dump valve through aft cabin underfloor compartment door (162AZ).

R

B. Removal

- (1) FWD and AFT waste dump valve (Ref. Fig. 401)
 - (a) Remove and discard cotter pin (4).
 - (b) Remove washer (3), pin (2) and disconnect operating rod.
 - (c) Remove nuts (7), washers (6) and bolts (5).
 - (d) Remove valve (1).
 - (e) Remove and discard packings (8).

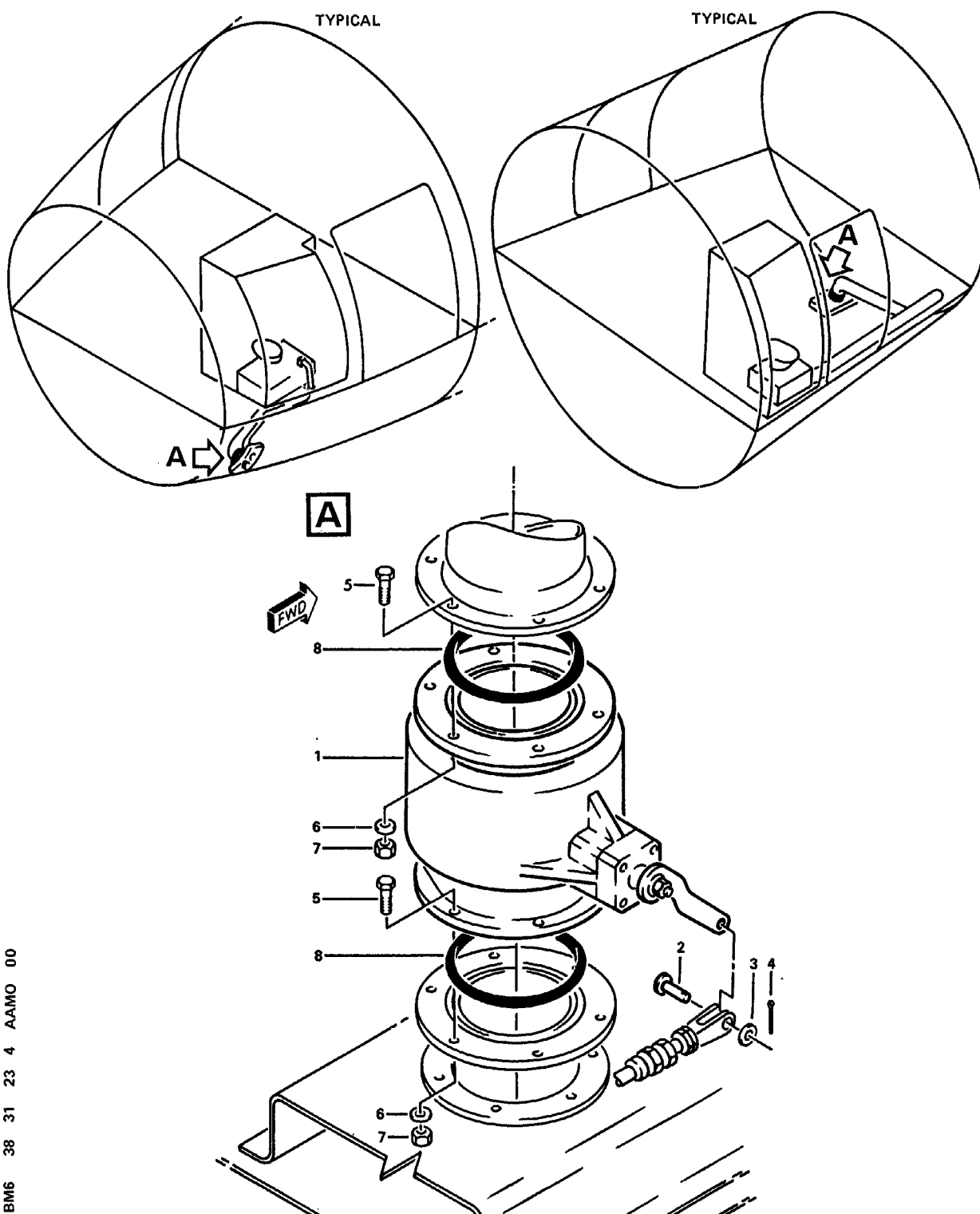
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R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-23

Page 401
Jun 01/07



FWD and AFT Waste Dump Valve
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-23

Page 402
Jun 01/07

(2)MID waste dump valve

(Ref. Fig. 402)

- (a)Remove and discard cotter pin (4).
- (b)Remove nut (3), washer (2) and disconnect operating lever (4).
- (c)Remove nuts (7), washers (6) and bolts (5).
- (d)Remove valve (1).
- (e)Remove and discard packings (8).

R

C. Installation

(1)FWD and AFT waste dump valve (Ref. Fig. 401)

- (a)Install new packings (8).
- (b)Position valve (1).
- (c)Install bolts (5), washers (6) and nuts (7).
- (d)TORQUE nuts (7) to between 0.09 and 0.135 m.daN (8 and 12 lbf.in.).
- (e)Position operating rod, install pin (2), washer (3) and secure with cotter pin (4).

R

(2)MID waste dump valve (Ref. Fig. 402)

- (a)Install new packings (8).
- (b)Position valve (1).
- (c)Install bolts (5), washers (6) and nuts (7).
- (d)TORQUE nuts (7) to between 0.09 and 0.135 m.daN (8 and 12 lbf.in.).
- (e)Position operating lever (4) and secure with washer (2) and nut (3).

D. Test

- (1)Fill each waste tank with approx. 20 l (5.5 US gal.) of water (Ref. 12-16-38, P. Block 1).
- (2)Open appropriate toilet drain valve and check connections of waste dump valve for leaks.
NOTE : Leakage is not permissible.
- (3)Position container under appropriate toilet service panel, open waste dump valve and allow water to drain.

R

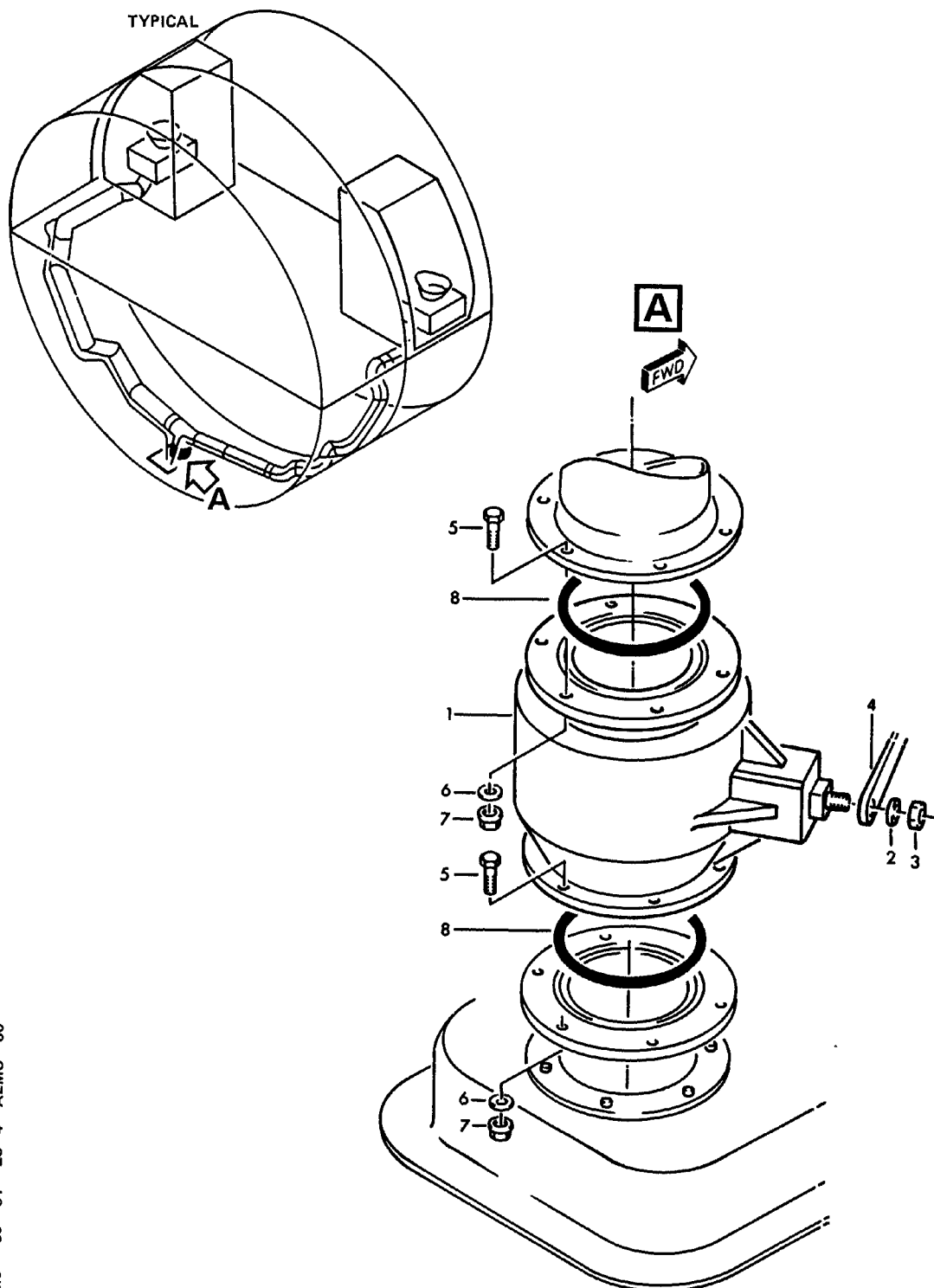
E. Close-Up

- (1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2)Close access doors (131AZ, 132AZ and 162AZ) and floor panel (132QF).
- (3)Close cargo compartment door.
- (4)Remove access platform.
- (5)Replenish toilets (Ref. 12-16-38, P. Block 1).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-23Page 403
Jun 01/07



MID Waste Dump Valve
Figure 402

BM6 38 31 23 4 AEMO 00

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-23

Page 404
Jun 01/06



AIRCRAFT MAINTENANCE MANUAL

WASTE DUMP VALVE - INSPECTION/CHECK

1. General Check

A. Reason for the Job

- (1) Visual inspection during scheduled maintenance.

B. Equipment and Materials

ITEM

DESIGNATION

- | ITEM | DESIGNATION |
|------|--------------------------------|
| 1. | Access Platforms 2.7 m (9 ft.) |

Referenced Procedures

- 52-30-00, P. Block 301

FWD and AFT Cargo Compartment Doors

C. Procedure

(1) Job Set-Up

- (a) Position access platforms and open cargo doors (Ref. 52-30-00, P. Block 301).

R

NOTE : Access to forward waste dump valve is gained through avionics compartment access doors (131AZ/132AZ), for mid waste dump valve open floor panel (132QF) and aft waste dump valve through aft cabin underfloor compartment door (162AZ).

R

(2) Visually inspect valve.

- (a) Inspect valve for pitting, corrosion, cracks, breaks or evidence of scoring.
- (b) Inspect valve for leakage and make sure that valve area is clean.

R

(3) Close-Up

- (a) Close access doors (131AZ, 132AZ and 162AZ) and floor panel (132QF).
- (b) Close cargo compartment doors.
- (c) Remove access platforms.

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EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-23

Page 601
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

FLUSH LINE CHECK VALVE - REMOVAL/INSTALLATION

CAUTION : FOR SANITARY REASONS; ALWAYS WEAR RUBBER GLOVES WHEN PLACING HANDS IN WASTE TANKS OR WHEN HANDLING CONTAMINATED COMPONENTS

CAUTION : LOCALLY-PURCHASED EQUIVALENT SUBSTITUTE DISINFECTANTS MAY BE USED IN LIEU OF MAT. NO. 14-001, PROVIDED THAT THESE SUBSTITUTES WILL NOT CAUSE DAMAGE TO SURFACE ON WHICH USED.
MANUFACTURERS' INSTRUCTIONS FOR MIXING AND APPLICATION MUST BE STRICTLY ADHERED TO.

1. Reason for the Job

A. Clean rinse line check valve of all toilets

2. Equipment and Materials

ITEM	DESIGNATION
A.	Stiff-bristled brush
B.	Soap-water solution
C.	Dry, compressed air
D.	Blanking Caps
E.	O-Ring
F.	Gasket
G.	Torque Wrench up to 30 lbf.in. (0.34 m.daN)
H. Material No. 14-001	Disinfectant (Ref. 20-31-00)

Referenced Procedures

- | | |
|--------------------------|----------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 25-40-12, P. Block 401 | Toilet Shroud |

3. Procedure

A. Job Set-Up

- (1) Connect toilet servicing vehicle.
- (2) Drain and clean waste tank (Ref. 12-16-38, P. Block 001).
NOTE : Do not replenish waste tank.
- (3) Remove toilet shrouds (Ref. 25-40-12, P. Block 401).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-24

Page 401
Jun 01/07

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B. Removal

(Ref. Fig. 401)

- (1) Disconnect toilet flush lines (1) at unions and fit blanking caps.
- (2) Remove nuts (2) and washers (3).
- (3) Remove check valve (4), gaskets (5) and plate (6).
NOTE : Mark the plate to make certain that it is reinstalled the correct way up.
- (4) Remove cap assembly (7) by removing screws (8), washers (9) and nuts (10).
- (5) Remove and discard gasket (11).
- (6) Remove poppet (12) by removing nut (13), washers (14) and spring (15).
- (7) Remove and discard O-ring (16).

C. Preparation of Replacement Components**NOTE** : Prior to installation of check valve assy make certain that no residue from old seal is present on mounting surface of waste tank.**NOTE** : Repair of the check valve and/or parts of this is not practical. If cracked, broken or deformed in any manner which impairs the poppet valve from seating, a replacement is required.

- (1) Clean all parts with soap, disinfectant (Mat. No. 14-001) and hot water solution.
Apply dry compressed air, if necessary.
NOTE : Apply a stiff-bristled brush to clean all parts of the check valve.
- (2) Visually inspect all parts for nicks, cracks, fraying, dents, distortion, chafing, scoring, excessive wear, loose or missing mounting stud bolts and screws, stripped or crossed threads, and other defects could impair function of the toilet.

D. Installation

- (1) Install O-ring (16) on poppet (12).
- (2) Install poppet (12) with spring (15) using washer (14) and nut (13).
- (3) Install cap assembly (7) with gasket (11), screws (8), washers (9) and nuts (10).
- (4) Position plate (6), gasket (5) and check valve (4).
NOTE : Make certain that the marked plate is installed the correct way up.
- (5) Install nuts (2) and washers (3).
- (6) Torque nuts (2) to between 12 and 15 lbs.in. (0.14 and 0.17 m. daN).
- (7) Remove blanking caps and connect flush lines (1) to check valve.

E. Test

- (1) Replenish toilets (Ref. 12-16-38, P. Block 1).
- (2) Check the valve for leaks.
NOTE : Leaks are not permissible.
- (3) Check for satisfactory operation.
- (4) Replenish toilets (Ref. 12-16-38, P. Block 1).

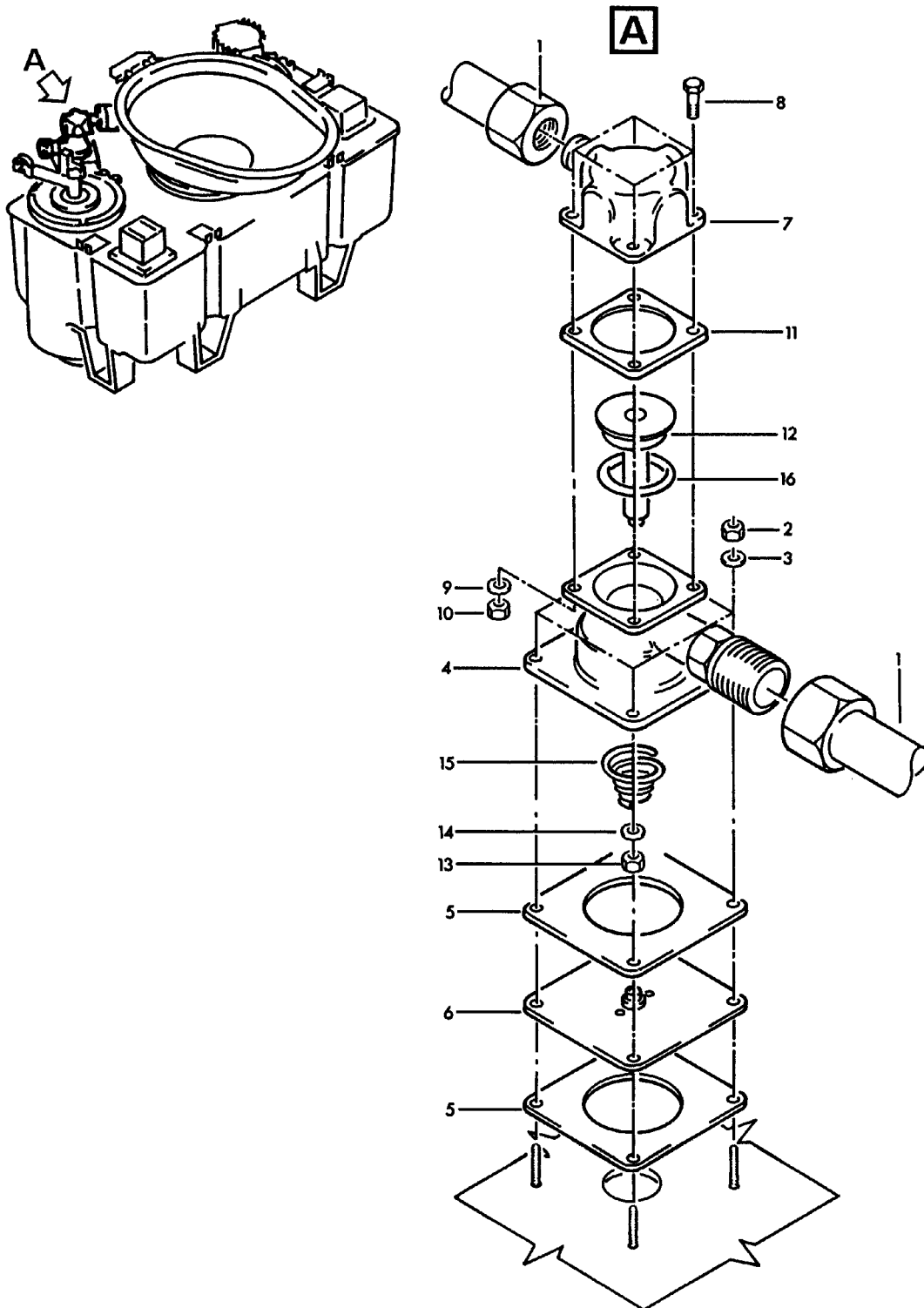
F. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscel-

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-24Page 402
Jun 01/07



Flush Line Check Valve
Figure 401

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R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-24

Page 403
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

- laneous items of equipment.
- (2) Install toilet shroud (Ref. 25-40-12, P. Block 401).
 - (3) Disconnect toilet servicing vehicle from aircraft.
 - (4) Remove all access equipment and miscellaneous items.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-24

Page 404
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

CONTROL CABLE - WASTE DUMP VALVE

1. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 2.0 m.daN (177 lbf.in.)
B.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
C.	Cotter pin
D.	Access Platform, 2.7 m (9 ft.)
E.	Access Platform, 1.0 m (3 ft.)
F. Material No. 04-004	Common Greases (Ref. 20-31-00)

Referenced Procedures

- 12-16-38, P. Block 1 Replenishing Toilets
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up

- (1)Position access platform at FWD and AFT cargo compartment doors.
- (2)Open FWD and AFT cargo compartment doors (Ref. 52-30-00, P. Block 301).
- (3)Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).
Do not replenish at this stage.
- (4)To gain access to FWD waste dump valve, open avionics compartment access doors (131AZ and 132AZ).
- (5)To gain access to AFT waste dump valve open access door (162AZ).

B. Removal (Ref. Fig. 401)

- (1)At toilet service panel:
 - (a)Remove setscrews (1) and handle (2).
 - (b)Remove locknut (4) and retaining collar (5).
 - (c)Remove split retainer (6) and discard.
- (2)At waste dump valve:
 - (a)Remove cotter pin (7), washer (8) and pin (9), discard cotter pin (7).
 - (b)Remove lockwire, release locknut (17) and remove clevis (10).
 - (c)Pull cable (12) free of tube (13) and sleeve (16).
- (3)Removal of tube (13).
 - (a)Remove lockwire, remove nuts (14) and remove tube (13).
 - (b)Remove lockwire, remove locknuts (15) and remove sleeve (16).
 - (c)Remove lockwire, locknuts (18) and washer (19).
 - (d)Remove inner shaft (3) and outer shaft (20).

C. Preparation for Installation

- (1)Make sure that the control cable is not kinked or broken.
- (2)Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation (Ref. Fig. 401)

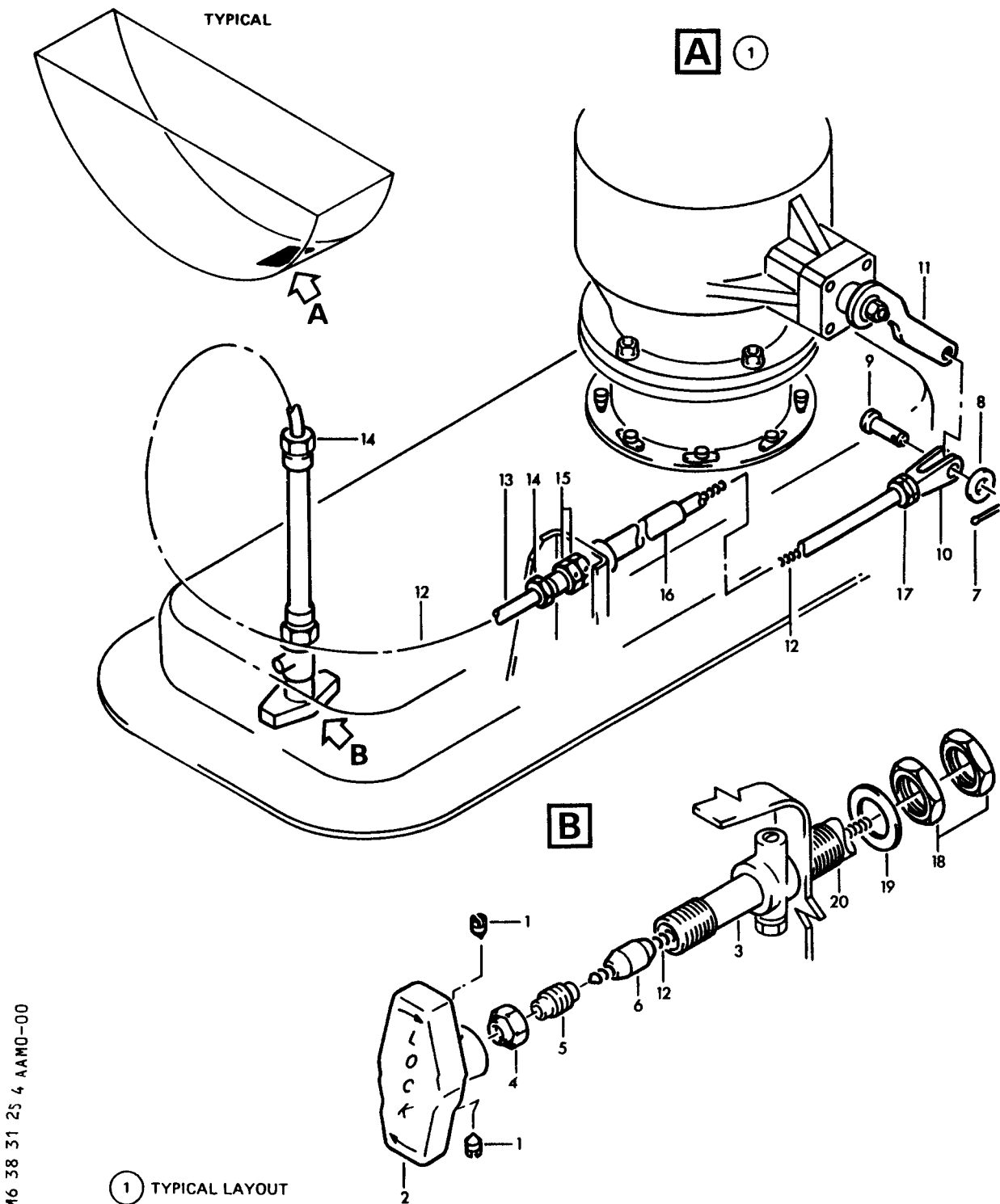
- (1)Installation of tube (13).
 - (a)Slide outer shaft (20) over inner shaft (3).

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-25

Page 401
Jun 01/07



BM6 38 31 25 4 AAMD-00

Waste Dump Valve Control Cable
Figure 401

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-25

Page 402
Jun 01/07

- (b) Position assembly in hole of toilet service panel.
- (c) Install washer (19) and locknuts (18).
- (d) TORQUE locknuts (18) to 1.2 - 1.3 m.daN (106 - 115 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
- (e) Install sleeve (16), and locknuts (15).
- (f) TORQUE locknuts (15) to 1.9 - 2.0 m.daN (168 - 177 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
- (g) Install tube (13).
- (h) TORQUE nuts (14) to 0.7 - 0.8 m.daN (62 - 71 lbf.in.).
- (2) At waste dump valve:
 - (a) Insert cable (12) through sleeve (16) and tube (13).
 - (b) Install locknut (17) and clevis (10).
 - (c) TORQUE locknut (17) to 0.6 - 0.7 m.daN (53 - 62 lbf.in) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
 - (d) Position clevis (10) on valve lever (11).
 - (e) Install pin (9), washer (8) and new cotter pin (7).
- (3) At toilet service panel:
 - (a) Install new retainer (6) on cable (12) and slide inner shaft (3) over retainer (6).
 - (b) Install retaining collar (5) so that no play exists between inner shaft and retainer; TORQUE to 0.7 - 0.8 m.daN (62 - 71 lbf.in.).
 - (c) Install locknut (4); TORQUE to 0.7 - 0.8 m.daN (62 - 71 lbf.in.).
 - (d) Install handle (2) and secure with setscrews (1).

NOTE : Make certain that handle is fully pushed in and placed in closed position.

E. Test (Ref. Fig. 401)

- (1) Operate waste dump valve handle and make certain that handle is fully extended. System drain valve handle stroke is 100 mm (3.9 in.).
 - (2) Turn handle clockwise 45° until locked.
 - (3) Turn handle counterclockwise 45° and push handle back in previous position.
- NOTE** : If adjustment is required, turn retainer (6) in clockwise or counterclockwise direction.

F. Close-Up

- (1) Close avionics compartment access doors (131AZ and 132AZ) in FWD cargo compartment and access door (162AZ) in AFT cargo compartment.
- (2) Replenish appropriate toilet system (Ref. 12-16-38, P. Block 1).
- (3) Close cargo compartment doors (Ref. 52-30-00, P. Block 301).
- (4) Remove access platforms.
- (5) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.



AIRCRAFT MAINTENANCE MANUAL

CONTROL HANDLE - WASTE DUMP VALVE

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.7 m (9 ft.)
A.	Access Platform, 1.0 m (3 ft.)

Referenced Procedures

- | | |
|--------------------------|-------------------------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 52-30-00, P. Block 301 | FWD and AFT Cargo Compartment Doors |

2. Procedure

A. Job Set-Up

- (1) Position access platform at FWD cargo compartment door.
- (2) Open FWD cargo compartment door (Ref. 52-30-00, P. Block 301).
- (3) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).
Do not replenish at this stage.
- (4) To gain access to MID waste dump valve remove cargo compartment floor panels (131QF and 132QF).

B. Removal (Ref. Fig. 401)

- (1) Remove setscrews (1) and handle (2).
- (2) Remove bolts (3) and washers (4).
- (3) Remove nut (5) and washer (6).
- (4) Remove control handle housing (9) and shims (8).

C. Installation (Ref. Fig. 401)

- (1) Put shims (8) and waste dump valve control handle housing (9) in position.
 - (2) Install washer (6) and nut (5).
 - (3) Install washers (4), bolts (3).
 - (4) Put handle (2) in position and secure with setscrews (1).
- NOTE** : Link (7) must be in correct parallel position with control handle housing (9). In case of incorrect alignment add or remove shims (8).

D. Close-Up

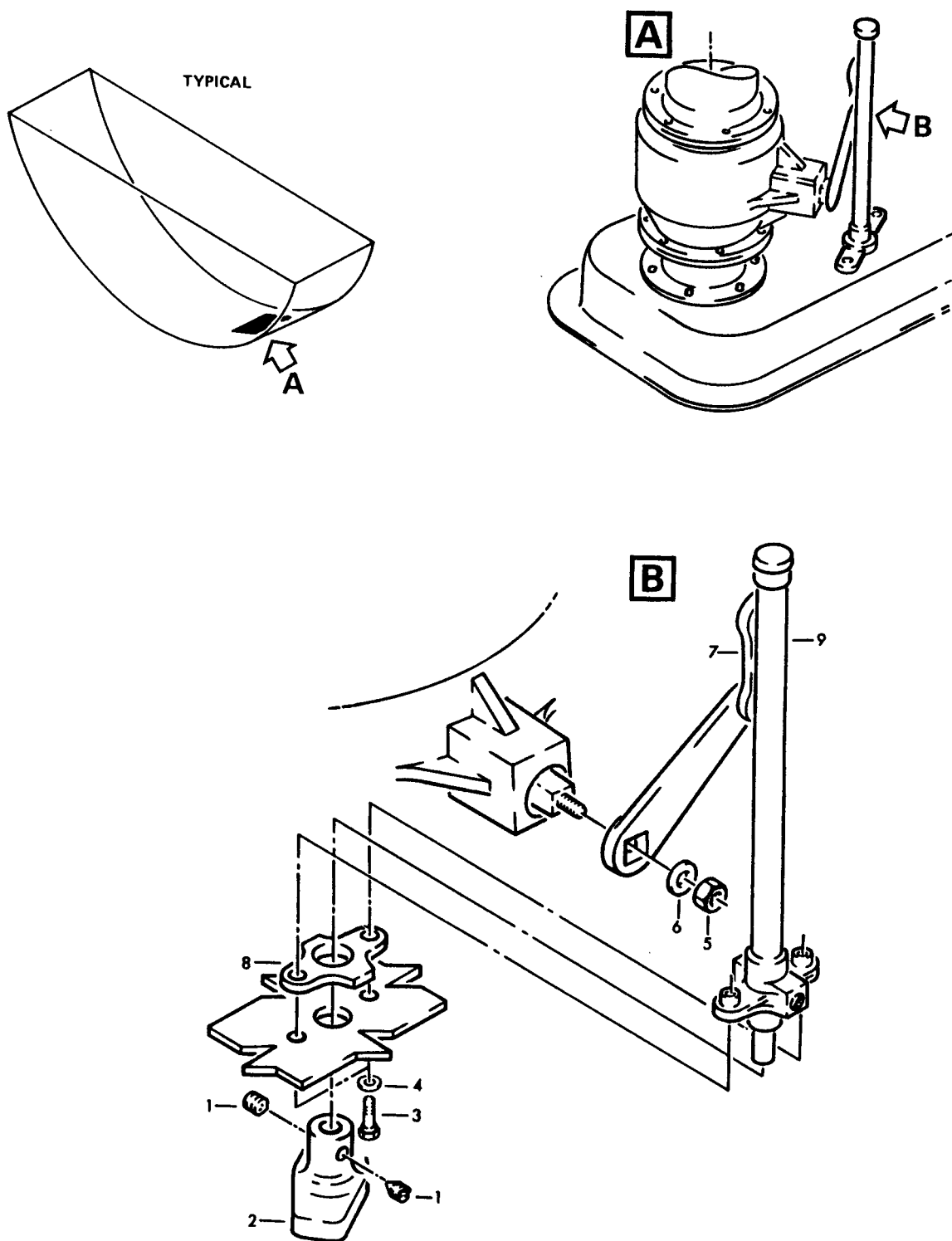
- (1) Install cargo compartment floor panels (131QF and 132QF).
- (2) Replenish appropriate toilet system (Ref. 12-16-38, P. Block 1).
- (3) Close FWD cargo compartment door (Ref. 52-30-00, P. Block 301).
- (4) Remove access platforms.
- (5) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-26

Page 401
Jun 01/06



Waste Dump Valve Control Handle Assembly
Figure 401

BM6 38 31 26 4 AAM0-00

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-31-26

Page 402
Jun 01/06



AIRCRAFT MAINTENANCE MANUAL

WASTE WATER DRAIN - DESCRIPTION AND OPERATION

1. General

The waste water drain system envelopes the drainage and disposal of waste water from lavatory compartment washbasins, and galley sinks.

2. Component Location

****ON A/C 226-226, 229-249,**

(Ref. Fig. 001)

****ON A/C 401-401, 404-500,**

Post COCAUA-DA25-072 For A/C 401-401,404-500,

(Ref. Fig. 002)

*

****ON A/C ALL**

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
**ON A/C 226-226, 229-249,					
14DU	MAST-DRAIN (HEATED)-AFT		172		30-71-00
24DU	MAST-DRAIN (HEATED)-FWD		136		30-71-00
381818	DRAIN-SINK ASSEMBLY J		231		38-12-15
381927	DRAIN-SINK ASSEMBLY N		232		38-12-15
381928	DRAIN-SINK ASSEMBLY H		231		38-12-15
381929	DRAIN-SINK ASSEMBLY U		262		38-12-15
381930	DRAIN-SINK ASSEMBLY V		261		38-12-15
381932	DRAIN-SINK ASSEMBLY K		232		38-12-15
383740	VALVE-DRAIN J		231		38-32-11
383748	VALVE-DRAIN N		232		38-32-11
383742	VALVE-DRAIN H		231		38-32-11
383743	VALVE-DRAIN K		232		38-32-11
383744	VALVE-DRAIN U		262		38-32-11
383745	VALVE-DRAIN V		261		38-32-11

****ON A/C 401-401, 404-500,**

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KSSU

38-32-00

Page 1
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
Post	COCAUA-DA25-072	For A/C	401-401,404-500,		
14DU	MAST-DRAIN (HEATED)-AFT		172		30-71-00*
24DU	MAST-DRAIN (HEATED)-FWD		136		30-71-00*
381818	DRAIN-SINK ASSEMBLY J		231		38-12-15*
381927	DRAIN-SINK ASSEMBLY N		232		38-12-15*
381660	DRAIN-SINK ASSEMBLY U		261		38-12-15*
381661	DRAIN-SINK ASSEMBLY V		261		38-12-15*
381662	DRAIN-SINK ASSEMBLY Y		261		38-12-15*
381663	DRAIN-SINK ASSEMBLY Z		262		38-12-15*
383636	VALVE-DRAIN Y		261		38-32-11*
383637	VALVE-DRAIN Z		262		38-32-11*
383740	VALVE-DRAIN J		231		38-32-11*
383744	VALVE-DRAIN U		261		38-32-11*
383745	VALVE-DRAIN V		261		38-32-11*
383748	VALVE-DRAIN N		232		38-32-11*

**ON A/C ALL

3. Description

(Ref. Fig. 003)

The waste water system consists of washbasin sink drain assemblies in lavatories and galleys, drain valves in the sanitary unit cabinets, drain lines and heated drain masts.

4. Operation

Waste water is disposed overboard via two heated drain masts installed on the lower shell of the fuselage. Transportation of waste water to the drain masts is achieved by a combination of gravity and cabin differential pressure. To prevent loss of cabin air via drain lines, drain valves are installed in the drain lines of the sanitary unit cabinets.

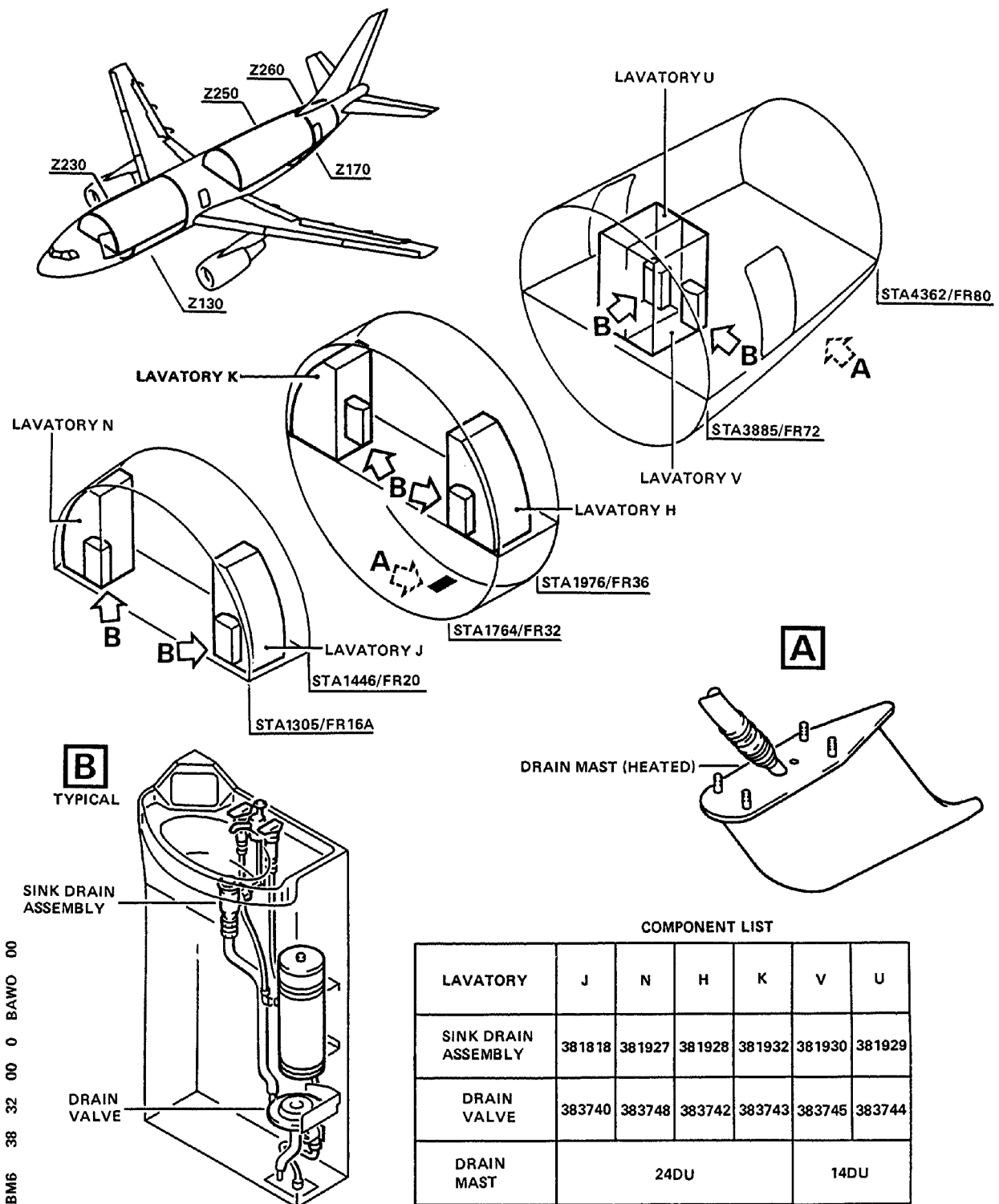
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38-32-00

Page 2
Jun 01/13

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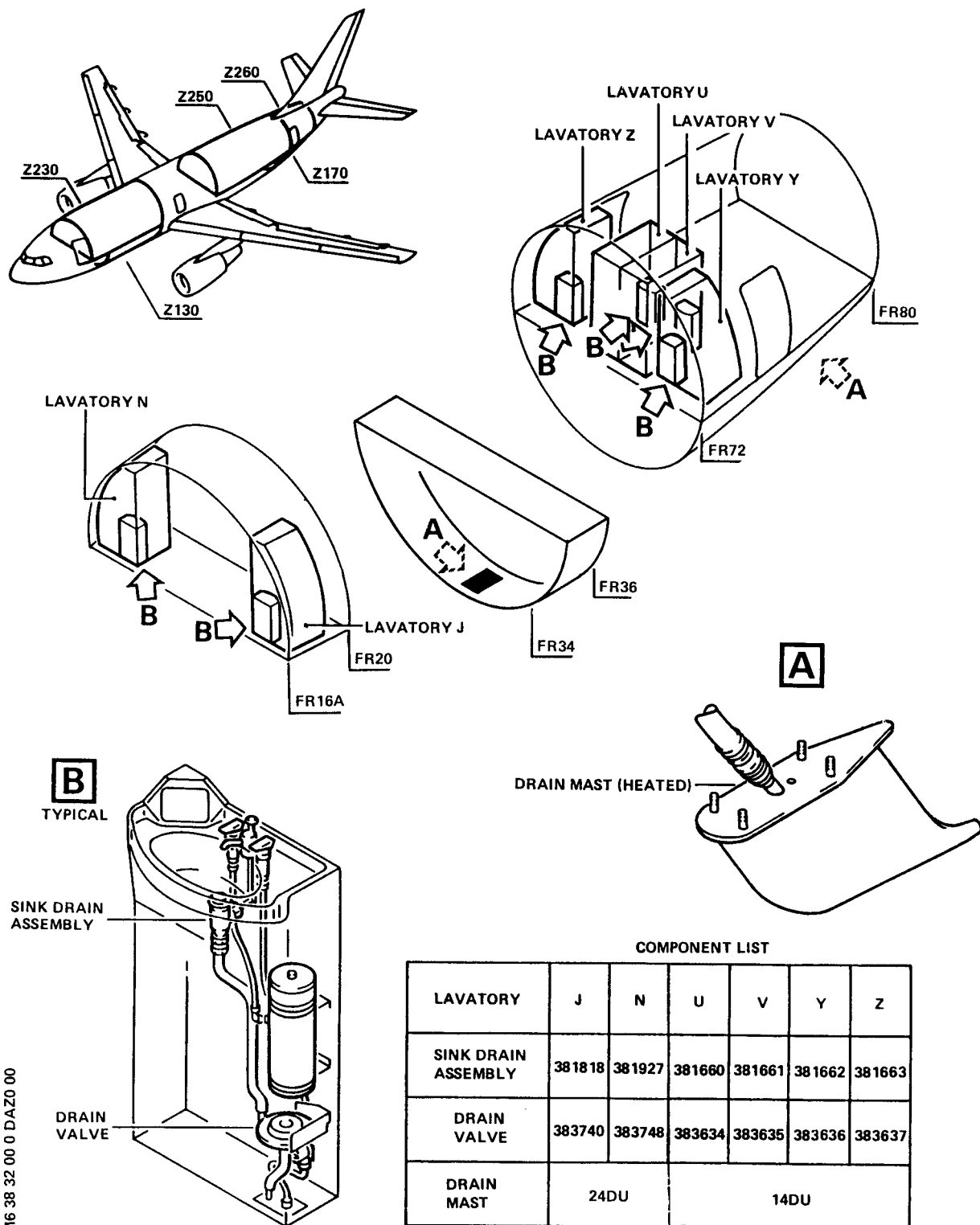
Component Location
Figure 001

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-32-00

Page 3
Jun 01/07



Component Location
Figure 002

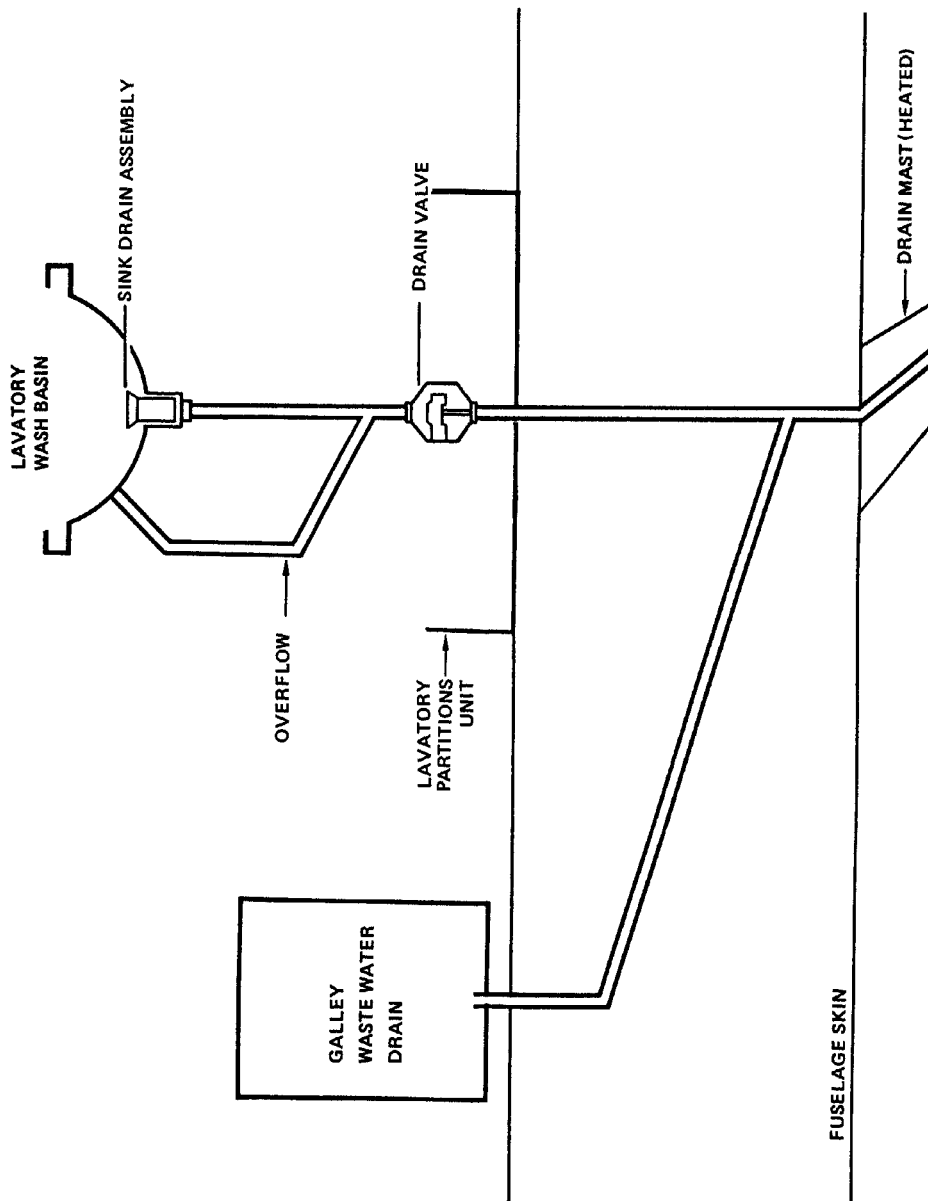
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KSSU

38-32-00

Page 4
Jun 01/13



Functional Diagram
Figure 003

R EFFECTIVITY: ALL

KSSU

38-32-00

Page 5
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

WASTE WATER DRAIN - INSPECTION/CHECK

1. Reason for the Job

A. General visual inspection of waste water drain lines.

2. Equipment and Material

ITEM

DESIGNATION

- | | |
|----|-------------------------------|
| A. | Access Platform 2,7 m (9 ft.) |
| B. | Light Source - Inspection |
| C. | Mirror - Inspection |

Referenced Procedures

- | | |
|----------------------------|-------------------------------------|
| - 25-54-10, P. Block 201 | FWD Cargo Compartment Linings |
| - 52-30-00, P. Block 301 | FWD and AFT Cargo Compartment |
| R - 53-10-35, P. Block 401 | Bulk Cargo Compartment Floor Panels |

3. Procedure

A. Job Set-Up

- (1) In sanitary unit cabinets, place all manual shutoff valves in the closed position.
- (2) To gain access to forward and mid drain pipes proceed as follows:
 - (a) Position access platform under FWD cargo compartment door (Z811).
 - (b) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
 - (c) Open avionics compartment doors (131AZ and 132AZ) to gain access to forward drain pipes.
 - (d) Remove appropriate FWD cargo compartment ceiling panels to gain access to mid drain pipes (Ref. 25-54-10, P. Block 201).

NOTE : If necessary, remove adjacent sidewall panels to gain additional access (Ref. 25-54-10, P. Block 201).

- (3) To gain access to aft drain pipes, proceed as follows:
 - (a) Position access platform and open BULK cargo compartment door (Z813).
 - (b) Open access door (162AZ) to gain access to aft drain lines (Ref. 53-10-35, P. Block 401).

B. General Visual Inspection

- (1) Visually examine the waste water drain lines for:
 - damages
 - leakage

NOTE : Leakage is not permissible.

- proper attachment.

C. Close-Up

EFFECTIVITY: ALL

KSSU

38-32-00

Page 601
Jun 01/10

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AIRCRAFT MAINTENANCE MANUAL

- R
- (1) In FWD cargo compartment:
 - (a) If removed, install FWD cargo sidewall panels (Ref. 25-54-10, P. Block 201).
 - (b) Install FWD cargo compartment ceiling panels Ref. 25-54-10, P. Block 201).
 - (c) Close avionics compartment doors (131AZ) and (132AZ).
 - (d) Remove FWD cargo compartment safety lock and close FWD cargo compartment door (Z811) (Ref. 52-30-00, P. Block 301).
 - (e) Remove access platform.
 - (2) In BULK cargo compartment:
 - (a) Close access door (162AZ).
 - (b) Close BULK cargo compartment door (Z813).
 - (3) Remove access platform.

EFFECTIVITY: ALL

KSSU

38-32-00

Page 602
Jun 01/10



AIRCRAFT MAINTENANCE MANUAL

WASTE WATER DRAIN - CLEANING/PAINTING

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHING WHEN YOU DO THE CLEANING.

CAUTION : TO AVOID DAMAGE USE ONLY NON STEEL MATERIALS TO CLEAN THE DRAIN MAST TUBE.

1. Reason for the Job

- A. To rinse waste water drain line.
- B. To remove obstruction from drain mast tube.
- C. To flush out deposits from drain mast tube.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7,5 ft)
B.	Bottle Brush length ca. 500 to 600 mm (20 to 24 in.), diameter ca. 13 to 15 mm (0.5 to 0.6 in.)
C.	Vinegar-essence

3. Procedure

A. Cleaning of waste water drain line.

(1)Job set-up

- (a)Position access platform under AFT drain mast (Z172).

(2)Cleaning

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHING WHEN YOU DO THE CLEANING.

- (a)Cap FWD and AFT drain mast.

- R (b)Fill waste line with 50% solution of vinegar (10% acetic acid solution)
- R and 50% water from a corresponding lavatory or galley sink drain.
- R (10l (2.641 USgal) of vinegar with 10l (2.641 USgal) of water).

NOTE : Make sure that overflow does not occur when filling.

- (c)Let solution take affect for one hour.

- (d)Check drain line connections for leakage.

- (e)Uncap FWD and AFT drain mast.

- (f)Drain waste line and flush with clear water.

(3)Close-Up

- (a)Remove access platform.

- (b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

B. Cleaning of drain mast tube

(1)Job set-up

EFFECTIVITY: ALL

KSSU

38-32-00

Page 701
Jun 01/12



AIRCRAFT MAINTENANCE MANUAL

- (a) Position access platform under AFT drain mast (Z172).
- (2) Cleaning
 - (a) AFT drain mast
 - 1 Brush inside of drain mast tube with bottle brush.
NOTE: Use only bronze or hard plastic brush.
 - 2 Pour water into an AFT lavatory or Galley sink drain.
 - 3 Flush waste drain line until water is clear.
 - (b) FWD drain mast
 - 1 Brush inside of drain mast tube with bottle brush.
NOTE: Use only bronze or hard plastic brush.
 - 2 Pour water into a FWD lavatory or Galley sink drain.
 - 3 Flush waste drain line until water is clear.
- (3) Close-Up
 - (a) Remove access platform.
 - (b) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

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KSSU

38-32-00

Page 702
Jun 01/12



AIRCRAFT MAINTENANCE MANUAL

FLOAT VALVE - REMOVAL/INSTALLATION

R

1. Not applicable

R

2. Procedure
(Ref. Fig. 401)

R

A. Job Set-Up

- (1) Open appropriate sanitary unit cabinet door.
- (2) Switch off water heater.
- (3) Place manual shutoff valve in closed position.
- (4) Activate water faucet and allow water to drain.

B. Removal

- (1) Release clamps (1) and disconnect hoses (2).
- (2) Remove bolts (3), washers (4) and float valve (5).

C. Installation

- (1) Install float valve (5) and secure with washers (4) and bolts (3).
- (2) Connect hoses (2) and secure with clamps (1).

D. Close-Up

- (1) Place manual shutoff valve in open position and close sanitary unit cabinet door.
- (2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

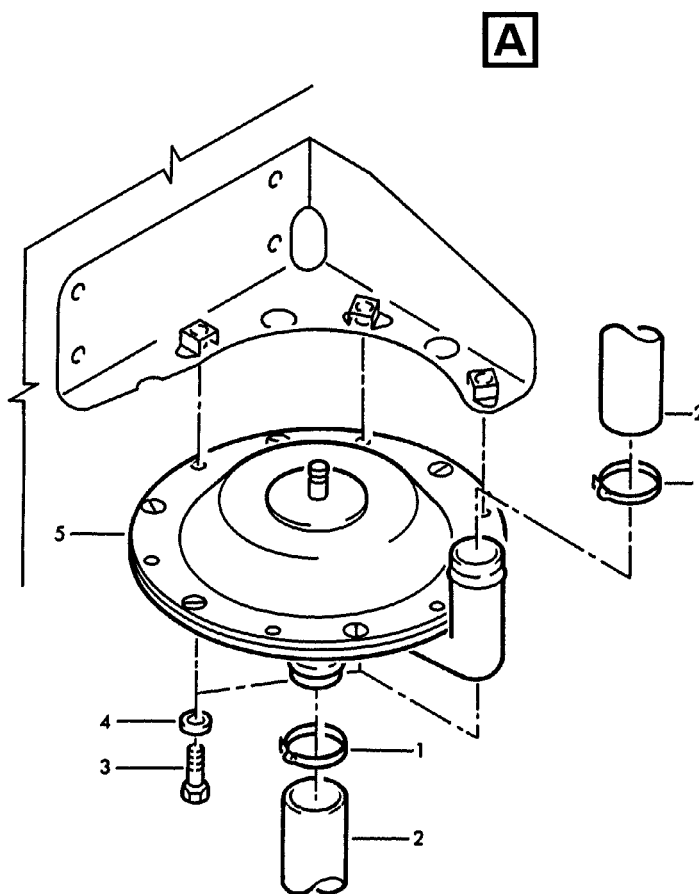
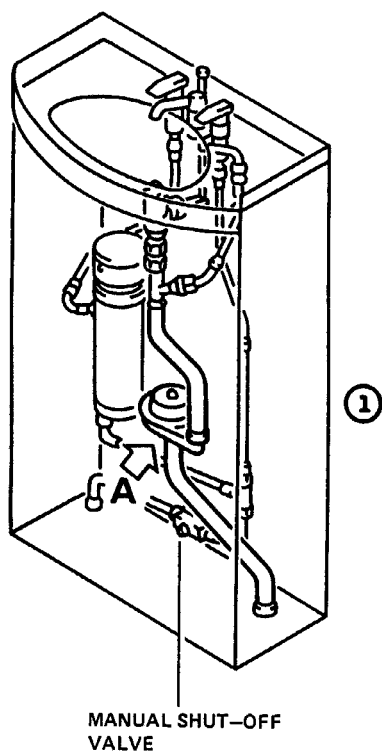
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KSSU

38-32-11

Page 401
Dec 01/95

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① TYPICAL LAYOUT

Float Valve
Figure 401

EFFECTIVITY: ALL

KSSU

38-32-11

Page 402
Dec 01/89



AIRCRAFT MAINTENANCE MANUAL

WASTE WATER DRAIN LINE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.7 m (9 ft).

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-29, P. Block 401	FWD Cargo Compartment Floor Panels
- 53-10-35, P. Block 401	BULK Cargo Compartment Floor Panels

2. Procedure

A. Job Set-Up

- (1) In sanitary unit cabinets, place all manual shutoff valves in the closed position.
- (2) To gain access to forward and mid drain lines or forward drain mast, proceed as follows:
 - (a) Position access platform under FWD cargo compartment door (Z 811).
 - (b) Open FWD cargo compartment door (Z 811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
 - (c) Open avionics compartment doors (131AZ) and (132AZ) to gain access to forward drain lines.
 - (d) Remove appropriate FWD cargo compartment ceiling panels to gain access to mid drain lines (Ref. 25-54-10, P. Block 201).
NOTE : If necessary, remove adjacent sidewall panels to gain additional access (Ref. 25-54-10, P. Block 201).
 - (e) Remove appropriate FWD cargo compartment floor panels to gain access to forward drain mast connection (Ref. 53-10-29, P. Block 401).
- (3) To gain access to aft drain lines and aft drain mast, proceed as follows:
 - (a) Position access platform and open BULK cargo compartment door (Z 813).
 - (b) Open BULK cargo compartment door (162AZ) to gain access to aft drain lines.
 - (c) Remove appropriate BULK cargo compartment floor panels to gain access to drain mast (Ref. 53-10-35, P. Block 401).

B. Removal

(Ref. Fig. 401)

- (1) Remove bolts (8), nuts (9) or bolts (10).
- (2) Release fixing clamps (7), attaching drain lines to brackets.
- (3) Release clamps (1) and remove sleeve (2).
- (4) Disconnect unions (3) at T-piece (4).
- (5) Disconnect union (5) at end fitting (6).
- (6) Disassemble drain lines.

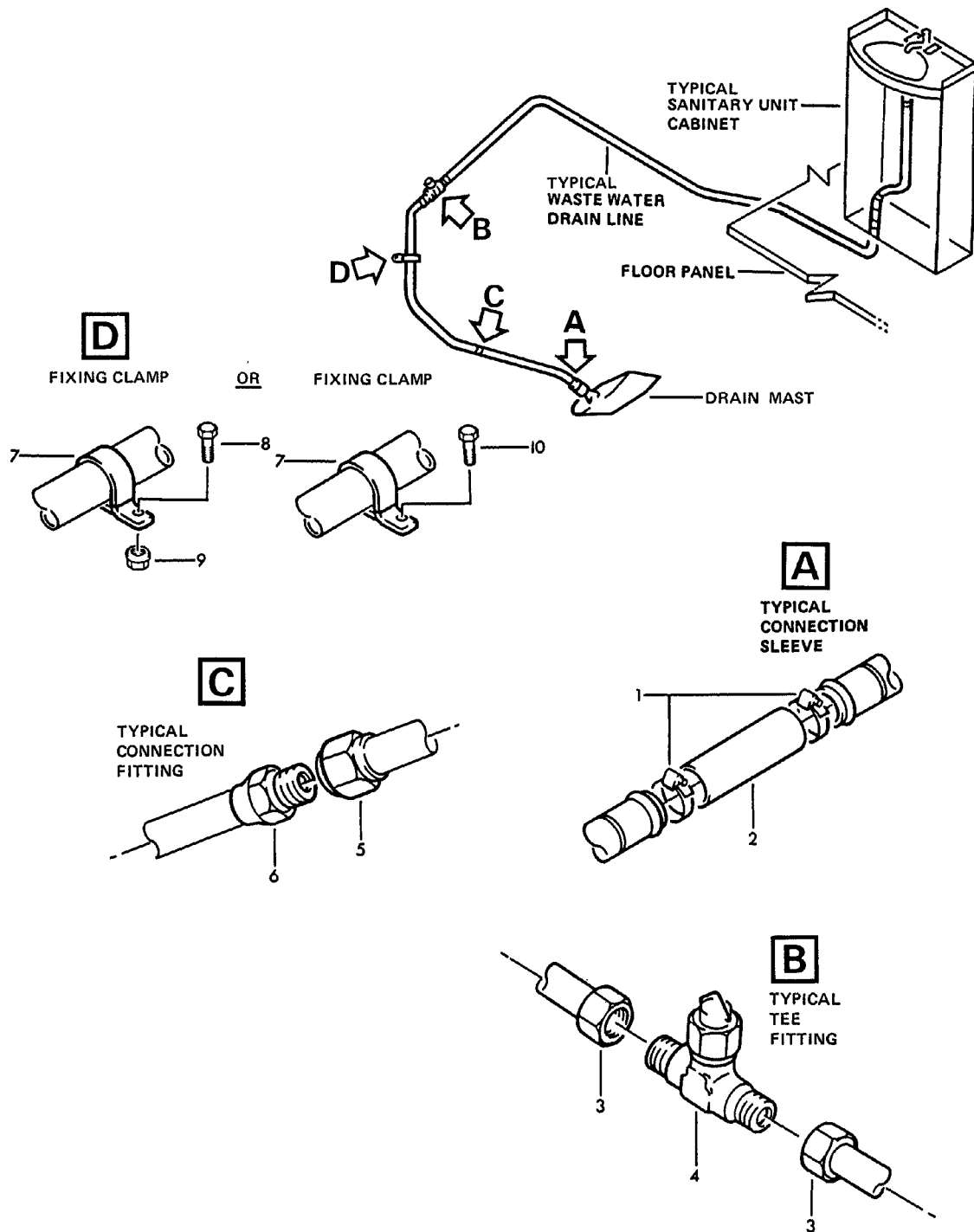
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KSSU

38-32-15

Page 401
Jun 01/01



Waste Water Drain Line
Figure 401

BMS 38 32 15 4 AAMO 00

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38-32-15

Page 402
Jun 01/90

C. Preparation for Installation

- (1) Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401).

- (1) Assemble drain lines.
- (2) Install sleeve (2) and secure with clamps (1).
NOTE : Make certain that sleeves are fitted up to color markings on drain line.
- (3) Connect unions (3) at T-piece (4).
- (4) Secure drain lines to brackets with clamps (7), install nuts (9), bolts (8) or bolts (10).
- (5) Connect union (5) at end fitting (6).
- (6) In all sanitary unit cabinets, place all manual shutoff valves in the open position.

E. Test

- (1) Replenish potable water system (Ref. 12-15-38, P. Block 1).
- (2) Pressurise water system (Ref. 38-40-00, P. Block 300).
- (3) Open manual shutoff valves.
- (4) Check waste water drain lines for leakage.
 - (a) Temporarily cap and seal appropriate drain mast.
 - (b) Open an appropriate lavatory or galley water faucet and allow drain line to fill.
 - (c) Close water faucet in appropriate lavatory or galley and check drain line connections for leakage.
NOTE : Leakage is not permissible.
 - (d) Remove sealed cap from drainmast and allow water to drain into an appropriate container.

F. Close-Up

- (1) In FWD cargo compartment:
 - (a) Install FWD cargo compartment floor panels (Ref. 53-10-29, P. Block 401).
 - (b) If removed, install FWD cargo compartment sidewall panels (Ref. 25-54-10, P. Block 201).
 - (c) Install FWD cargo compartment ceiling panels (Ref. 24-54-10, P. Block 201).
 - (d) Close avionics compartment doors (131AZ) and (132AZ).
 - (e) Remove FWD cargo compartment safety lock and close FWD cargo compartment door (Z 811) (Ref. 52-30-00, P. Block 301).
 - (f) Remove access platform.
- (2) In BULK cargo compartment:
 - (a) Install BULK cargo compartment floor panels (Ref. 53-10-35, P. Block 401).
 - (b) Close BULK cargo compartment access door (162AZ).
 - (c) Close BULK cargo compartment door (Z 813).
- (3) Remove access platform.
- (4) Replenish potable water system as required (Ref. 12-15-38, P. Block 1).

EFFECTIVITY: ALL

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KSSU

38-32-15Page 403
Jun 01/94



AIRCRAFT MAINTENANCE MANUAL

WASTE/PRIME LEVEL INDICATION - DESCRIPTION AND OPERATION

1. General

The system provides an indication to the maintenance crew that the prime charge of a lavatory waste tank is at a maximum level.

2. Component Location

****0N A/C 226-226, 229-249,**

(Ref. Fig. 001)

****0N A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

(Ref. Fig. 002)

*

****0N A/C 226-226, 229-249,**

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
4MV1	LIGHT-CONTROL J	917VU		121DL	
4MV4	LIGHT-CONTROL N	917VU		121DL	
4MV5	LIGHT-CONTROL H	925VU		134DL	
4MV6	LIGHT-CONTROL K	925VU		134AR	
4MV7	LIGHT-CONTROL U	926VU		172AR	
4MV8	LIGHT-CONTROL V	926VU		172AR	
5MV	SWITCH-LIMIT J, N	917VU		121DL	
10MV	RELAY	918VU		172AR	
11MV	SWITCH-LIMIT U, V	918VU		172AR	
12MV	TRANSMITTER J	1860VU			38-33-11
14MV	TRANSMITTER U				38-33-11
15MV	TRANSMITTER H	862VU			38-33-11
16MV	TRANSMITTER K	879VU			38-33-11
19MV	TRANSMITTER V				38-33-11
21MV	TRANSMITTER N	1861VU			38-33-11

****0N A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

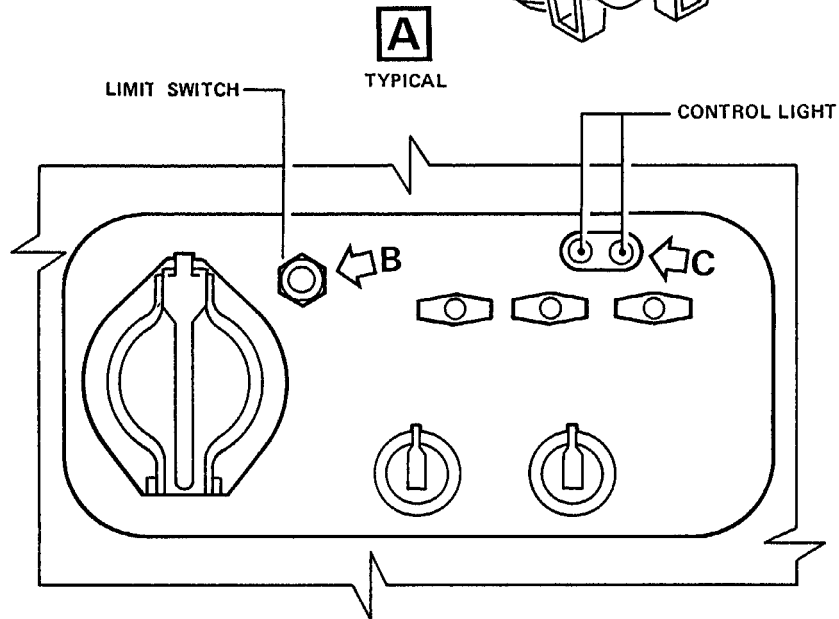
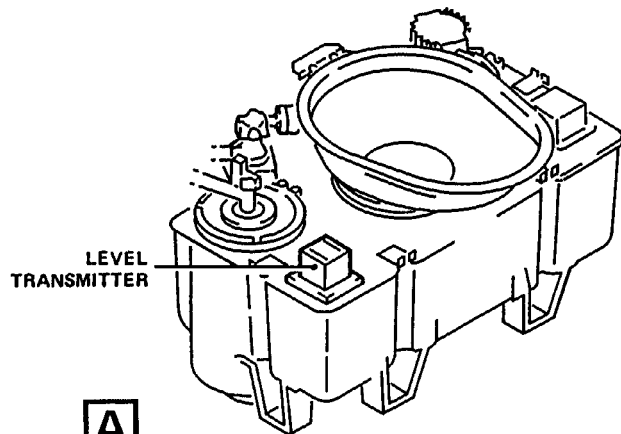
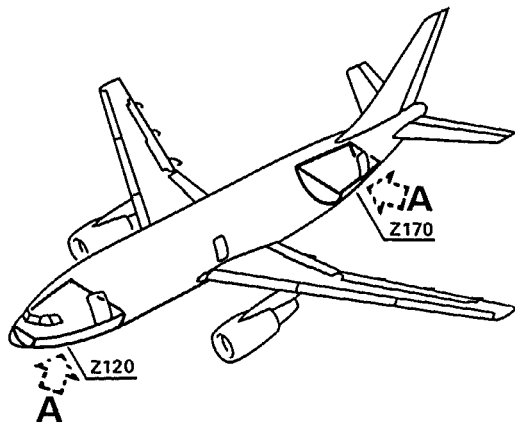
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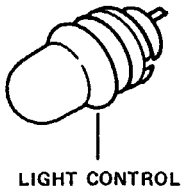
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Page 1
Jun 01/07

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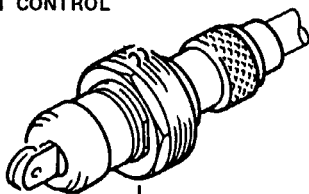


C



LIGHT CONTROL

B



SWITCH-LIMIT 5MV

LAVATORY	J	N	H	K	U	V
TRANS-MITTER	12MV	21MV	15MV	16MV	14MV	19MV

SERVICE PANEL	FWD		MID		AFT	
SWITCH LIMIT	5MV		20MV		11MV	
LIGHT CONTROL	4MV 1	4MV 4	4MV 5	4MV 6	4MV 7	4MV 2

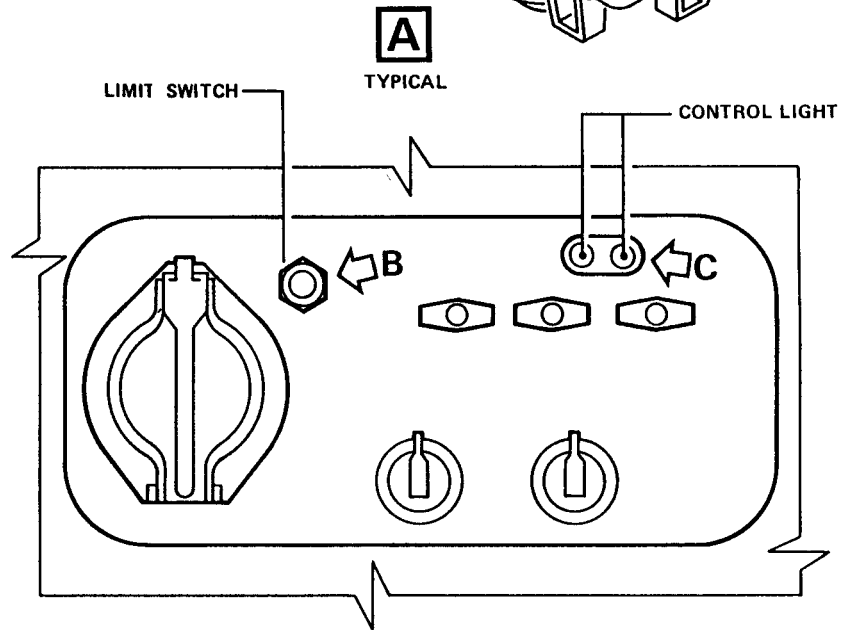
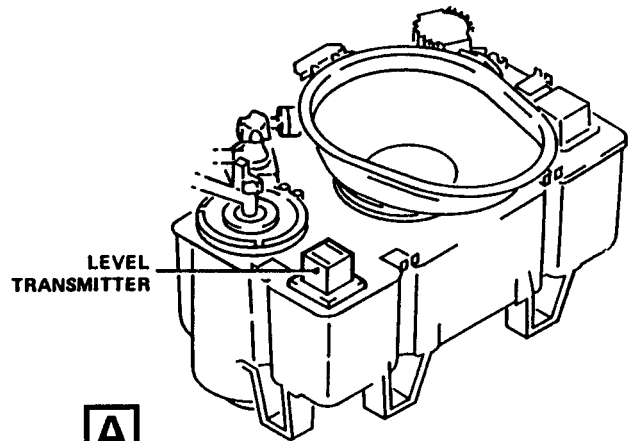
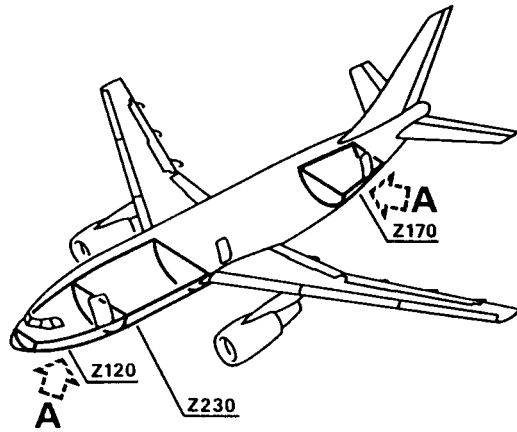
Component Location
Figure 001

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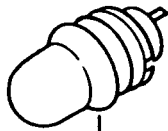
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Page 2
Jun 01/07

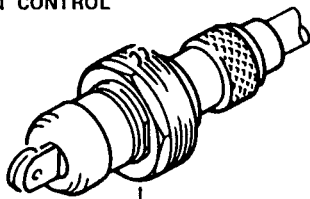


C



LIGHT CONTROL

B



SWITCH-LIMIT 5MV

LAVATORY	J	N	U	V	Y	Z
TRANS-MITTER	12MV	21MV	14MV	19MV	25MV	26MV

SERVICE PANEL	FWD			AFT		
SWITCH LIMIT	5MV			11MV		
LIGHT CONTROL	4MV 1	4MV 4	4MV 7	4MV 2	4MV 3	

BM6 38 33 00 0 ATC0 00

Component Location
Figure 002

*

R EFFECTIVITY: 401-401,

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38-33-00

Page 3
Jun 01/07

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
4MV1	LIGHT-CONTROL J	917VU		121DL	*
4MV2	LIGHT-CONTROL Y	918VU		172AR	*
4MV3	LIGHT-CONTROL Z	918VU		172AR	*
4MV4	LIGHT-CONTROL N	917VU		121DL	*
4MV7	LIGHT-CONTROL U	926VU		172AR	*
4MV8	LIGHT-CONTROL V	926VU		172AR	*
5MV	SWITCH-LIMIT J, N	917VU		121DL	*
10MV	RELAY	918VU		172AR	*
11MV	SWITCH-LIMIT U, V, Y, Z	918VU		172AR	*
12MV	TRANSMITTER J	1860VU			38-33-11*
14MV	TRANSMITTER U				38-33-11*
19MV	TRANSMITTER V				38-33-11*
21MV	TRANSMITTER N	1861VU			38-33-11*
25MV	TRANSMITTER Y	1865VU			38-33-11*
26MV	TRANSMITTER Z	1864VU			38-33-11*

R **0N A/C 226-226, 229-249, 401-401,

3. System Description

**0N A/C 226-226, 229-249,

(Ref. Fig. 003)

**0N A/C 401-401,

Post COCAUA-DA25-072 For A/C 401-401,

(Ref. Fig. 004)

*

**0N A/C 226-226, 229-249,

A. System Architecture

The system comprises:

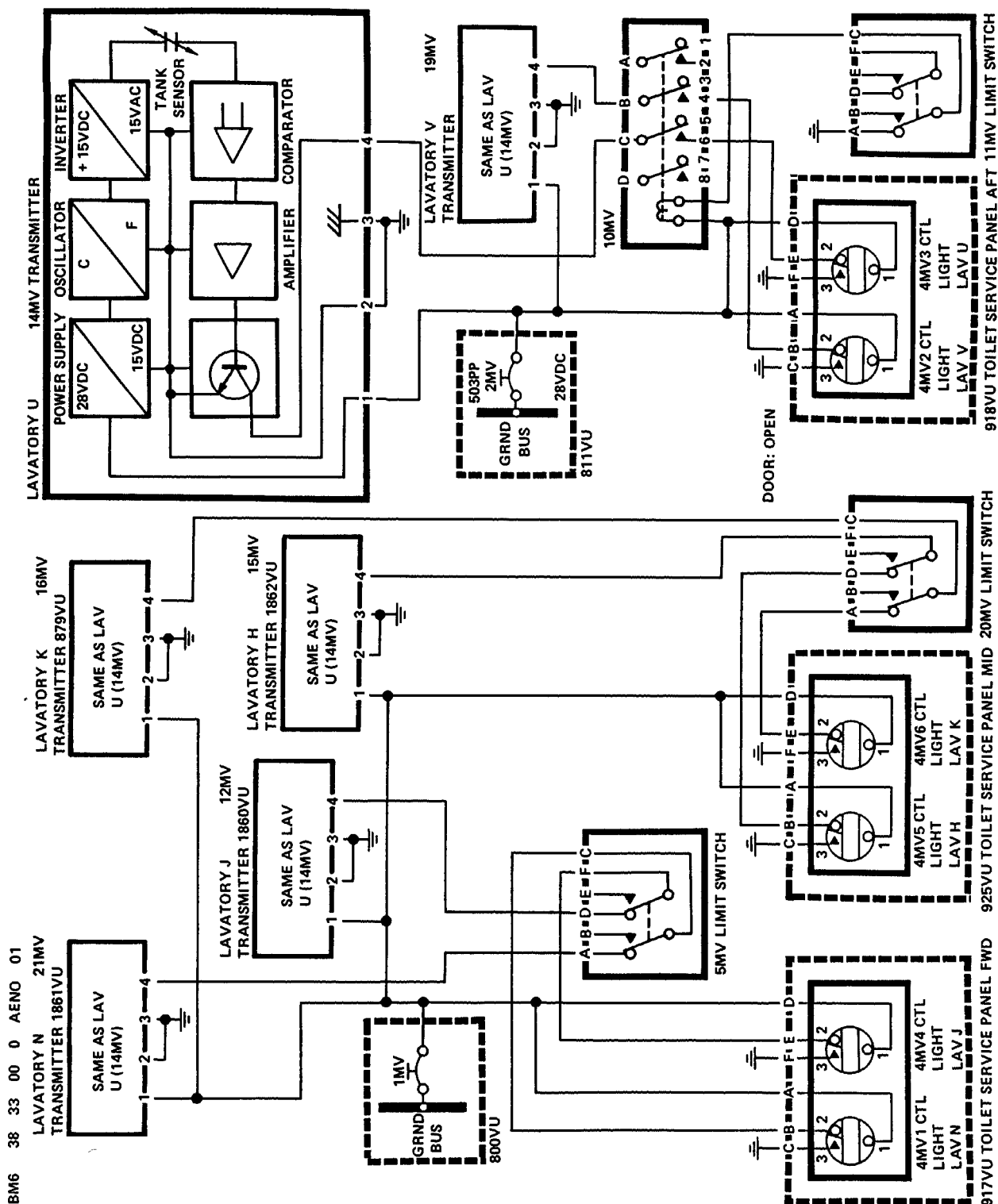
- a level transmitter (12MV) fitted to waste tank lavatory J.
- a level transmitter (21MV) fitted to waste tank lavatory N.
- a level transmitter (15MV) fitted to waste tank lavatory H.
- a level transmitter (16MV) fitted to waste tank lavatory K.
- a level transmitter (19MV) fitted to waste tank lavatory V.
- a level transmitter (14MV) fitted to waste tank lavatory U.
- a limit switch (5MV) which connects the control lights (4MV1) lavatory N and (4MV4) lavatory J to the level transmitters (12MV, 21MV) only when the fwd service panel door is open.
- a limit switch (20MV) which connects the control lights (4MV5) lava-

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-33-00

Page 4
Jun 01/07



Electrical Schematic
Figure 003

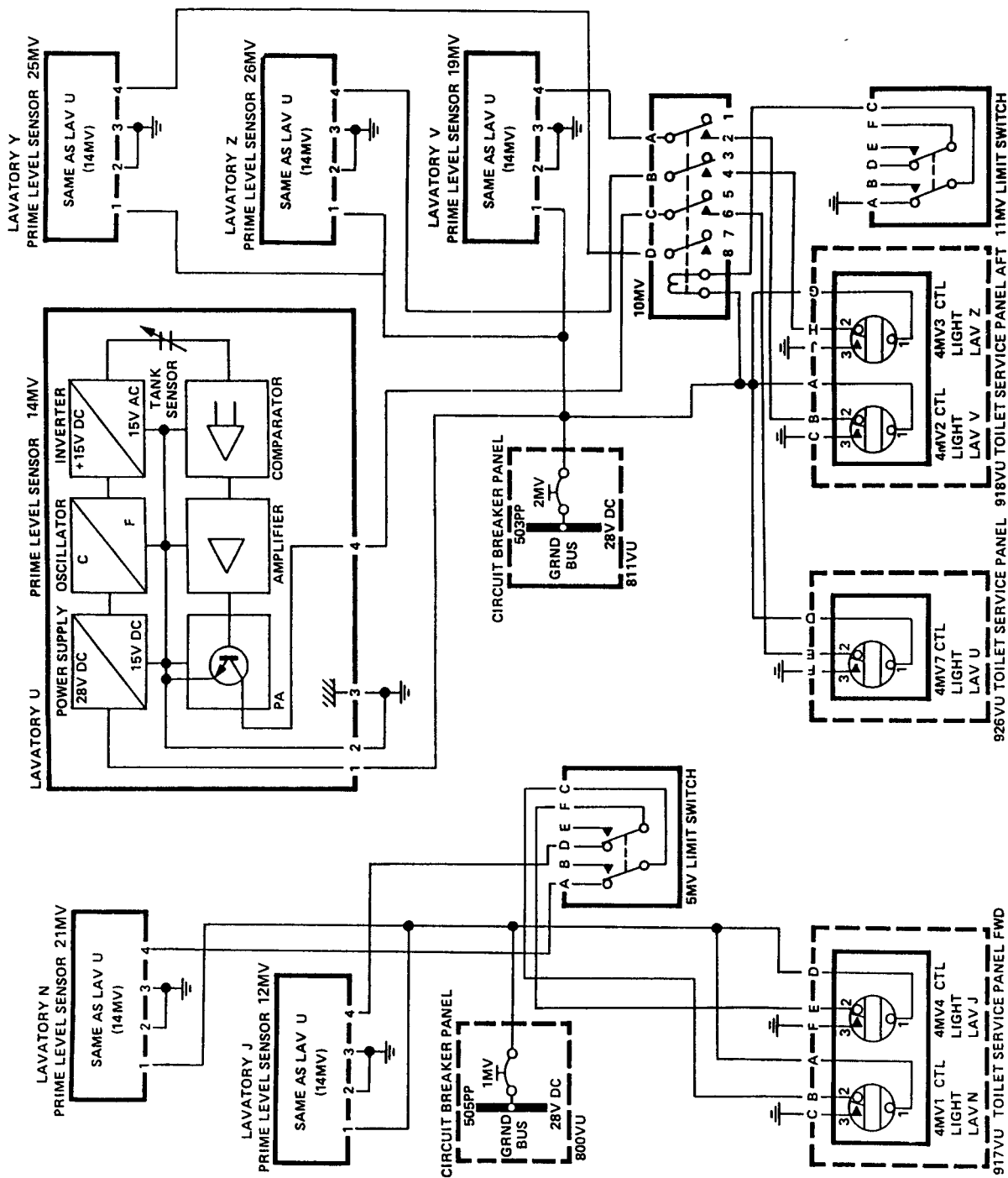
R EFFECTIVITY: 226-226, 229-249,

KSSU

38-33-00

Page 5
Jun 01/07

BM6 38 33 00 0 AUC0 00



Electrical Schematic
Figure 004

*

R EFFECTIVITY: 401-401,

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38-33-00

- tory H and (4MV6) lavatory K to the level transmitters (15MV, 16MV) only when the mid service panel door is open.
- a limit switch (11MV) which grounds the coil of relay (10MV) when the aft service panel door is open.
 - a relay (10MV) which, when energized, connects the control lights (4MV2) lavatory V and (4MV7) lavatory U to the level transmitters (14MV, 19MV).

****0N A/C 401-401,**

Post COCAUA-DA25-072 For A/C 401-401,

A. System Architecture

The system comprises:

- a level transmitter (12MV) fitted to waste tank lavatory J. *
- a level transmitter (21MV) fitted to waste tank lavatory N. *
- a level transmitter (19MV) fitted to waste tank lavatory V. *
- a level transmitter (14MV) fitted to waste tank lavatory U. *
- a level transmitter (25MV) fitted to waste tank lavatory Y. *
- a level transmitter (26MV) fitted to waste tank lavatory Z. *
- a limit switch (5MV) which connects the control lights (4MV1) lavatory N and (4MV4) lavatory J to the level transmitters (12MV, 21MV) only when the fwd service panel door is open. *
- a limit switch (11MV) which grounds the coil of relay (10MV) when the aft service panel door is open. *
- a relay (10MV) which, when energized, connects the control lights (4MV2) lavatory V, (4MV3) lavatory Z, (4MV7) lavatory U and (4MV8) lavatory Y to the level transmitters (14MV, 19MV, 25MV, 26MV). *

R ****0N A/C 226-226, 229-249, 401-401,**

B. Component Description

(1) Level transmitter

The transmitter comprises:

- a power supply circuit which reduces the input 28 V DC supply to 15 V DC.
- an oscillator which provides local oscillation to the inverter.
- an inverter which changes the 15 V DC to 15 V AC for the tank sensor and comparator.
- a capacitive tank sensor which provides a signal when the level of fluid in the tank is at maximum.
- a comparator which uses the change in capacitive reactance to provide an output which is in relation to the level of fluid in the tank.
- an amplifier which amplifies the output of the comparator to trigger the output transistors when the tank prime charge is at maximum level.
- an output transistor which, when triggered, provides the ground return for the control lights.

(2) Control light

The amber control light is provided with a self-test facility. When

R EFFECTIVITY: 226-226, 229-249, 401-401,

KSSU

38-33-00

Page 7
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

pressed, the lamp is grounded and the light comes on.

(3) Power supply

The fwd lavatory transmitters and control lights are supplied by the 28 V DC busbar 505PP via circuit breaker (1MV) on circuit breaker panel 800VU. The aft lavatory transmitters and control lights are supplied by the 28 V DC busbar 503PP via circuit breaker (2MV) on circuit breaker panel 811VU.

4. System Operation

The transmitters are energized when their respective busbars are supplied with 28 V DC and their circuit breakers are closed.

When a tank prime charge is at maximum level and the relevant service panel door is open, the respective amber control light comes on.

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38-33-00

Page 8
Jun 01/07

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LEVEL TRANSMITTER - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Toilet Servicing Vehicle
D.	O-Ring
E.	Brush
F.	Liquid Soap

Referenced Procedures

- 12-16-38, P. Block 1 Replenishing Toilets
- 25-45-11, P. Block 401 Toilet Shroud

2. Procedure

A. Job Set-Up

(1) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).

NOTE : Do not replenish waste tanks at this stage.

(2) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

(3) Open, safety and tag the following circuit breakers:

R **0N A/C 226-226, 229-249,

PANEL	SERVICE	IDENT.	LOCATION
800VU	LAVATORY FRONT & MIDDLE - WASTE PNL	1MV	G 9

**0N A/C 401-401,

800VU	LAVATORY FWD & MID - WASTE PNL	1MV	G 9
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R **0N A/C 226-226, 229-249,

811VU	LAVATORY REAR - WASTE PNL	2MV	B 8
-------	---------------------------	-----	-----

**0N A/C 401-401,

811VU	LAVATORY AFT - WASTE PNL	2MV	B 8
-------	--------------------------	-----	-----

R **0N A/C 226-226, 229-249, 401-401,

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KSSU

38-33-11

Page 401
Jun 01/07

B. Removal

(Ref. Fig. 401)

(1) Disconnect and cap electrical connector (1).

NOTE : Clean the level transmitter with liquid soap and clean water, if necessary. Use a brush to clean the level transmitter.

(2) Remove stud (2), lockwasher (3), washer (4) and bonding strap (5).

(3) Remove screws (6), lockwashers (3), washers (4) and transmitter (7).

(4) Remove and discard O-ring (8).

C. Installation (Ref. Fig. 401)

(1) Install new O-ring (8) and position transmitter (7).

(2) Install washer (4), bonding strap (5), lockwasher (3) and secure with stud (2).

(3) Install washers (4), lockwashers (3) and screws (6).

(4) Remove blanking cap and connect electrical connector (1).

D. Test

(1) Remove safety clips and tags and close circuit breakers 1MV and 2MV.

(2) Replenish waste tanks in fwd lavatories with water (Ref. 12-16-38, P. Block 1) and make certain that level indicator light on service panel comes on when tank is filled with approx. 9.5 l (2.5 US gal.).

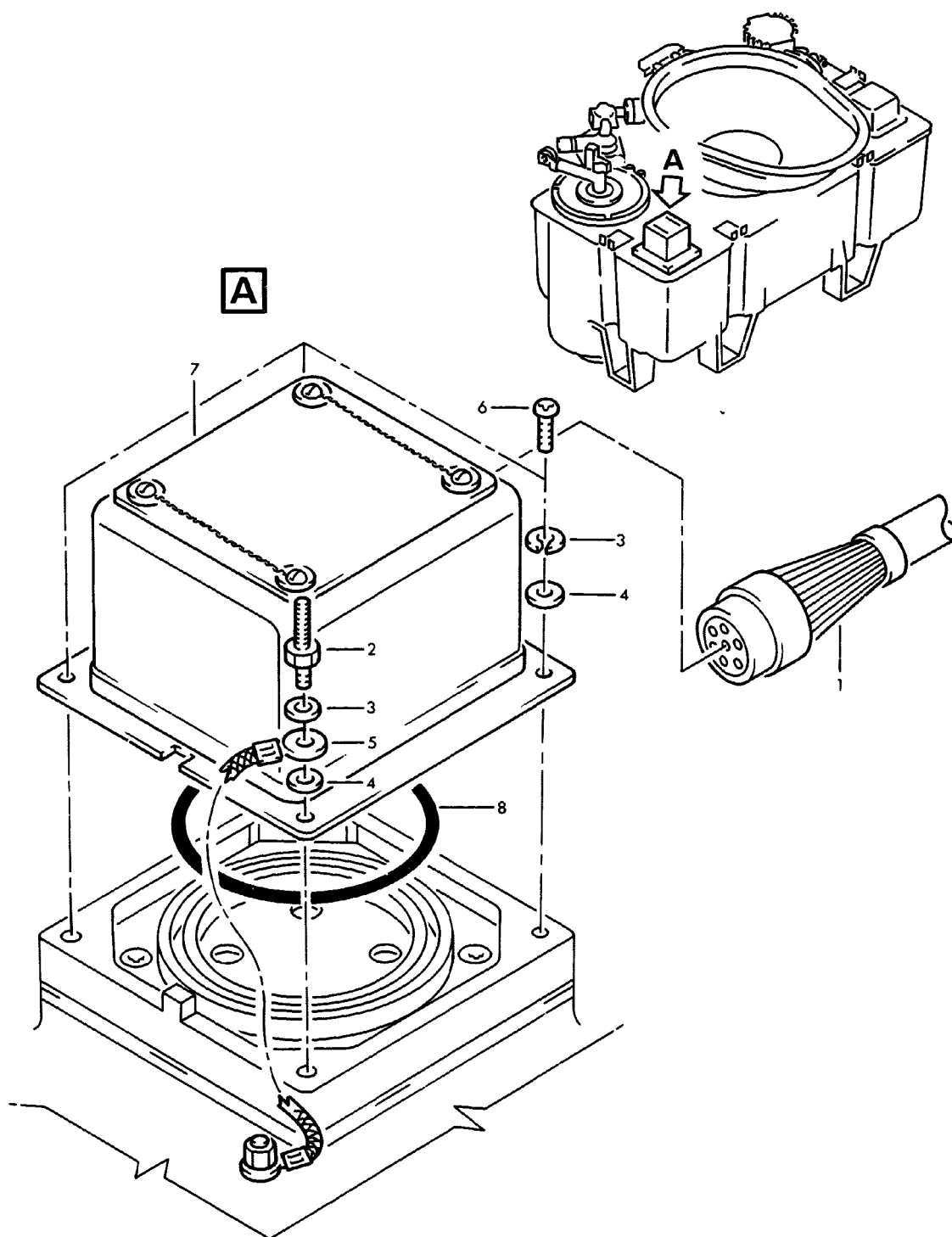
(3) Replenish waste tanks in aft lavatories with water (Ref. 12-16-38, P. Block 1) and make certain that level indicator lights on service panel come on when each tank is filled with approx. 19 l (5 US gal.).

E. Close-Up

(1) Install toilet shroud (Ref. 25-45-11, P. Block 401).

(2) Drain and replenish toilet systems (Ref. 12-16-38, P. Block 1).

(3) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.



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Level Transmitter
Figure 401

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38-33-11

Page 403
Jun 01/07

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VACUUM TOILET SYSTEM - DESCRIPTION AND OPERATION

1. General

Two vacuum toilet systems (L/H and R/H) are provided for passenger and crew convenience.

The toilets are flushed with water from the aircraft pressurized potable water system.

Removal of waste matter from the toilet bowls into waste tanks is achieved by vacuum draining.

The above floor installation of the system includes flush switches, the toilet assemblies and flush control units.

The underfloor installation of each system includes waste tank assembly, vacuum blower assembly, check valves, logic control unit, level sensors, waste system dump valve and waste piping.

In addition, the system consists of a limit switch installed on the waste service panel and an altitude pressure switch installed in the nonpressurized zone of the aft section.

2. Component Location

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
12MG	CONTACTOR - R/H SYSTEM		260		
13MG	ALTITUDE PRESSURE SWITCH R/H		312	312AR	38-35-35
14MG	LIMIT SWITCH	863VU	221		
15MG	SWITCH PUSHBUTTON	863VU	221		
16MG	VACUUM BLOWER R/H		170	162AZ	38-35-15
17MG	RELAY - R/H	800VU	223		
18MG	LOGIC CONTROL UNIT R/H		170	162AL	38-35-31
19MG	SENSOR A - WASTE LEVEL R/H		170	162AL	38-35-32
20MG	SENSOR B - WASTE LEVEL R/H		170	162AL	38-35-32
21MG	SENSOR C - WASTE LEVEL R/H		170	162AL	38-35-32
FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
112MG	CONTACTOR - L/H SYSTEM		260		
113MG	ALTITUDE PRESSURE SWITCH L/H		312	312AR	38-35-35
114MG	LIMIT SWITCH	863VU	221		
115MG	SWITCH PUSHBUTTON	863VU	221		
116MG	VACUUM BLOWER L/H		170	162AZ	38-35-15
117MG	RELAY - L/H	800VU	223		
118MG	LOGIC CONTROL UNIT L/H		170	162AL	38-35-31
119MG	SENSOR A - WASTE LEVEL L/H		170	162AL	38-35-32
120MG	SENSOR B - WASTE LEVEL L/H		170	162AL	38-35-32
121MG	SENSOR C - WASTE LEVEL L/H		170	162AL	38-35-32
384200	WASTE TANK - L/H		171	162AL	38-35-17
384201	WASTE TANK - R/H		171	162AL	38-35-17
384205	CHECK VALVE - VENT LINE L/H		171	162AL	38-35-21
384206	CHECK VALVE - VENT LINE R/H		171	162AL	38-35-21

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FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
384260	VALVE TACO		171	162AL	38-35-39
1	WATER/WASTE SERVICE PANEL		171	171AL	

Lavatory J

1MG2	FLUSH SWITCH		231		
2MG2	FLUSH CONTROL UNIT		231		38-35-33
3MG2	WATER VALVE		231		38-35-37
4MG2	FLUSH VALVE		231		38-35-27
384162	TOILET UNIT		231		38-35-13

Lavatory N

1MG1	FLUSH SWITCH		232		
2MG1	FLUSH CONTROL UNIT		232		38-35-33
3MG1	WATER VALVE		232		38-35-37
4MG1	FLUSH VALVE		232		38-35-27
384163	TOILET UNIT		232		38-35-13

R

Lavatory U

101MG5	FLUSH SWITCH		262		
102MG5	FLUSH CONTROL UNIT		262		38-35-33
103MG5	WATER VALVE		262		38-35-37
104MG5	FLUSH VALVE		262		38-35-27
384174	TOILET UNIT		262		38-35-13

Lavatory V

101MG6	FLUSH SWITCH		261		
102MG6	FLUSH CONTROL UNIT		261		38-35-33
103MG6	WATER VALVE		261		38-35-37
104MG6	FLUSH VALVE		261		38-35-27
384175	TOILET UNIT		261		38-35-13

R **ON A/C 404-500,

Post COCAUA-DA25-072 For A/C 404-500,

Lavatory Y

101MG4	FLUSH SWITCH		261		
102MG4	FLUSH CONTROL UNIT		261		38-35-33
103MG4	WATER VALVE		261		38-35-37
104MG4	FLUSH VALVE		261		38-35-27
384173	TOILET UNIT		261		38-35-13

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 2
Jun 01/13

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
-----	------------------------	-------	------	----------------	-------------

R **0N A/C 404-500,

Lavatory Z

101MG4	FLUSH SWITCH		252		
102MG4	FLUSH CONTROL UNIT		252		38-35-33
103MG4	WATER VALVE		252		38-35-37
104MG4	FLUSH VALVE		252		38-35-27
384170	TOILET UNIT		252		38-35-13

**0N A/C 404-500,

Post COCAUA-DA25-072 For A/C 404-500,

(Ref. Fig. 001)

*

R **0N A/C 404-500,

(Ref. Fig. 002)

3. Description

Each vacuum toilet assembly is a self-contained, free standing unit, bolted to the lavatory floor and connected to plumbing and wiring.

One is installed in each lavatory compartment and comprise:

A. Toilet Unit

(1) Toilet Bowl and Spray Ring

(Ref. Fig. 003)

The toilet bowl is elliptically shaped on top and contoured with steep sloping sides with a waste exit hole of 1.75 inches (44.45 mm) diameter. It is made of stainless steel with an abrasive resistant, nonstick, nonwettable coating. The spray ring is attached to the top of the bowl and anti-siphon valve.

(2) Water Control Module

The water control module is self-contained and comprise:

- Water Valve (solenoid controlled).

When energized, the water valve opens and allows water to flow into the toilet bowl. The outlet of the valve is connected to the anti-siphon valve. The water valve is connected to and controlled by the flush control unit.

- Strainer

The replaceable finger strainer inhibits lime scale and other impurities clogging the valves and spray ring.

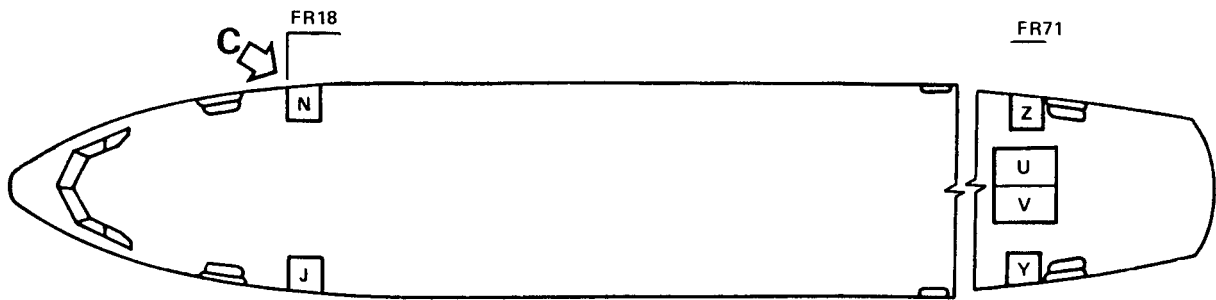
(3) Anti-Siphon Valve

The anti-siphon valve prevents entry of contaminated water into the portable water line by returning any excess splash or backup water into the toilet bowl. It is installed above the toilet bowl.

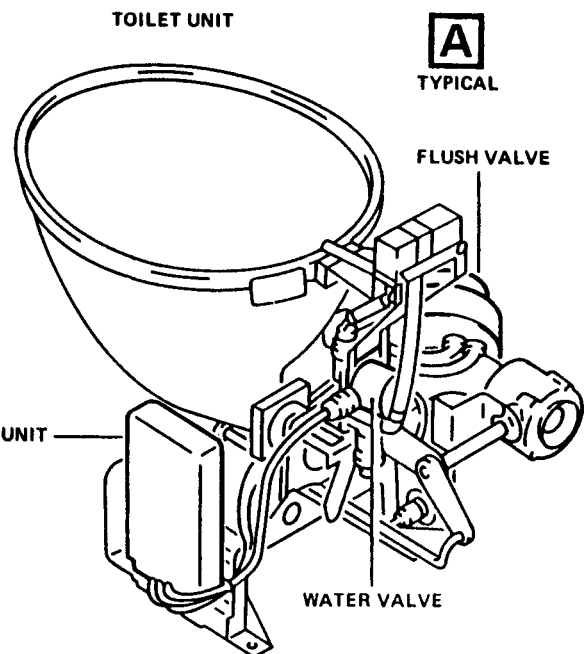
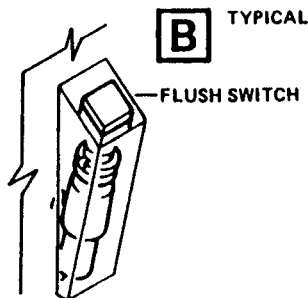
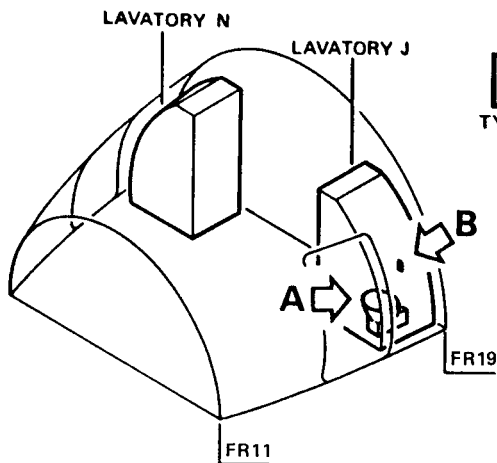
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LAVATORY	J	N	U	V	Y	Z
TOILET UNIT	384162	384162	384172	384168	384173	384169
FLUSH SWITCH	1MG2	1MG1	101MG5	101MG6	101MG4	101MG3
FLUSH CONTROL UNIT	2MG2	2MG1	102MG5	102MG6	102MG4	102MG3
WATER VALVE	3MG2	3MG1	103MG5	103MG6	103MG4	103MG3
FLUSH VALVE	4MG2	4MG1	104MG5	104MG6	104MG4	104MG3



Component Location
Figure 001

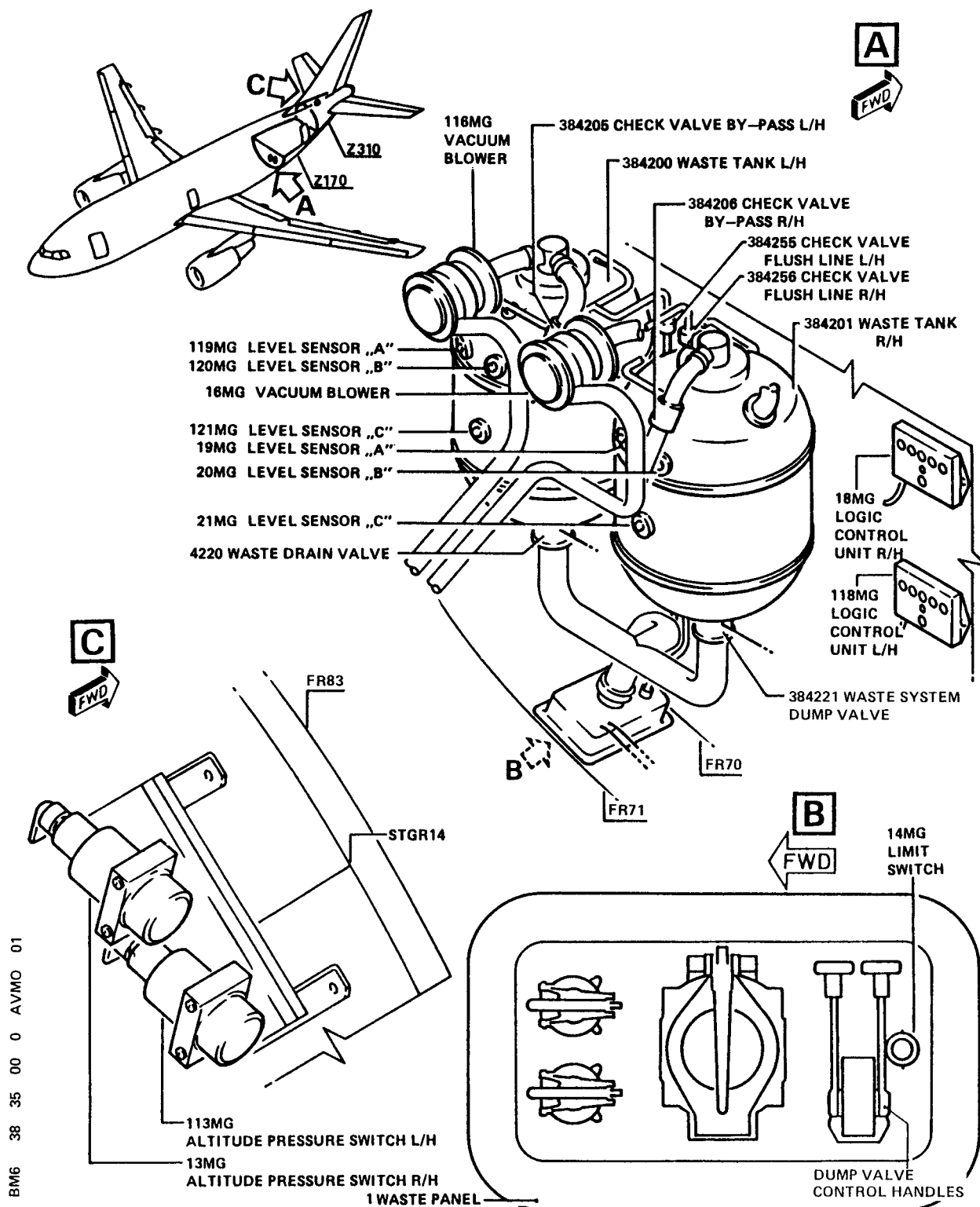
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KSSU

38-35-00

Page 4
Jun 01/13



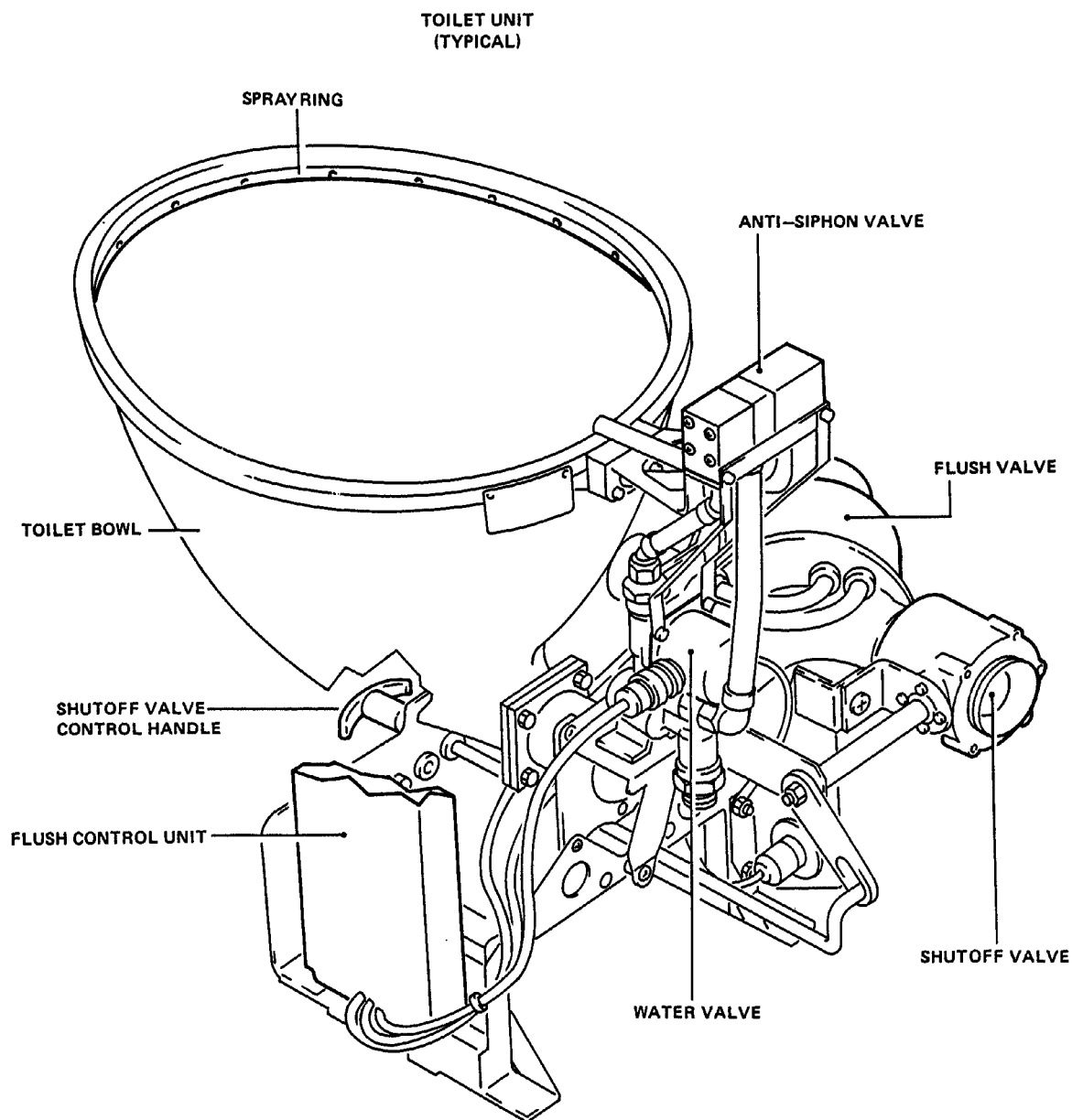
Component Location
Figure 002

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Vacuum Toilet Unit
Figure 003

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KSSU

38-35-00

Page 6
Jun 01/13

(4) Flush Valve and Shutoff Valve

The flush valve is a self-contained, solenoid controlled unit.

It is plumbed to the toilet bowl outlet and electrically connected to the flush control unit. When energized by the flush control unit, it opens to allow passage of waste matter.

The shutoff valve is installed in the toilet waste line, next to the flush valve. When operated it isolates the toilet unit from vacuum lavatory system.

A push-pull handle (in front of the toilet assembly) operates the shutoff valve.

(5) Flush Switch

The flush switch is a momentary type, actuated by a button.

B. Waste Tank Assembly

The waste tank assembly is located below the cabin floor in the rear section (FR.71) of the aircraft and comprise:

- Waste Tank and Waste Level Sensors
- Water Separator
- Check Valve Flush Line
- Check Valve Vent Line
- Waste Inlet
- Rinse Assembly
- Waste Drain Connection and Waste Service Panel

(1) Waste Tank

The waste tank is a metallic-lined, filament wound, cylindrical vessel with end domes, and polar inlets and outlets. It has a useable capacity of 265 l (70 US gal.) and a total capacity of 328 l (87 US gal.). There is an access hole for interior cleaning and inspection.

(2) Water Separator

The water separator prevents any moisture or foam (formed by the incoming waste matter which could damage the vacuum blower) from entering the overboard vent line.

It is located inside and mounted to the top of the waste tank.

The water separator is a self-cleaning unit with no moving parts and can be removed/installed without removal of the waste tank.

(3) Check Valve - Flush Line

It is installed in the waste tank flush line and allows water to flow only into the waste tank.

(4) Vacuum Blower

The vacuum blower, when energized by the flush control unit, creates a negative pressure difference of 1 to 6 psi (0.07 to 0.42 bar) in the waste tank at sea level static condition and up to 16.000 ft. (max.) altitude. The vacuum blower is a radial flow type with an air cooled motor, connected to the waste tank and the overboard vent line by a 2.5 inch nom. I.D. inlet line and a 2.25 inch nom. I.D. differential line.

(5) Check Valve - Vent Line

It is installed in the overboard vent line and prevents ambient pressure entering the vacuum system.

(6)Waste Inlet

There are two waste inlet connections on the upper dome of the waste tank. The LH inlet pipe is for the forward, the RH for the aft lavatories.

The waste inlet connections, 2-inch nom. I.D. are designed to avoid clogging and the possibility of waste matter damaging the waste tank on high velocity entry.

(7)Rinse Assembly

The rinse assembly consists of two fittings located on the upper dome of the waste tank and a device within the waste tank. Flush/rinse connection points are at the waste service panel.

(8)Waste Drain Connection and Waste Service Panel

The waste drain connection is located on the lower dome. The waste tank outlet drain pipe is connected to the waste system dump valve and then plumbed to a common outlet with a TACO-valve at the waste service panel. The waste system dump valve is operated by a control cable.

At the waste service panel, located between frames 70 and 71, there are two dump valve control handles, one for each system, two flush/rinse ports, one for each waste tank and one waste drain port.

C. System Control**(1)Logic Control Unit**

The logic control unit is an electronic assembly which controls the timing and event sequences of flush control unit, waste level sensors, vacuum blower and altitude pressure switch.

It computes:

- Level sensor signals
- Flush control unit signals
- Altitude pressure switch signal
- Waste tank FULL signal.

The logic control unit is equipped with built-in test lights and a switch to check the status of waste level sensors i.e. operational or not-operational.

There is one logic control unit for each system and mounted to frame 70 next to the waste tanks.

(2)Level Sensors

Three waste level sensors are fitted to each tank. The upper two (Level Sensor 'A' and Level Sensor 'B') are for tank FULL signal. System shut-down occurs if either one detects tank FULL. The tank full level is defined as the level reached at the useable capacity of 265 l (70 US gal.).

A third level sensor (Level Sensor 'C') is installed at approximately 2/3 full level. The design objective includes the 2/3 full sensor in the decision logic for system shutdown control.

(3)Flush Control Unit

The flush control unit is an electronic assembly which controls the timing and event sequences of the flush cycle. One is installed in each toilet unit and computes the following electrical signals:

- Flush switch signal
- Water valve signal
- Flush valve signal
- Switched vacuum blower signal.



AIRCRAFT MAINTENANCE MANUAL

(4)Altitude Pressure Switch

Two altitude pressure switches, one for each system, are mounted at frame 83 and switch 'ON' or 'OFF' the power supply to the vacuum blower. The power supply to the vacuum blower is 'ON' on ground and up to 16.000 ft. altitude. Above 16.000 ft. altitude, the power is 'OFF'.
(Ref. Fig. 004, 005)

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Page 9
Jun 01/13



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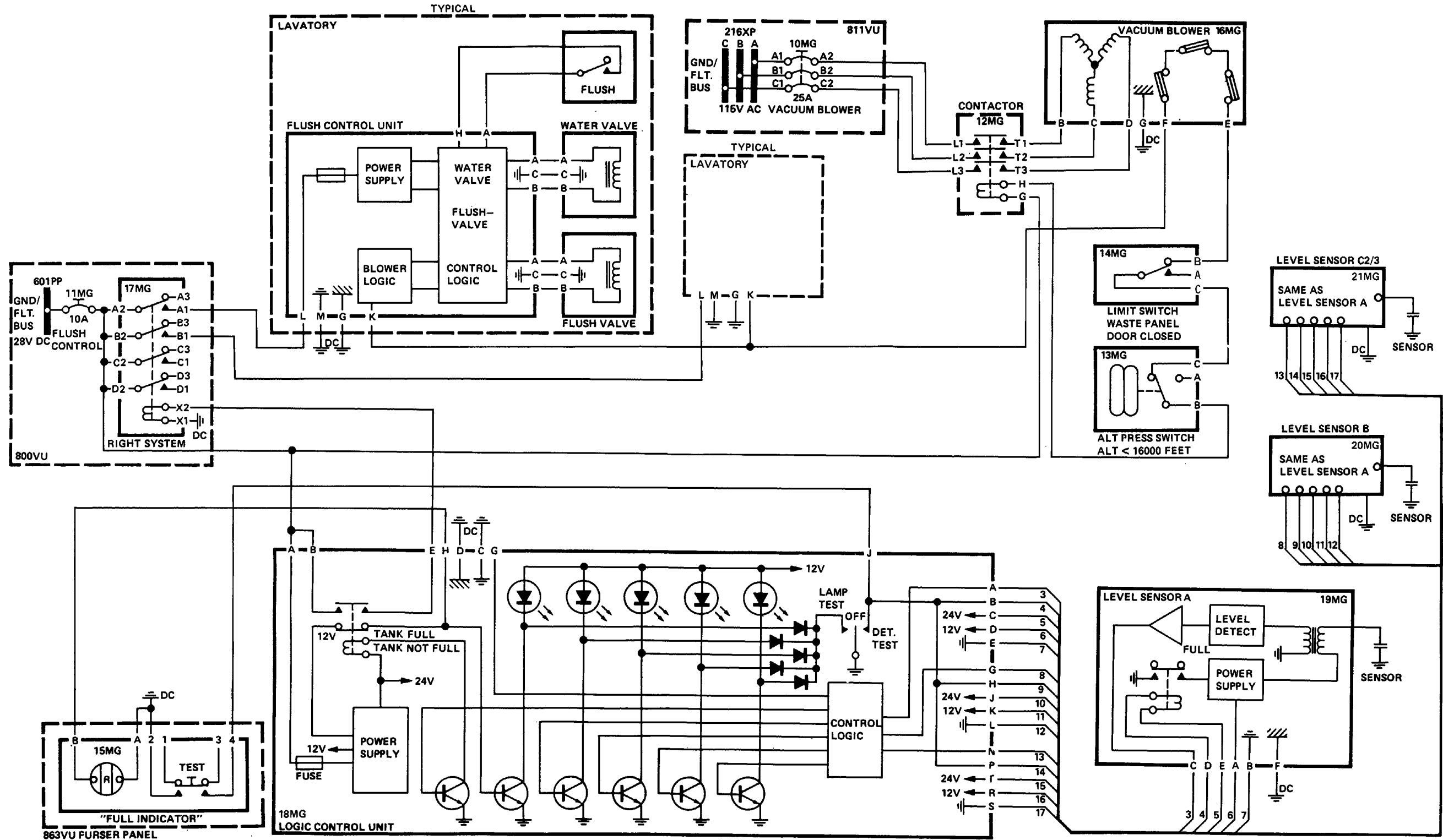
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Page 10
Jun 01/13

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Electrical Schematic - R/H
Figure 004

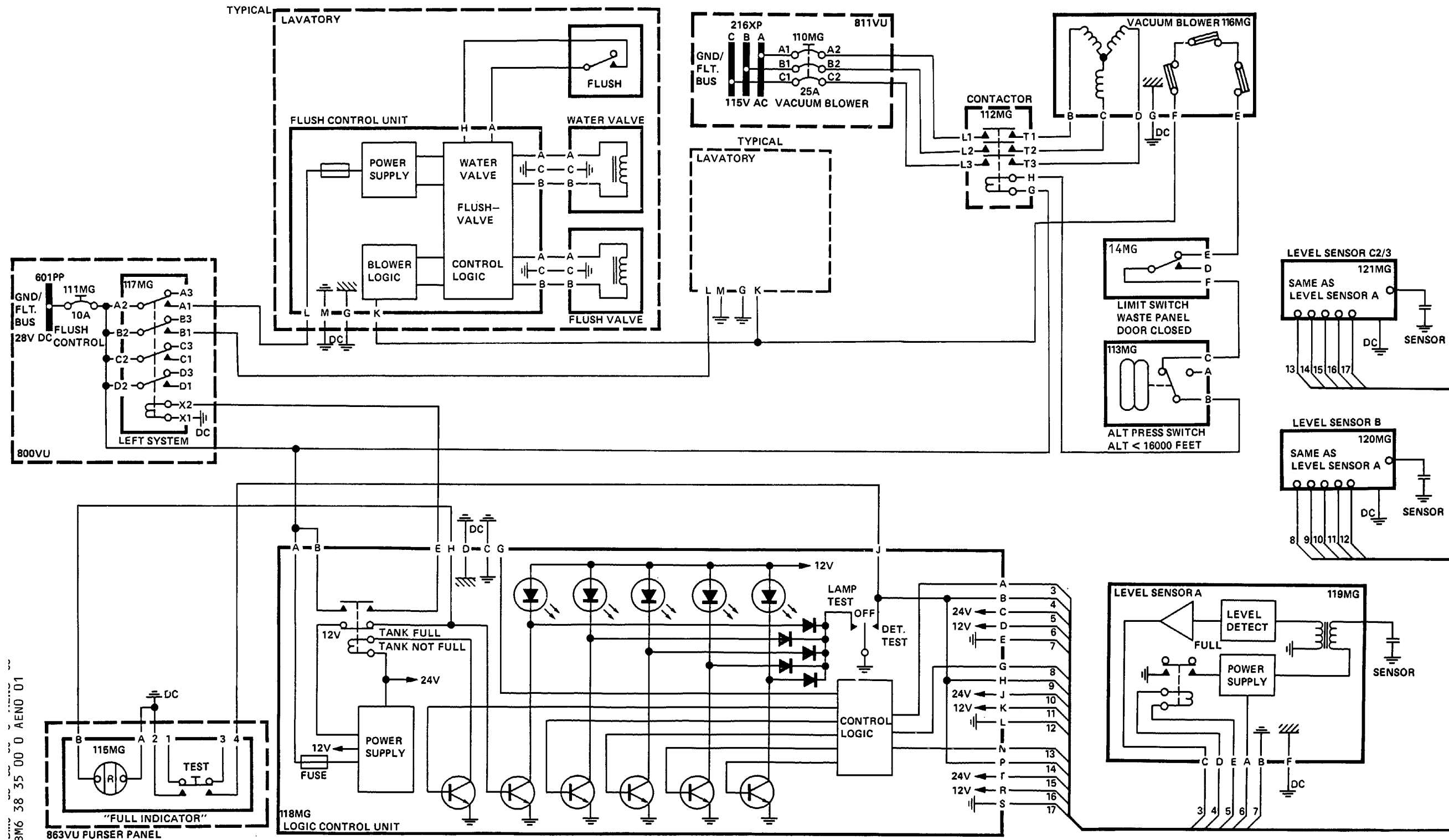
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Page 11- 12
Jun 01/13



Electrical Schematic - L/H
Figure 005

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Page 13- 14
Jun 01/13

4. Operation

A. Flush Control Unit

(Ref. Fig. 006)

Upon actuation of the toilet flush switch, the flush control unit receives an electrical signal and controls the following steps:

- activating the vacuum blower directly, from 0 ft. up to 16.000 ft. (4876.9 m) altitude only; the input for this information is given by the altitude pressure switch. Above 16.000 ft. (4876.9 m) the vacuum blower is off and the system functions with the cabin to ambient pressure differential. In this case, the air is led through the by-pass line via the vent line check valve, apart from this the flush cycle remains unchanged.
- after a delay of one second, it opens the water valve for one second to discharge a water quantity of 0.18 - 0.206 l (0.048 - 0.055 US gal.).
- 2 seconds after starting the cycle, it opens the flush valve for 4 seconds to rinse waste matter with water supplied from the water valve.
- The cycle duration is 15 seconds after pressing the flush switch. A re-start of the flush cycle within this time is inhibited.

B. Logic Control Unit

The logic control unit performs the following control functions:

- checks and compares the signals from the waste level sensors. When either one of the full level sensors detects a tank FULL, it initiates an electrical signal from the flush switches to the logic control unit to inhibit further flushing of the toilets belonging to the particular system (system shut down).
- computes the signals from the waste level sensors and provides output signals to the purser's panel for '2/3' and 'FULL' (if installed) tank waste level indication.
- when a flush signal is received from a flush control unit, it disables all other flush control units of the system for 5 seconds.

C. Waste Tank Draining and Flushing

During servicing, a toilet servicing vehicle is connected to the flush and drain connection points at the service panel. The spring loaded TACO valve and the waste system dump valves are opened and the waste tanks drained. When empty, they require to be flushed with water.

The water pressure must not exceed 50 psi. (3.45 bar).

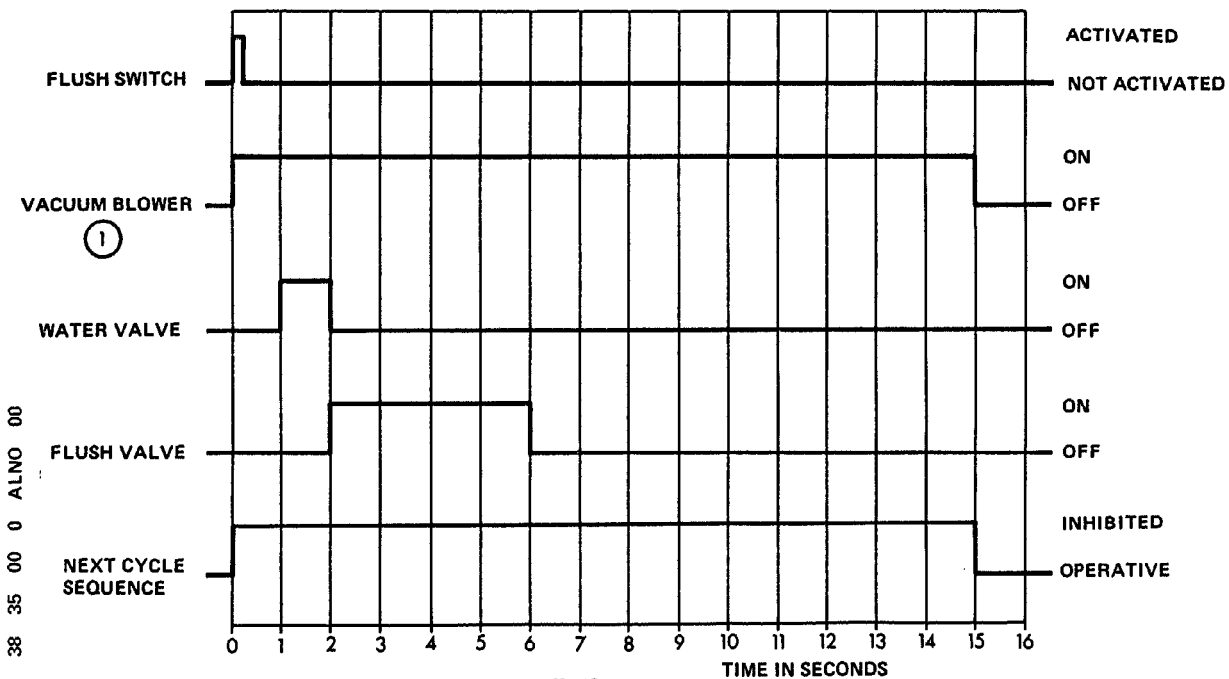
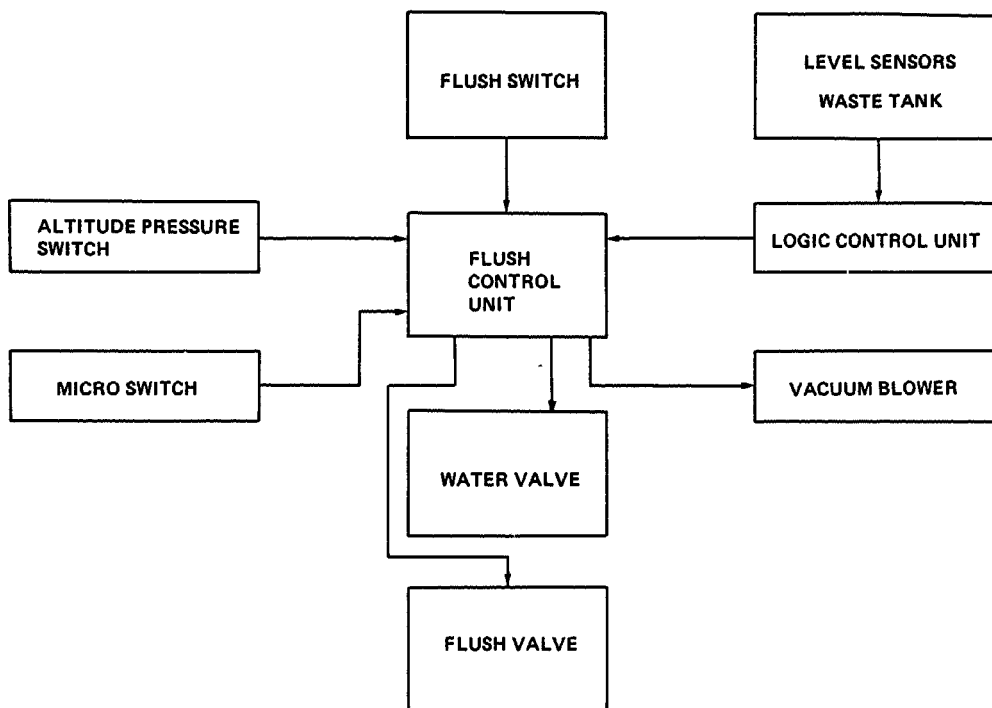
When the flushing procedure is completed, the valves are closed.

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 15
Jun 01/13



NOTE: ① VACUUM BLOWER IS ONLY OPERATIVE, IF AIRCRAFT IS BELOW FL 160.

Functional Diagram
Figure 006

R EFFECTIVITY: 404-500,

KSSU

38-35-00



AIRCRAFT MAINTENANCE MANUAL

VACUUM TOILET SYSTEM - ADJUSTMENT/TEST

1. System Test

A. Reason for the Job

- Test of tank level sensors
- Test of vacuum blower and toilet function.

NOTE : The vacuum toilet system test applies to the LH and RH toilet systems. Both systems operate independently of each other.

R B. Equipment and Materials

ITEM	DESIGNATION
R (1)	Access Platform, 4.6 to 5.2 m (15 to 17 ft.)
R (2)	Access Platforms, up to 2.3 m (7.50 ft.)
R (3)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
R (4) 98A38308235000 or 98A38308456000	Adapter Altitude Pressure Switch
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-16-38, P. Block 1	Replenishing Toilets
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 501
Jun 01/14

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- R C. Procedure
- R (1) Job Set-Up
- R (a) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
- NOTE : Do not prime waste tanks at this stage.
- R (b) Fill potable water system (Ref. 12-15-38, P. Block 1), if necessary, and pressurize water system (Ref. 38-40-00, P. Block 301).
- R (c) Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
- R (d) Make sure that electronics racks ventilation is correct.
- R (e) Make sure that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

- R (f) Position access platform and open BULK cargo compartment door (Z813).
- R (g) Position access platform and open toilet service panel access door (171BL).
- R (h) Open access door (162AZ) to gain access to logic control unit, waste tanks and vacuum blower.
- R (j) Position access platform and open access door (312AR) to gain access to altitude pressure switches.
- R (k) Make sure that waste drain valves are closed.
- R (l) Connect service vehicle 1-inch flush/fill hose to flush/fill port in service panel.
- R (m) Carry out the following tests:
- R 1 Test of Tank Level Sensors (LH or RH System)

ACTION	RESULT
1. On toilet service panel: - Press and hold limit switch (14MG).	
2. On toilet service panel: - Fill 170 - 200 l (44.9 - 52.8 US gal.) of water into waste tank.	On purser panel 863VU: - Tank 2/3 FULL indication (if installed) comes on.
	On logic control unit, LED indications are: - SENSOR A is off, - SENSOR B is off, - SENSOR C comes on, - TANK FULL is off.
3. In any lavatory of tested system: - Push flush switch.	- Vacuum blower operates. - Toilet system operates.
4. On toilet service panel: - Top-up waste tank to 260 - 280 l (68.7 - 74.0 US gal.).	On purser panel 863VU: - Tank 2/3 FULL indication (if installed) remains on. - Tank FULL indication comes on.

EFFECTIVITY: 404-500,

KSSU

38-35-00

ACTION	RESULT
5. In any lavatory of tested system: - Push flush switch.	On logic control unit, LED indications are: - SENSOR A comes on, - SENSOR B comes on, - SENSOR C remains on, - TANK FULL comes on. <u>NOTE</u> : The logic control TANK FULL signal will cause shut down of the system.
6. On toilet service panel: - Release limit switch (14MG). - Drain and prime waste tank (Ref. 12-16-38, P. Block 1).	- Vacuum blower is inoperative. - Toilet System is inoperative.
R <u>2</u> Test of Vacuum Blower and Toilet function (LH or RH System)	
ACTION	RESULT
1. On toilet service panel: - Press and hold limit switch (14MG). 2. In lavatory of tested system: - Push flush switch in each lavatory.	On toilet system: - Vacuum blower operates. - Water flows into toilet bowl. - Air flows out of overboard vent line. - Flush valve opens and water is sucked out of toilet bowl.
<u>NOTE</u> : Next cycle sequence of each tested lavatory is inhibited for 15 sec.	
3. On altitude pressure switches: - Connect adapter altitude pressure switch to altitude pressure switch (113MG) LH or (13MG) RH. Apply a differential pressure to the altitude pressure switch to simulate an altitude of 4647.9 - 4663.1 m (15249 - 15299 ft.)	
4. In lavatory of tested system: - Push flush switch.	On toilet system: - Vacuum blower operates. - Water flows into toilet bowl. - Air flows out of overboard vent line. - Flush valve opens and water is sucked out of toilet bowl.
5. In lavatory of tested system: - Push flush switch again within 10 sec.	On Toilet system: Next cycle sequence is inhibited for approx. 15 sec. - Vacuum blower is still operating.

EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 503
Jun 01/14

ACTION	RESULT
6. On altitude pressure switches: - Increase differential pressure to simulate an altitude of 4663.4 - 5091.6 m (15300 - 16700 ft.).	- No water flows into toilet bowl.
7. In lavatory of tested system: - Push flush switch.	On toilet system: - Vacuum blower does not operate. - No air flows out of overboard vent line. - Water flows into toilet bowl. - Water drains out of toilet bowl.
8. On Altitude Pressure Switches: - decrease differential pressure to simulate an altitude of 3810 m (12500 ft.).	
9. In lavatory of tested system: - Push flush switch.	On toilet system: - Vacuum blower operates. - Air flows out of overboard vent line. - Water flows into toilet bowl. - Water is sucked out of toilet bowl.
10. On altitude pressure switches: - Disconnect adapter altitude pressure sw from altitude pressure switch (113MG) LH or (13MG) RH.	
11. On toilet service panel: - Release limit switch (14MG).	
R (2) Close-Up R (a) Make sure that working area is clean and clear of tools and miscellaneous items of equipment. R (b) Drain potable water system, if necessary (Ref. 12-24-38, P. Block 1). R (c) De-energize the aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301). R (d) Disconnect service vehicle 1-inch flush/fill hose from flush/fill port in service panel and close toilet service panel access door (171BL). R (e) Close access door (162AZ) and BULK cargo compartment door (Z813). R (f) Close access door (312AR). R (g) Remove access platforms.	
R 2. <u>Leakage Test of the Vacuum System</u>	
A. Reason for the Job - Self Explanatory	
R B. Equipment and Materials	

EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 504
Jun 01/14

ITEM	DESIGNATION
R (1)	Stop Watch
R (2)	Access Platform, up to 2.3 m (7.50 ft.)
R (3)9501501-4000	Leak Tester - Vacuum Toilet System
R C. Procedure	
R (1)Job Set-Up	
R (a)Open, safety and tag the following circuit breakers:	
PANEL	SERVICE IDENT. LOCATION
800VU	FLUSH CTL/LH 111MG J10
800VU	FLUSH CTL/RH 11MG J12
811VU	VACUUM BLOWER/LH 110MG C 5
811VU	VACUUM BLOWER/RH 10MG C 8
R (b)Position access platform below the vacuum-system overboard vents.	
R (c)Position access platform at BULK cargo compartment.	
R (d)Open BULK cargo compartment door (Z813).	
R (e)Open access door (162AZ).	
R (2)Installation of the Test Tool Leak Tester - Vacuum Toilet System (9501501-4000) (Ref. Fig. 501)	
<u>WARNING</u> : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU INSTALL THE TEST TOOL.	
R (a)Clean the component interface and the adjacent area.	
R (b)To measure the vacuum system:	
R 1 Connect the measuring part of the tool kit and the adapter to the overboard vent.	
R (3)Leakage Check of the Vacuum System	
R (a)Do this test before and after removal/installation of components of the vacuum toilet system.	
<u>NOTE</u> : Compare the result of the leak checks recorded before the removal and after the installation of the component.	
The result after the installation must not be less than 10% of the result before the removal.	
R (b)Remove safety clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.	

EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 505
Jun 01/14

R (4)Test

ACTION	RESULT
<p>1. In the lavatory:</p> <ul style="list-style-type: none"> - push and release the toilet flush switch. - use a stop watch and record the time of the flush cycle. <p>At the measuring tool:</p> <ul style="list-style-type: none"> - open the manual ventilation valve and release the pressure. - wait 2 minutes. 	<p>At the manometer:</p> <ul style="list-style-type: none"> - after 30 seconds the negative pressure must be minimum -200 mbar (-2.90 psi). - after 120 seconds the negative pressure must be minimum -80 mbar (-1.16 psi). <p><u>NOTE</u> : Record the value on the manometer at 30 seconds and at 120 seconds. First measurements.</p>
<p>2. In the lavatory:</p> <ul style="list-style-type: none"> - push and release the toilet flush switch. - use a stop watch and record the time of the flush cycle. <p>At the measuring tool:</p> <ul style="list-style-type: none"> - open the manual ventilation valve and release the pressure. - wait 2 minutes. 	<p>At the manometer:</p> <ul style="list-style-type: none"> - after 30 seconds the negative pressure must be minimum -200 mbar (-2.90 psi). - after 120 seconds the negative pressure must be minimum -80 mbar (-1.16 psi). <p><u>NOTE</u> : Record the value on the manometer at 30 seconds and at 120 seconds. Second measurement.</p>
<p>3. In the lavatory:</p> <ul style="list-style-type: none"> - push and release the toilet flush switch. - use a stop watch and record the time of the flush cycle. 	<p>At the manometer:</p> <ul style="list-style-type: none"> - after 30 seconds the negative pressure must be minimum -200 mbar (-2.90 psi). - after 120 seconds the negative pressure must be minimum -80 mbar (-1.16 psi). <p><u>NOTE</u> : Record the value on the manometer at 30 seconds and at 120 seconds. Third measurement.</p>

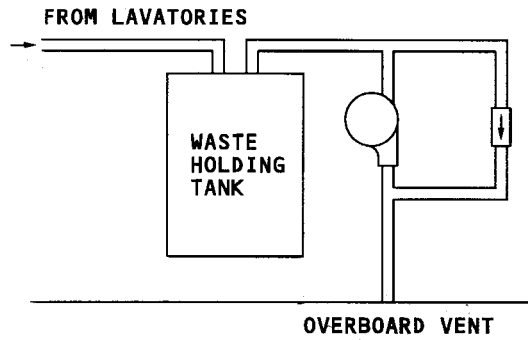
EFFECTIVITY: 404-500,

KSSU

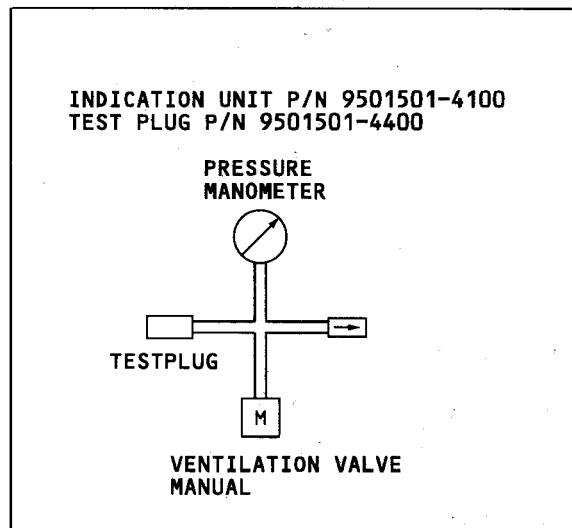
38-35-00

Page 506
Jun 01/14

ACTION	RESULT
<p>At the measuring tool:</p> <ul style="list-style-type: none"> - open the manual ventilation valve and release the pressure. 	
<p>R (a)The average value of the measurements at 30 seconds must not be less than -200 mbar (-2.90 psi).</p>	
<p>R (b)The average value of the measurements at 120 seconds must not be less than -80 mbar (-1.16 psi).</p>	
<p>R (5)Removal of the Test Tool (Ref. Fig. 501) WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU REMOVE THE TEST TOOL.</p>	
<p>R (a)Disconnect the measuring part and the adapter of the test tool kit from the overboard vent.</p>	
<p>R (b)Clean the component interface and the adjacent area.</p>	
<p>R (6)Close-Up</p>	
<p>R (a)Make sure that working area is clean and clear of tools and miscellaneous items of equipment.</p>	
<p>R (b)Close access door (162AZ) and BULK cargo compartment door (Z813).</p>	
<p>R (c)Remove access platforms.</p>	



TOOL KIT P/N 9501501-4000



BM6 38 35 00 5 AAMD 00

Measuring Tool
Figure 501

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 508
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

VACUUM TOILET SYSTEM - CLEANING/PAINTING

WARNING : DO NOT DO WORK ON THE TOILET WASTE SYSTEM AND THE POTABLE WATER SYSTEM AT THE SAME TIME. THIS WILL PREVENT CONTAMINATION OF THE POTABLE WATER SYSTEM. SUCH CONTAMINATION CAN BE DANGEROUS TO HEALTH.

WARNING : ALWAYS USE RUBBER GLOVES WHEN YOU DO WORK:
- ON THE TOILET WASTE SYSTEM, OR
- ON PARTS THAT HAVE CONTAMINATION FROM THE WASTE SYSTEM.
WHEN YOU COMPLETE THE WORK PROCEDURE, CLEAN YOUR HANDS WITH SOAP AND WATER.
THIS WILL PREVENT INFECTION (TOILET WASTE IS DANGEROUS TO HEALTH).

WARNING : WHEN YOU REMOVE A COMPONENT OF THE TOILET WASTE SYSTEM, ALWAYS PUT IT IN A PLASTIC BAG, THEN SEAL THE BAG.
DO NOT PUT DOCUMENTS INTO THE PLASTIC BAG. SEAL THE BAG FIRST, THEN ATTACH THE DOCUMENT TO IT.
THIS WILL PREVENT INFECTION (CONTAMINATION FROM TOILET CAN BE DANGEROUS TO HEALTH).

CAUTION : DAMAGE TO TANKS WILL OCCUR IF WATER IS ALLOWED TO FREEZE.

1. Reasons for the Job

- A. Removal of Obstruction from Toilet Bowl
- B. Cleaning and Disinfection of Toilet Unit and Vacuum Waste Line
- C. Cleaning of Waste Tank
- D. Preventive Cleaning of Vacuum Waste Line
- E. High Pressure Cleaning of the Vacuum Waste Line
- F. Special Cleaning of Waste Tank Area and Related Component Inspections
- G. High Pressure Cleaning of the Vacuum Waste Line with VACLAV2

2. Equipment and Materials

ITEM	DESIGNATION
A.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
B.	Ground Support Unit Commercially Available Equipment - Electrical Power Supply 220 V/50 Hz or 110 V/50 Hz Cleaning pressure 0-100 bar (0-1450 psi) High Pressure Water Hose 10 mm (0.39 in.) dia. Spray Nozzle with six Holes 0.8 mm (0.0315 in.) and a Spray Angle of approx. 40 ° to the Rear or Spray Nozzle with seven Holes 0.8 mm (0.0315 in.) and a Spray Angle of approx. 40 ° to the Rear and one Hole straight ahead. Cleaning pressure 0-100 bar (0-1450 psi) <u>NOTE</u> : Power supply Cable (15 - 30 m) Water Hose (approx. 50 m)

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 701
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

ITEM	DESIGNATION
C.	Vacuum Hose with Filterbox
D.	Toilet Service Vehicle with 1-inch and 4-inch Standard Couplings
E.	Access Platform, 2.3 m (7.50 ft.)
F.	Lint-free Cloth
G.	Crushed Ice
H.	Vinegar-essence (5%)
J.	Plastic sheets
K.	BORESCOPE DIA 25.0 (1.0 IN) - FLEXIBLE
L.	CLEANING EQUIPMENT VACLAV 2 - TANK, INTERNAL
M. Material No. 14-001	Disinfectants (Ref. 20-31-00)
N. Material No. 04-017	Common Greases (Ref. 20-31-00)
O. Material No. 11-028	Cleaning Agents (Ref. 20-31-00)
P. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)
Q. Material No. 14-501	DISINFECTANT (Ref. 20-31-00)

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 12-21-12, P. Block 201	Internal Cleaning
- 21-31-12, P. Block 401	Valve - Cabin Pressure Outflow
- 24-41-00, P. Block 301	AC-External Power Control
- 25-00-00, P. Block 301	Equipment/Furnishings - Servicing
- 25-45-11, P. Block 401	Toilet Shroud
- 25-50-21, P. Block 401	Heat and Sound Insulation
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 25-55-10, P. Block 201	AFT Cargo Compartment Linings
- 38-35-11, P. Block 401	Waste Tank
- 38-35-13, P. Block 401	Toilet Assy
- 38-35-15, P. Block 401	Vacuum Blower
- 38-35-17, P. Block 401	Waste System Dump Valve
- 38-35-29, P. Block 401	Waste Separator
- 38-35-31, P. Block 401	Logic Control Unit
- 38-35-32, P. Block 401	Waste Level Sensor
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- SRM 51-78-40, P. Block 1	(For Corrective Action)

3. Procedure

A. Removal of Obstruction from Toilet Bowl

(1) Job set-up

- (a) Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (b) Make certain that electronics racks ventilation is correct.
- (c) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 702
Jun 01/13

PANEL	SERVICE	IDENT.	LOCATION
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(2)Cleaning

- (a)Connect vacuum hose and filter box between obstructed toilet bowl and functional toilet bowl.

NOTE : Make certain that connections do not leak.

- (b)Flush functional toilet unit until obstructed toilet unit is clear.

- (c)Disconnect vacuum hose and filter box.

(3)Close-up

- (a)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

- (b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

- (c)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

B. Cleaning and Disinfection of Toilet Unit and Vacuum Waste Line

(1)Job set-up

- (a)Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

- (b)Make certain that electronics racks ventilation is correct.

- (c)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/LH	10MG	C 8

- (d)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(2)Cleaning

- (a)Clean toilet unit and toilet unit area with disinfectant and lint-free cloth.

- (b)Put 1 l (0.26 US gal.) disinfectant fluid Material No. 14-001 in all toilet bowls, and flush toilet units.

(3)Close-up

- (a)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

- (b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

- (c)Install toilet shroud (Ref. 25-45-11, P. Block 401).

- (d)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 703
Jun 01/13

C. Cleaning of Waste Tank (Ref. Fig. 704)**(1) Job set-up**

CAUTION : DAMAGE TO TANKS WILL OCCUR IF WATER IS ALLOWED TO FREEZE.

(a) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(b) Position access platform at Bulk cargo compartment.

(c) Open Bulk cargo compartment door (Z813).

(d) Open access door (162AZ).

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(e) Remove the top waste level sensor from waste tank (Ref. 38-35-32, P. Block 401).

(f) Connect waste drain hose of service vehicle to waste service panel.

(g) Connect clean water supply to ground support unit.

(h) Connect electrical power to ground support unit.

(j) Attach clean water supply to level sensor flange of waste tank.

NOTE : Make certain that tapered plug of the cleaning adapter is secured in the tank.

(k) Open waste drain valve.

(2) Cleaning

(a) Energize ground support unit.

(b) Open shutoff valve and adjust cleaning pressure to 9.3 bar (135 psi).

(c) Flush until clear water flows out of waste drain valve.

(d) Flush for 1 minute with disinfecting fluid Material No. 14-001.

(e) Reduce cleaning pressure to minimum and close shutoff valve.

(f) De-energize ground support unit.

(g) Make certain that nozzles are clean of disinfectant and calcium (Ref. 38-35-28, P. Block 201).

(h) Make certain that level sensors are clean of disinfectant and calcium.

(3) Close-up

(a) Disconnect clean water supply hose from level sensor flange of waste tank.

(b) Install waste level sensor (Ref. 38-35-32, P. Block 401).

(c) Make certain that working area is clean and clear of miscellaneous items of equipment.

(d) Close access door (162AZ).

(e) Close bulk cargo compartment door (Z 813) and remove access platform.

(f) De-energize aircraft electrical network, and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

(g) Disconnect waste drain hose of service vehicle from waste service panel.

(h) Close waste drain valve.

(j) Disconnect clean water supply from ground support unit.

(k) Disconnect electrical power from ground support unit.

(l) Prime waste tank (Ref. 12-16-38, P. Block 1), if necessary.

D. Preventive Cleaning of Vacuum Waste Lines

NOTE : Application of this preventive cleaning procedure on a weekly basis may reduce material build up in the vacuum waste lines.

(1) Job set-up

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 704
Jun 01/13

AIRCRAFT MAINTENANCE MANUAL

- (a) Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (b) Make certain that electronics racks ventilation is correct.
- (c) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

- (d) Make certain that the portable water system contains water and that it is pressurized.
- (e) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
- (f) Prime waste tank (Ref. 12-16-38, P. Block 1).
- 1 Make sure that each waste tank contains 50 l (13.20 US gal.) of water.

(2) Cleaning with vinegar

- (a) Flush the toilet once, to verify that the system operates normally.
- (b) Put 21 (0.5 US gal.) of vinegar (10% acetic acid) into the toilet bowl for 10 minutes soaking starting at the forward lavatories.

CAUTION : DO NOT LET THE SOLUTION STAY IN THE TOILET BOWL, THE SOLUTION MAY CAUSE CORROSION.

- (c) Put 21 (0.5238 US gal.) of crushed ice into the toilet bowl and flush the toilet immediately 2 times.
 - (d) Flush the toilet immediately.
 - (e) Flush the toilet three more times to make sure that no solution stays in the toilet.
 - (f) Repeat this procedure for each toilet.
- (3) Cleaning with cleaning agent (Mat. No. 11-028)

WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD SUPPLY OF AIR.
OBEY THE MANUFACTURERS INSTRUCTIONS.
PUT ON PROTECTIVE CLOTHING, RUBBER GLOVES, GOGGLES AND A MASK.
DO NOT GET THEM IN YOUR MOUTH.
DO NOT SMOKE.
DO NOT BREATHE THE GAS.
THESE MATERIALS ARE POISONOUS AND SKIN IRRITANTS.
GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

- (a) Flush the toilet assembly, to verify that the system operates normally.

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 705
Jun 01/13

AIRCRAFT MAINTENANCE MANUAL

- (b) Put 1 l (0.2641 US gal.) of cleaning agent (Mat. No. 11-028) into each toilet bowl for 10 minutes soaking starting at the forward lavatories.
- (c) Put 2 l (0.5238 US gal.) of crushed ice into the toilet bowl and flush the toilet immediately 2 times. Do this procedure for all of the toilets in the aircraft starting at the forward lavatories.

NOTE : Start the procedure at the most forward lavatory.
Do not bypass the cleaning agent soaking.

- (d) After approx. 30 minutes, flush the toilet assemblies three times.

(4) Close-up

- (a) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
- (b) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (c) Prime waste tank (Ref. 12-16-38, P. Block 1), if necessary.
- (d) De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

E. High Pressure Cleaning of the Vacuum Waste Line

(1) Job set-up

- (a) Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (b) Make certain that electronics racks ventilation is correct.
- (c) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/LH	10MG	C 8

- (d) Remove toilet shroud (Ref. 25-45-11, P. Block 401).
- (e) Remove the FWD cargo compartment linings (Ref. 25-54-10, P. Block 201) to get access to the vacuum waste lines.
- (f) Remove the AFT cargo compartment linings (Ref. 25-55-10, P. Block 201) to get access to the vacuum waste lines.

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(2) Cleaning

NOTE : Start the cleaning procedure in forward lavatory on the LH or RH side and work towards the rear lavatory.

- (a) Flush the toilet once, to verify that the system operates normally.
- (b) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
- (c) Prime waste tank (Ref. 12-16-38, P. Block 1).
- 1 Make sure that each waste tank contains 50 l (13.20 US gal.) of water.
- (d) Close manual water shutoff valve.
- (e) Disconnect waste line from toilet assy (Ref. 38-35-13, P. Block 401), if necessary remove toilet assy, to gain access to waste line inlet.

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 706
Jun 01/13

(f) Put protective covers on the toilet floor and surrounding carpet.

(g) Adjust water pressure of ground support unit to max. 100 bar (1450 psi).

NOTE : For better cleaning results, use hot water, up to 60 °C (140 °F).

(h) Insert high pressure hose approx. 1 m (3.28 ft.) into the waste line.

NOTE : If necessary lubricate high pressure hose with Silicone grease (Material No. 04-017) to reduce friction between hose and vacuum waste line.

CAUTION : IF NO SUCTION OCCURS WHEN THE FLUSH BUTTON IS PRESSED STOP HIGH PRESSURE WATER SUPPLY AT ONCE, OTHERWISE FLOODING OF THE LAVATORY MAY OCCUR.

(j) Start high pressure water supply and push flush button every 30 sec.

NOTE : Pressing the flush button will start the vacuum generator and the water will be sucked into the waste tank. The vacuum generator will not start when the waste tank is full.

(k) Slowly insert high pressure hose further into vacuum waste line, by moving it forward and backward until vacuum waste line connection of next toilet or waste tank is reached.

NOTE : The approx. position of the spray nozzle can be localized by the noise inside the vacuum waste line. To hear the noise you must be in the FWD or AFT cargo compartment.

(l) If vacuum blower stops, drain waste tank (Ref. 12-16-38, P. Block 1).

(m) Stop high pressure water supply and pull high pressure hose back to initial position.

(n) Repeat cleaning procedure for this vacuum waste line section as necessary.

(p) Remove high pressure hose from waste line.

(q) Remove protective covers from the toilet floor and surrounding carpet.

(r) If necessary install toilet assy and connect waste line to toilet assy (Ref. 38-35-13, P. Block 401).

(s) Repeat cleaning procedure in the next lavatory until all vacuum waste lines are cleaned.

NOTE : Totally blocked or vacuum waste lines which cannot be reached with the high pressure hose must be removed and cleaned separately.

(3) Close-up

(a) Inspect all vacuum waste line connections for leakage.

NOTE : Leakage is not permitted.

(b) Install AFT cargo compartment linings (Ref. 25-55-10, P. Block 201).

(c) Install FWD cargo compartment linings (Ref. 25-54-10, P. Block 201).

(d) Install toilet shroud (Ref. 25-45-11, P. Block 401).

(e) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

(f) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(g) De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

F. Special Cleaning of Waste Tank Area and Related Component Inspections

(1) Job Set-Up

(a) Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 707
Jun 01/13

- (b) Make certain that the electronics racks ventilation is correct.
 - (c) Position the access platform at AFT cargo compartment door (Z812).
 - (d) Open the AFT cargo compartment door (Z812) and secure with the safety lock (Ref. 52-30-00, P. Block 301).
 - (e) Open the access door (162AZ).
 - (f) Remove the waste tank(s) (Ref. 38-35-11, P. Block 401).
 - (g) Remove the insulation blankets from the contaminated area (Ref. 25-50-21, P. Block 401).
- (2) Cleaning
- (a) Clean the contaminated area and the waste tank(s) area (Ref. 12-21-12, P. Block 201).
 - (b) Clean the aircraft structure with cleaning agents (Material No. 11-003) and follow the recommendations as given in (Ref. SRM 51-78-40, P. Block 1).
- (3) Disinfection
- (a) Disinfect the contaminated area and the waste tank(s) area (Ref. 25-00-00, P. Block 301).
 - (b) After disinfection, dry the area and the compartment floor with air at 40 deg. C (104.00 deg. F).
- (4) Inspection
- (a) Do an inspection of the insulation blankets.
 - 1 If the blankets are contaminated, replace them (Ref. 25-50-21, P. Block 401).
 - (b) Do an inspection of the outflow valve.
 - 1 If contamination is found, replace the outflow valve (Ref. 21-31-12, P. Block 401).
 - (c) Do an inspection of the waste dump valve(s).
 - 1 If contamination is found, replace the waste dump valve(s) (Ref. 38-35-17, P. Block 401).
 - (d) Do an inspection of the vacuum blower(s).
 - 1 If contamination is found, replace the vacuum blower(s) (Ref. 38-35-15, P. Block 401).
 - (e) Do an inspection of the logic control unit(s).
 - 1 If contamination is found, replace the logic control unit(s) (Ref. 38-35-31, P. Block 401).
 - (f) Do an inspection of the water separator(s).
 - 1 If contamination is found, replace the water separator(s) (Ref. 38-35-31, P. Block 401).
 - (g) Do an inspection of the waste level sensors.
 - 1 If contamination is found, replace the waste level sensors (Ref. 38-35-32, P. Block 401).
- (5) Close-Up
- (a) Install the insulation blankets.
 - (b) Install the waste tank(s) (Ref. 38-35-11, P. Block 401).
 - (c) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
 - (d) Close the access door (162AZ).
 - (e) Close the AFT cargo compartment door (Z812) (Ref. 52-30-00, P. Block 301).
 - (f) Remove the access platform.
 - (g) De-energize the aircraft electrical network and disconnect

AIRCRAFT MAINTENANCE MANUAL

the electrical ground power unit (Ref. 24-41-00, P. Block 301).

G. Cleaning of the Toilet Waste Lines with High Pressure Equipment VACLAV 2

WARNING : ALWAYS PUT ON RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES
TO PREVENT INFECTION WHEN YOU DO THIS WORK.

(Ref. Fig. 701)

(Ref. Fig. 702)

(Ref. Fig. 703)

(1) Job Set-Up

(a) Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

(b) Make certain that electronics racks ventilation is correct.

(c) Make sure that the following circuit breakers are closed.

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING.

(d) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

(e) Close the water shutoff valves in the lavatories.

(f) Disinfect the toilet assemblies:

WARNING : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THE SPECIAL MATERIAL. THIS MATERIAL IS DANGEROUS.

1 Put 4.5 l (1.1887 USgal) of DISINFECTANTS (Material No. 14-001A) in each toilet assembly on the two sides of the aircraft.

2 Flush the toilet assemblies.

3 Apply DISINFECTANTS (Material No. 14-501) to the toilet bowl, the flush valves and other contaminated areas.

NOTE : If a toilet waste line is blocked, it is necessary to remove and clean the line before you can continue this procedure.

(g) Drain the waste holding tanks (Ref. 12-16-38, P. Block 1).

(h) Put plastic sheets on the floor of the lavatory and the adjacent area to give protection the floor coverings.

(j) Disconnect only one of the forward toilet assemblies from the aircraft waste system.

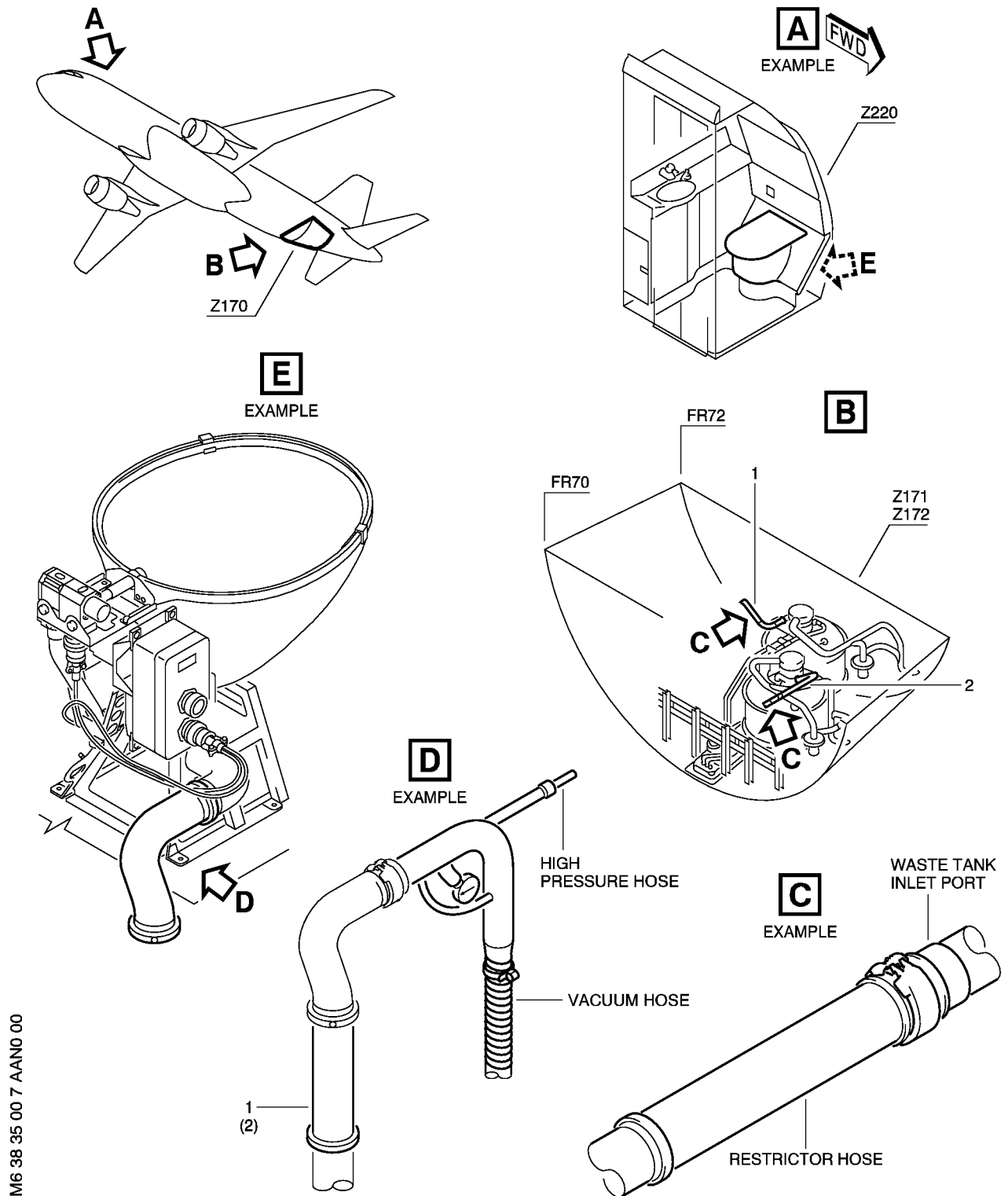
(k) Remove the short waste line (1) or (2) of the related waste tank inlet port.

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 709
Jun 01/13



BM6 38 35 00 7 AAN0 00

**Adapter and Restrictor Arrangement
Figure 701**

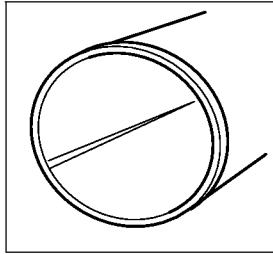
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KSSU

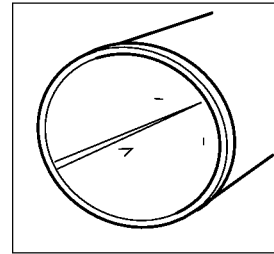
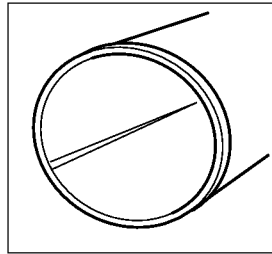
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Page 710
Jun 01/13

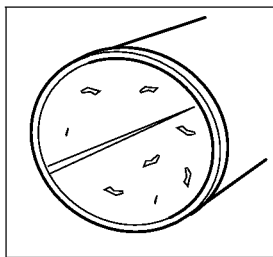
WASTE LINE CONDITIONS



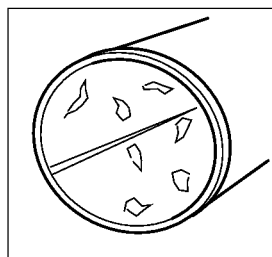
DARK TYPE < NEW > LIGHT TYPE



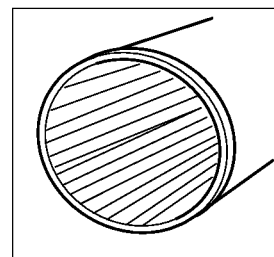
CONDITION 1 / FILM



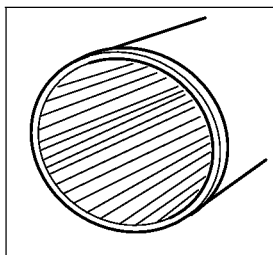
CONDITION 1 LOOSE RESTS



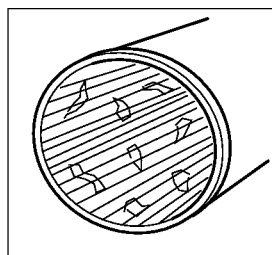
CONDITION 2 SOME PRICKLES



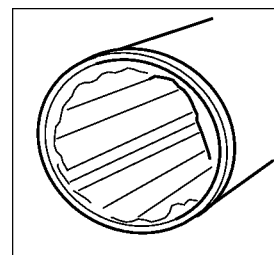
CONDITION 3 THICKER FILM



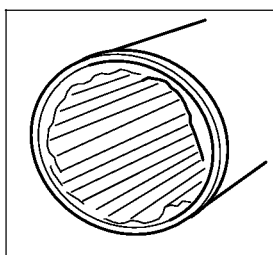
CONDITION 4 CLOSED LAYER



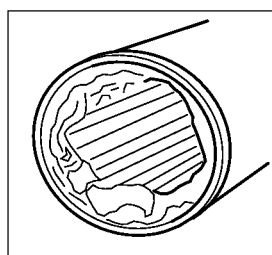
CONDITION 5



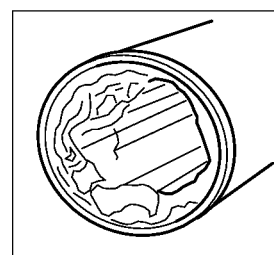
CONDITION 6



CONDITION 7



CONDITION 8



CONDITION 9

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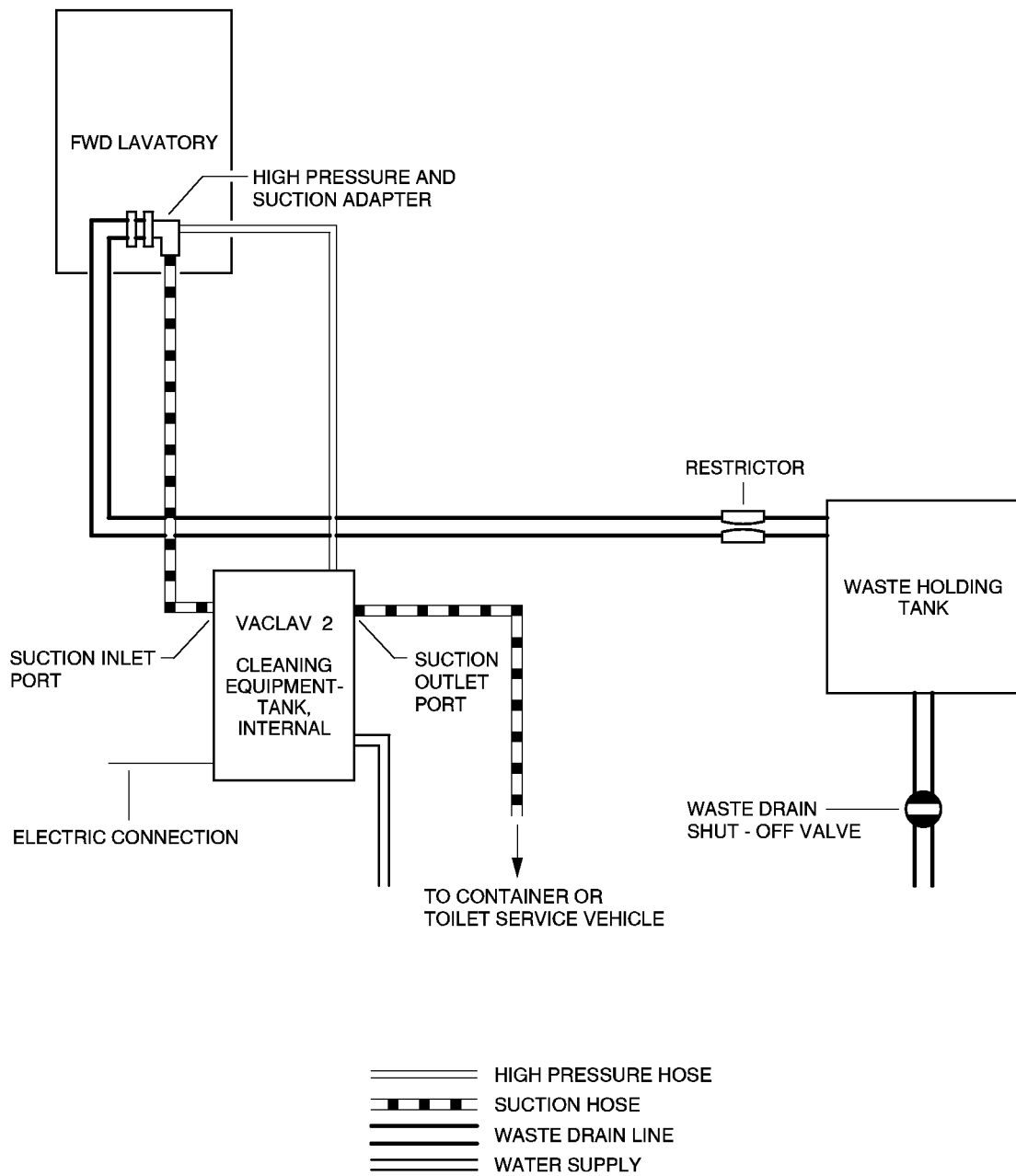
Waste-Line Condition Schematic
Figure 702

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 711
Jun 01/13



VacLav 2 Schematic
Figure 703

BM6 38 35 00 7 AAB0 00

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 712
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

(2) Inside Inspection of Waste Lines

- (a) Use a BORESCOPE DIA 25.0 (1.0 IN) - FLEXIBLE and do the inspection of the waste lines.
- (b) If the contamination is as shown in condition 1 to 5, the cleaning is not necessary.

(3) Cleaning of the Toilet Waste Lines

WARNING : ALWAYS PUT ON RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES TO PREVENT INFECTION WHEN YOU DO THIS WORK.

CAUTION : MAKE SURE THAT THE WATER TEMPERATURE IS NOT HIGHER THAN 60 DEG.C (140.00 DEG.F). IF IT IS HIGHER, IT CAN CAUSE DAMAGE TO THE COMPONENT.

NOTE : It is necessary to start the procedure at the forward toilet.

- (a) Install the removed waste line (1) or (2) to the waste line of the removed toilet assembly.

NOTE : It is not necessary to disconnect the electrical connectors for this procedure.

- (b) Put the CLEANING EQUIPMENT VACLAV 2 - TANK, INTERNAL in position at the forward area of the airplane.

- (c) Clean the toilet waste lines.

- (d) Preparation of the High Pressure Cleaner and the Vacuum Pump

- 1 Install the suction and pressure adapter on the waste line from the toilet assembly.

NOTE : It is necessary to do the cleaning only in the direction of the waste holding tank.

- 2 Install the restrictor hose assembly between the waste line and the waste inlet port.

- 3 Attach the suction hose of the high pressure cleaner to the suction and pressure adapter.

- 4 Attach the high pressure hose of the high pressure cleaner to the spray nozzle of the suction and pressure adapter.

- 5 Turn the main switch of the vacuum service vehicle and that of the high pressure pump to the ON position.

- 6 Operation of the High Pressure Cleaning Equipment

- Let the vacuum pressure increase until it is between 250 mbar (3.62 psi) and 270 mbar (3.91 psi).

- Operate the high-pressure water pump at a maximum pressure of 400 bar (5801.05).

- (e) Slowly push the high pressure hose assembly at a rate of approximately 1 m/min into the waste line until it is near the restrictor hose.

- (f) Stop the high-pressure water pump when it is near the restrictor

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 713
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

hose at the other end of the waste line.

1 While the vacuum source continues to operate:

- Slowly retract the high pressure hose from the waste line.

2 Stop the vacuum source.

(g) Do a boroscope inspection.

(h) If the boroscope inspection shows that the cleaning is not satisfactory:

- Do the cleaning procedure a second time.

(4) Close-Up

(a) Remove the high pressure hose.

(b) Remove the suction hose.

(c) Remove the suction and pressure adapter and the waste line (1) or (2).

(d) Connect the toilet assembly to the waste line.

(e) Remove the restrictor hose assembly from the waste line.

(f) Put the waste line (1) or (2) in position.

(g) Connect the waste holding tank to the waste line.

(h) Install the toilet shroud (Ref. 25-45-11, P. Block 401).

(j) Remove the container.

(k) Make sure that the work area is clean and clear of tools and other items.

(m) De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

(5) Test

(a) Do the leak check of the vacuum system (Ref. TASK

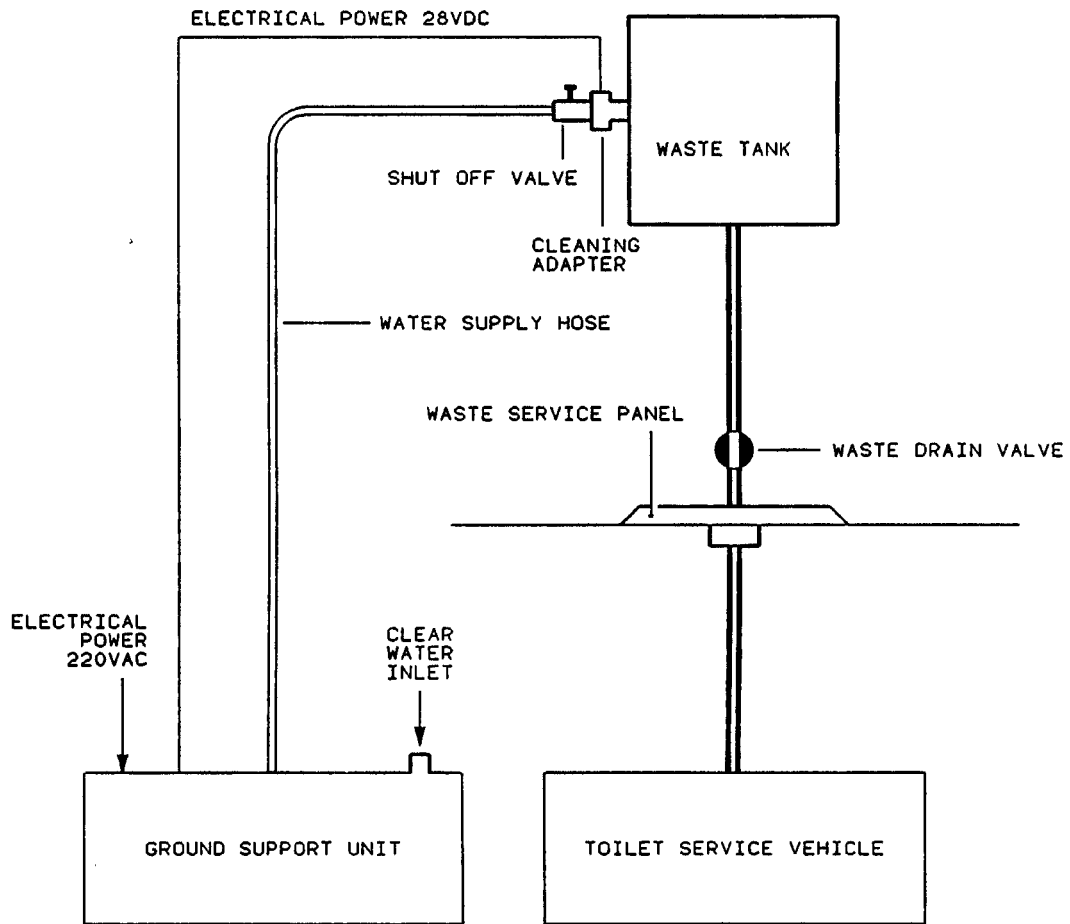
38-31-00-790-801), and examine the connections for leaks. Leaks are not permitted. Do a functional test of the toilet assemblies (Ref. TASK 38-31-00-720-802).

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 714
Jun 01/13



===== WASTE LINE

Waste Tank Cleaning
Figure 704

BM6 38 35 00 7 AAM0 01

R EFFECTIVITY: 404-500,

KSSU

38-35-00

Page 715
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

WASTE TANK - REMOVAL/INSTALLATION

1. Reasons for the Job

- A. Removal for replacement
- B. Removal for repair
- C. Removal for replacement or repair of fixed partition.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 38-35-00, P. Block 501	Vacuum Toilet System
- 38-35-15, P. Block 401	Vacuum Blower
- 38-35-17, P. Block 401	Waste System Dump Valve
- 38-35-19, P. Block 401	Bypass Check Valve - Vent Line
- 38-35-29, P. Block 401	Waste Separator
- 38-35-32, P. Block 401	Waste Level Sensor
- 51-75-10, P. Block 801	Repair of Paint Coatings
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-59, P. Block 401	BULK Cargo Compartment Fixed Partition

3. Procedure

A. Job Set-Up

(1) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3) Position access platform at AFT cargo compartment door (Z812).

(4) Open AFT cargo compartment door (Z812) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(5) Open access door (162AZ).

(6) Remove overboard vent lines (Ref. 38-35-19, P. Block 401).

(7) Remove vacuum blower (Ref. 38-35-15, P. Block 401).

R EFFECTIVITY: 404-500,

KSSU

38-35-11

Page 401
Jun 01/13

- (8) Remove waste level sensor (Ref. 38-35-32, P. Block 401).
- (9) Disconnect and cap flush lines (7) from waste tank (6).
- (10) Disconnect and cap waste lines (5) from waste tank (6).
- (11) Remove waste separator (Ref. 38-35-29, P. Block 401).
- (12) Remove waste system dump valve (Ref. 38-35-17, P. Block 401).
- (13) Remove RH fixed partition in area of access door (162AZ) (Ref. 53-10-59, P. Block 401).

B. Removal

(Ref. Fig. 401)

- (1) Removal of Waste Tanks (6).
 - (a) Remove nuts (1), washers (2) and bolts (3) from brackets (4).
 - (b) Remove bolts (9), washers (10) and bonding strap (11) from console (8).
 - (c) Remove waste tanks (6).

C. Preparation for Installation

- (1) Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.
- (2) Check anchor nuts on console (8) for damage and replace, if necessary.
- (3) Check paint coatings in area of waste tanks for good condition and repaint, if necessary (Ref. 51-75-10, P. Block 801).

D. Installation (Ref. Fig. 401)

NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.

- (1) Position waste tanks (6) to consoles (8).
- (2) Install washers (10), bolts (9) and bonding strap (11).
- (3) Position brackets (4) and install bolts (3), washers (2) and nuts (1).
- (4) Install waste system dump valve (Ref. 38-35-17, P. Block 401).
- (5) Install waste separator (Ref. 38-35-29, P. Block 401).
- (6) Remove blanking caps from disconnected waste lines (5) and connect waste lines to waste tanks (6).
- (7) Remove blanking caps from disconnected flush lines (7) and connect flush lines to waste tanks (6).
- (8) Install waste level sensors (Ref. 38-35-32, P. Block 401).
- (9) Install vacuum blower (Ref. 38-35-15, P. Block 401).
- (10) Install overboard vent lines (Ref. 38-35-19, P. Block 401).

E. Test

- (1) Carry out vacuum toilet system test (Ref. 38-35-00, P. Block 501).

F. Close-Up

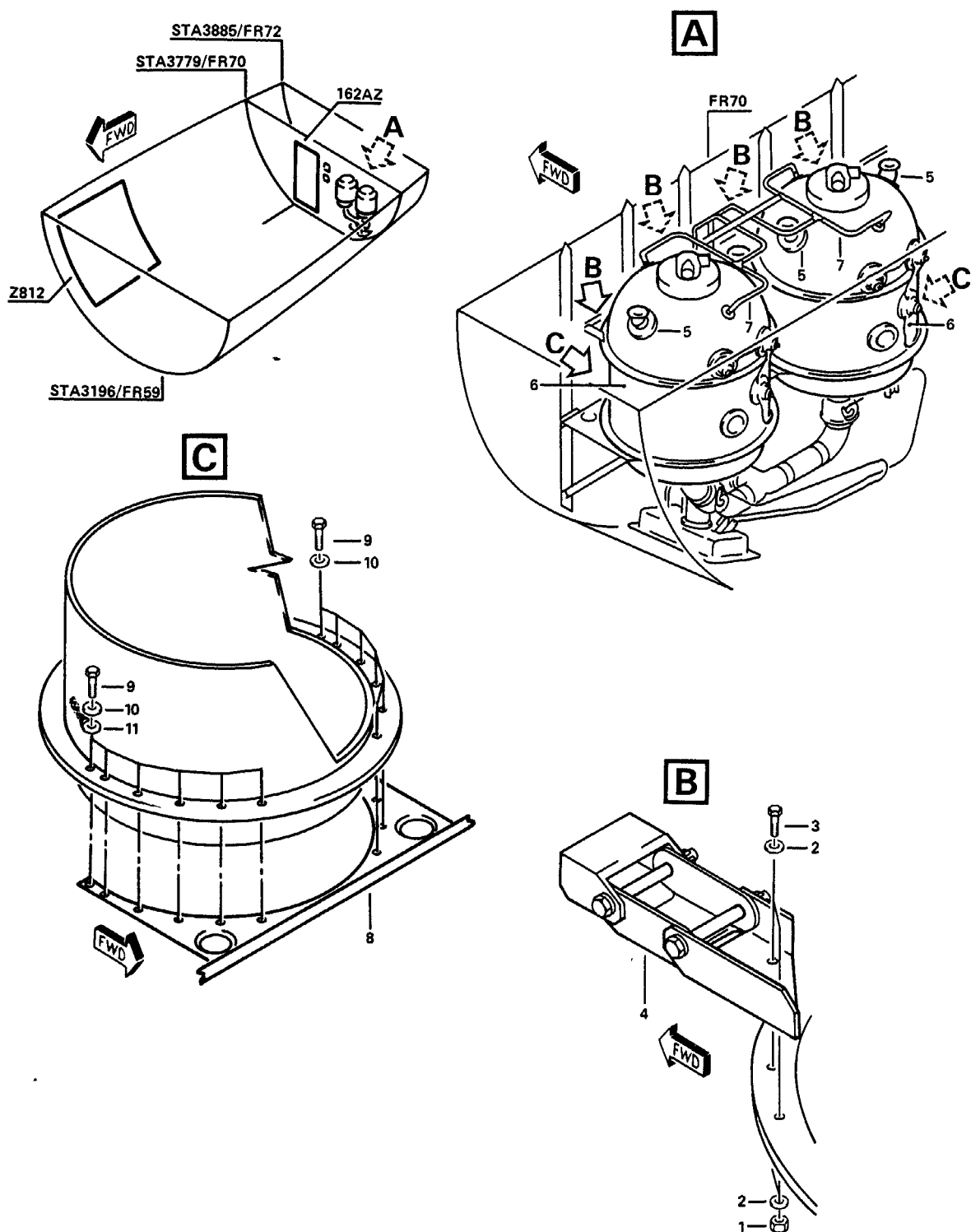
- (1) Install RH fixed partition (Ref. 53-10-59, P. Block 401).
- (2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (3) Close access door (162AZ).
- (4) Remove safety lock (Ref. 52-30-00, P. Block 301) and close AFT cargo compartment door (Z812).
- (5) Remove access platform.
- (6) Remove safety clips and tags and close circuit breakers 111MG, 11MG, 110MG and 10MG.

R EFFECTIVITY: 404-500,

KSSU

38-35-11

Page 402
Jun 01/13



Waste Tank
Figure 401

BM 6 38 35 11 4 AA M 0-23

R EFFECTIVITY: 404-500,

KSSU

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38-35-11

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

(7) Replenish waste tanks (Ref. 12-16-38, P. Block 1) if necessary.

R EFFECTIVITY: 404-500,

KSSU

38-35-11

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

TOILET ASSY - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit, 3-Phase 115/200 V, 100 Hz
D.	O-Rings

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2) Close manual shutoff valve in sanitary unit cabinet.

(3) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal

(Ref. Fig. 401)

(1) Remove toilet assy as follows:

NOTE : The removal of all toilet assy is similar therefore only the removal of one toilet assy is described.

(a) Remove clamshell (4) and slide sleeve (3) over tube (5).

NOTE : Quick-disconnect action of the clamshell (4) enables assembly/ removal by one hand. All three latch pawls must be lifted simultaneously to disengage the latch.

(b) Disconnect electrical plug (6).

(c) Disconnect potable water line (7).

(d) Remove nuts (8) with washers (9).

(e) Lift toilet assy from toilet mounting (10).

(f) Remove sleeve (3) from tube (5).

(g) Remove and discard O-rings (2).

(h) Install blanking caps to tube (5), shutoff valve (1), and potable water line (7).

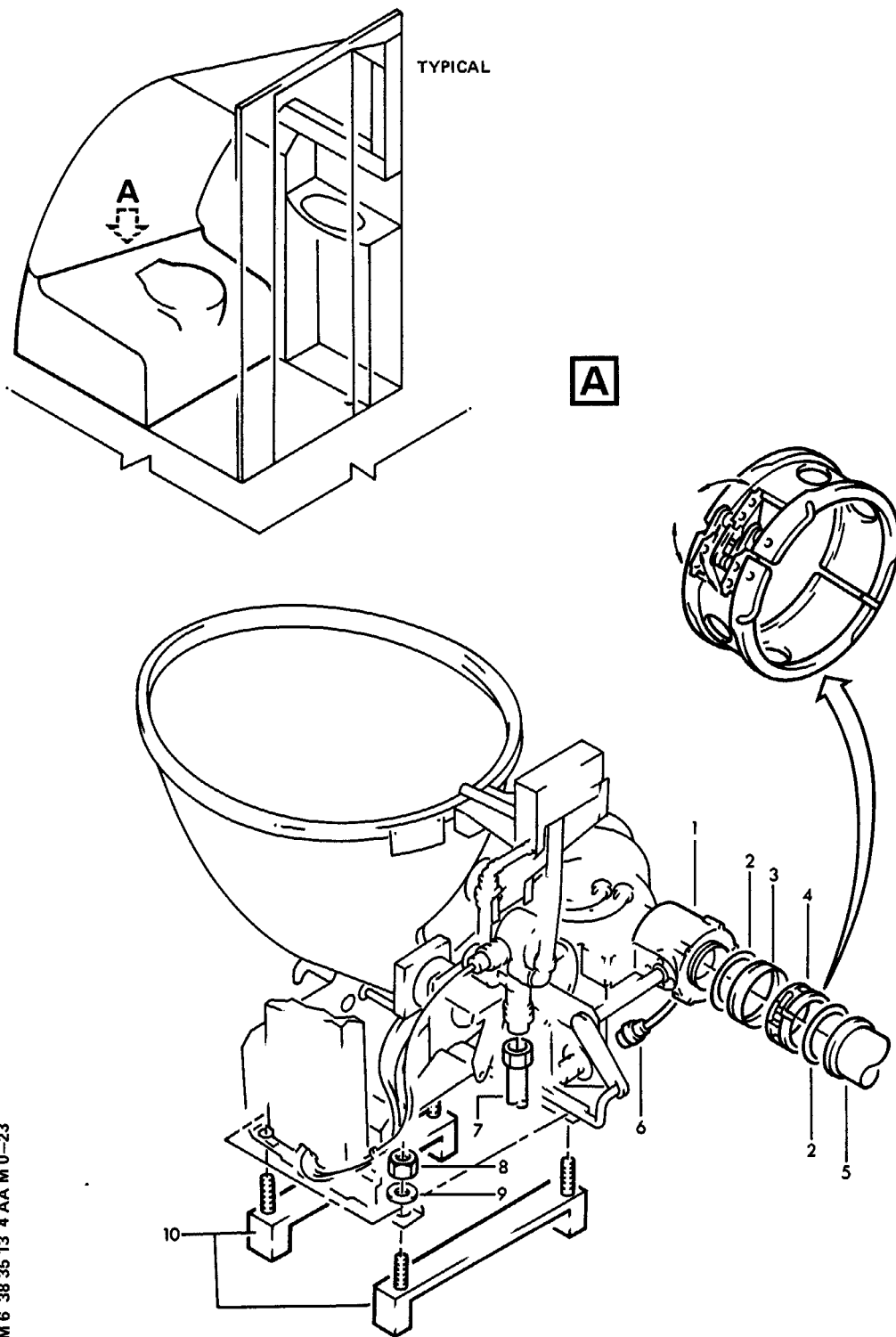
R EFFECTIVITY: 404-500,

KSSU

38-35-13

Page 401
Jun 01/13

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Toilet Assy
Figure 401

BM 6 38 35 13 4 AA M 0-23

R EFFECTIVITY: 404-500,

KSSU

38-35-13

Page 402
Jun 01/13

C. Preparation for Installation

- (1) Make certain that toilet assy is clean and no external damage is visible.
- (2) Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)

- (1) Remove blanking caps from tube (5), shutoff valve (1), and potable water line (7).
- (2) Install new O-ring (2) to shutoff valve (1).
- (3) Install new O-ring (2) to tube (5) and slide sleeve (3) over tube.
- (4) Position toilet assy on toilet mounting (10).
- (5) Slide sleeve (3) over O-rings (2) and install clamshell (1).
- (6) Install washers (9) and nuts (8).
- (7) Connect potable water line (7).
- (8) Connect electrical plug (6).

E. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Replenish potable water system (Ref. 12-15-38, P. Block 1), if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
- (4) Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.
- (5) Open manual shutoff valve in sanitary unit cabinet.
- (6) Inspect potable water line connection for leakage.
NOTE : Leakage is not permissible.
- (7) Flush toilet assy a few times and check for normal operation.
- (8) Inspect waste line connection for leakage.
NOTE : Leakage is not permissible.
- (9) Depressurize air supply system (Ref. 38-40-00, P. Block 301).

F. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.
- (4) Drain potable water system (Ref. 12-24-38, P. Block 1), if necessary.

R EFFECTIVITY: 404-500,

KSSU

38-35-13Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

VACUUM TOILET BOWL - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Packing
E.	Torque Wrench, up to 17 m.daN (150 lbf.in.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-35-25, P. Block 401	Antisiphon Valve
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2) Close manual shutoff valve in sanitary unit cabinet.

(3) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal

(Ref. Fig. 401)

(1) Disconnect the antisiphon valve assembly from the toilet bowl

(Ref. 38-35-25, P. Block 401).

NOTE : The removal of the toilet bowl in all toilet assemblies is similar, therefore, only the removal of one toilet bowl is described and applies to LH and RH toilet assemblies.

(2) Remove the nuts (4) the bolts (2) and the washers (3).

(3) Remove the nut (6) the bolt (5) and the washers (7).

(4) Remove the toilet bowl (1) from the toilet assembly mounting (9).

(5) Remove and discard the packing (8).

(6) If necessary remove the spray ring.

(a) Remove the nuts (11) the bolts (12) the washers (13) and the retaining clips (14).

(b) Lift the spray ring (15) out of the toilet bowl (1).

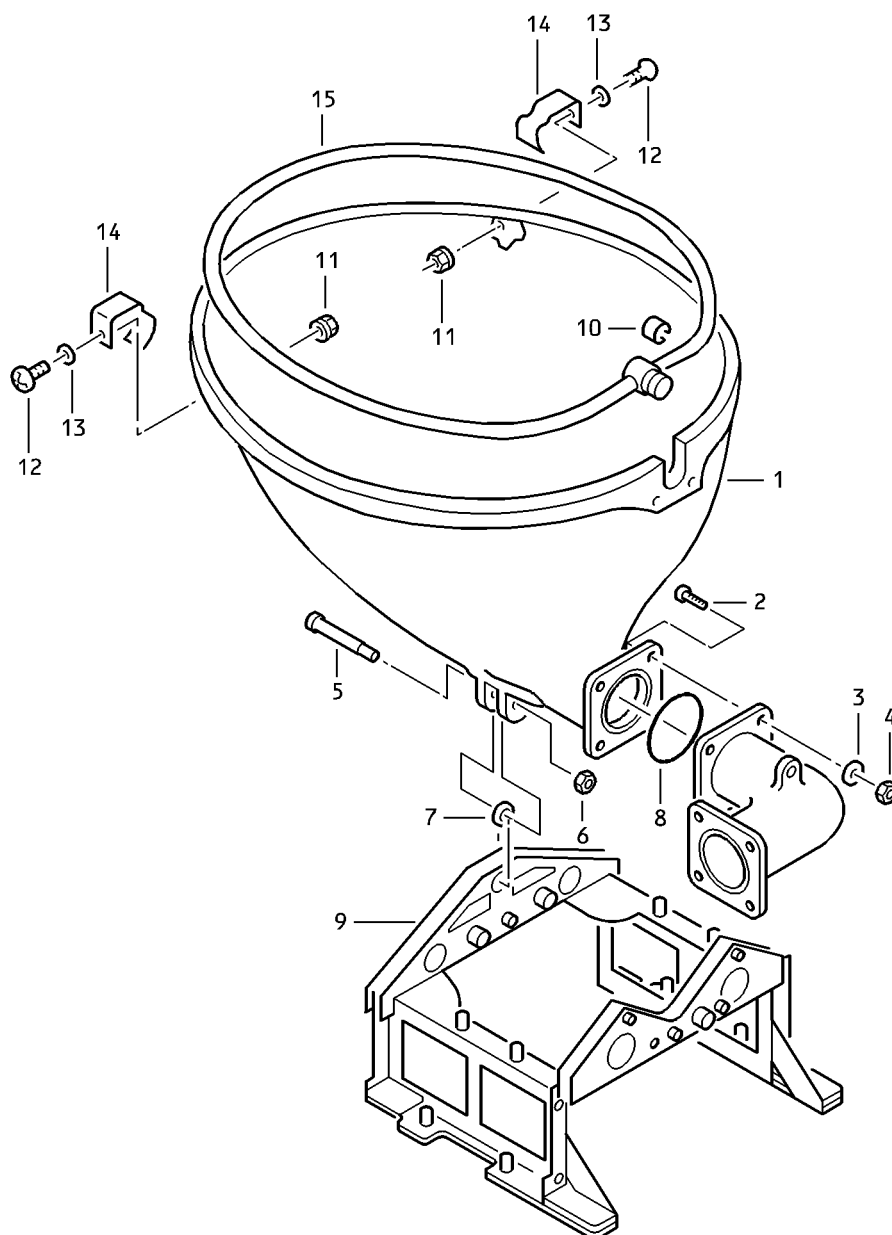
(c) Remove the spacer (10).

R EFFECTIVITY: 404-500,

KSSU

38-35-14

Page 401
Jun 01/13



Vacuum Toilet Bowl
Figure 401

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R EFFECTIVITY: 404-500,

KSSU

38-35-14

Page 402
Jun 01/13

C. Preparation for Installation

- (1) Make sure that all the parts are clean and there is no visible damage.
- (2) Make certain that the installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)

- (1) If necessary install the spray ring.
 - (a) Install the the spacer (10) on the spray ring (15).
 - (b) Put the spray ring (15) in position on the toilet bowl (1).
 - (c) Install the bolts (12) the washers (13) the nuts (11) and the retaining clips (14).
- (2) Install the new packing (8) on the flange of the toilet bowl (1).
- (3) Position the toilet bowl (1) on the toilet assembly mounting (9).
- (4) Install the bolts (2) the washers (3) and the nuts (4).
- (5) **TORQUE** nuts (4) to 80 lbf.in. (9.04 m.daN).
- (6) Install the bolt (5) the washers (7) and the the nut (6).
NOTE : Use the washers (7) as spacers to fill the gaps between the toilet assembly mounting (9) and the mounting lug of the toilet bowl assembly (1).
- (7) **TORQUE** nuts (6) to 150 lbf.in. (16.95 m.daN).
- (8) Reconnect the antisiphon valve assembly to the toilet bowl.

R

E. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Replenish portable water system (Ref. 12-15-38, P. Block 1).
- (4) Pressurize water system (Ref. 38-40-00, P. Block 301).
- (5) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
- (6) Check through inspection hole in antisiphon valve that spring is extended.
- (7) Open manual shutoff valve in sanitary unit cabinet.
- (8) Check through inspection hole in antisiphon valve that spring is compressed.
- (9) Flush toilet assy a few times and check for normal operation.
- (10) Inspect all previously disconnected connections for leakage.
NOTE : Leakage is not permissible.

R

F. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

R EFFECTIVITY: 404-500,

KSSU

38-35-14Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

NOTE : Leakage is not permissible.

R EFFECTIVITY: 404-500,

KSSU

38-35-14

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

FILTER ASSEMBLY - SERVICING

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU DO THIS PROCEDURE.

WARNING : DETERGENT IS DANGEROUS. MANUFACTURER'S RECOMMENDATIONS MUST BE STRICTLY ADHERED TO.

CAUTION : WATER FLUSHING PRESSURE MUST NOT BE MORE THAN 2.76 BAR (40 PSI).

CAUTION : TO PREVENT DAMAGE TO THE FILTER, DO NOT USE SOLVENTS OR GASOLINE TO CLEAN THE FILTER ASSEMBLY.

NOTE : There are two cleaning procedures:

Compressed air cleaning procedure.

This procedure is recommended when the filter assembly has only dust on it.

Detergent and water cleaning procedure.

This procedure is recommended when the filter assembly has a combination of dust and oil on it.

1. Reason for the Job

A. To clean the filter assembly

2. Equipment and Materials

ITEM	DESIGNATION
A.	Container 8 l (2.113 US gal.)
B.	Dry, Compressed Air
C.	Hot Air Blower, with a temperature of not more than 71.1°C (160°F)
D.	Rubber Gloves
E. Material No. 11-001	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- 38-35-15, P. Block 401 Vacuum Blower

3. Procedure

A. Job Set-Up

(1) Compressed air cleaning procedure:

(a) Remove the vacuum blower (Ref. 38-35-15, P. Block 401).

(b) Remove the filter assembly (Ref. 38-35-15, P. Block 401).

(2) Detergent and water cleaning procedure:

(a) Remove the vacuum blower (Ref. 35-35-15, P. Block 401).

(b) Remove the filter assembly (Ref. 35-35-15, P. Block 401).

(c) Mix 28.35 gr (1 Oz.) of detergent (Mat. No. 11-001) with 7.57 l (2 US gal.) of water.

WARNING : USE THE CORRECT PROTECTION. COMPRESSED AIR WILL CAUSE LOOSE PARTICLES THAT CAN GET IN YOUR EYES. THE AIRSTREAM CAN CAUSE CUTS. DO NOT POINT THE AIRSTREAM TOWARD YOURSELF OR OTHER PERSONS.

R EFFECTIVITY: 404-500,

KSSU

38-35-15

Page 301
Jun 01/13

Printed in France

CAUTION : TO PREVENT DAMAGE TO THE FILTER ASSEMBLY, USE COMPRESSED AIR AT A MAXIMUM OF 0.689 BAR (10 PSI.).
KEEP THE NOZZEL A MINIMUM OF 25.4 MM (1 IN.) AWAY FROM FILTER ASSEMBLY.

B. Cleaning the filter assembly

NOTE : If the filter assembly is not damaged it can be cleaned a total of 5 times.

NOTE : Check the filter for marks or dates on it. The filter must be discarded and replaced if there are 5 marks or dates on it.

(1)Compressed air Procedure

- (a)Blow compressed air through the filter assembly in the opposite direction to the normal air flow, until all the dust is removed.
- (b)Hold the filter assembly towards a bright light source.
- (c)Check the filter assembly for tears or holes in the filter material.
- (d)Check the filter assembly for damage to the foam frame.
- (e)If the filter assembly is damaged discard and replace the filter assembly.
- (f)If the filter assembly is not damaged put a mark or the date on the filter assembly.

CAUTION : TO PREVENT DAMAGE TO THE FILTER; DO NOT USE SOLVENTS OR GASOLINE TO CLEAN THE FILTER ASSEMBLY.

(2)Detergent and water Procedure

- (a)Remove any loose dust.
 - 1 Flush the filter assembly under a continuous flow of water not more than 2.76 bar (40 psi) and in the opposite direction to the normal air flow.
- (b)Soak the filter assembly in the detergent and water solution for at least 15 minutes.
 - NOTE** : Do not soak the filter assembly for more than 24 hours.
- (c)Move the filter assembly around in the detergent and water solution to help remove the contamination.
- (d)Remove all suds and contamination.
 - 1 Flush the filter assembly under a continuous flow of water that is not more than 2.76 bar (40 psi) and in the opposite direction to the normal air flow.
- (e))Dry filter assembly.
 - 1 Dry the filter assembly in a warm airflow that is not more than 71.1 C (160 F).
- (f)Hold the filter assembly towards a bright light source.
- (g)Check the filter assembly for tears or holes in the filter material.
- (h)Check the filter assembly for damage to the foam frame.
- (j)If the filter assembly is damaged discard and replace the filter assembly.
- (k)If the filter assembly is not damaged put a mark or the date on the filter assembly.

R EFFECTIVITY: 404-500,

KSSU

38-35-15

Page 302
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

VACUUM BLOWER - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
D.	Blanking Caps

Referenced Procedures

- | | |
|--------------------------|---------------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 20-28-11, P. Block 1 | Electrical Bonding |
| - 24-41-00, P. Block 301 | AC External Power Control |
| - 38-35-15, P. Block 301 | Filter Assembly |

2. Procedure

A. Job Set-Up

- (1) Drain and flush the waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime the waste tank at this stage.

- (2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

- (3) Position access platform at BULK cargo compartment.

- (4) Open BULK cargo compartment door (Z813).

- (5) Open access door (162AZ).

B. Removal

(Ref. Fig. 401)

- (1) Removal of the Vacuum Blower

- (a) Disconnect and cap electrical connector (9) 16MG-A or 116MG-A as required.

- (b) Release the clamps (1), disconnect and cap the hoses (2, 3).

- (c) Remove the bolt (6), washer (7) and bonding strap (8).

- (d) Remove the bolts (4), washers (5) and vacuum blower (10).

NOTE : The vacuum blower weighs 7 kg (15.4 lb.).

- (2) Removal of the Filter Assembly

- (a) Remove the preformed packings (11) which secure the filter assembly (12) to the vacuum blower (10).

NOTE : Retain the packings for reinstallation.

- (b) Remove and inspect the filter assembly (12) (Ref. 38-35-15, P. Block 301).

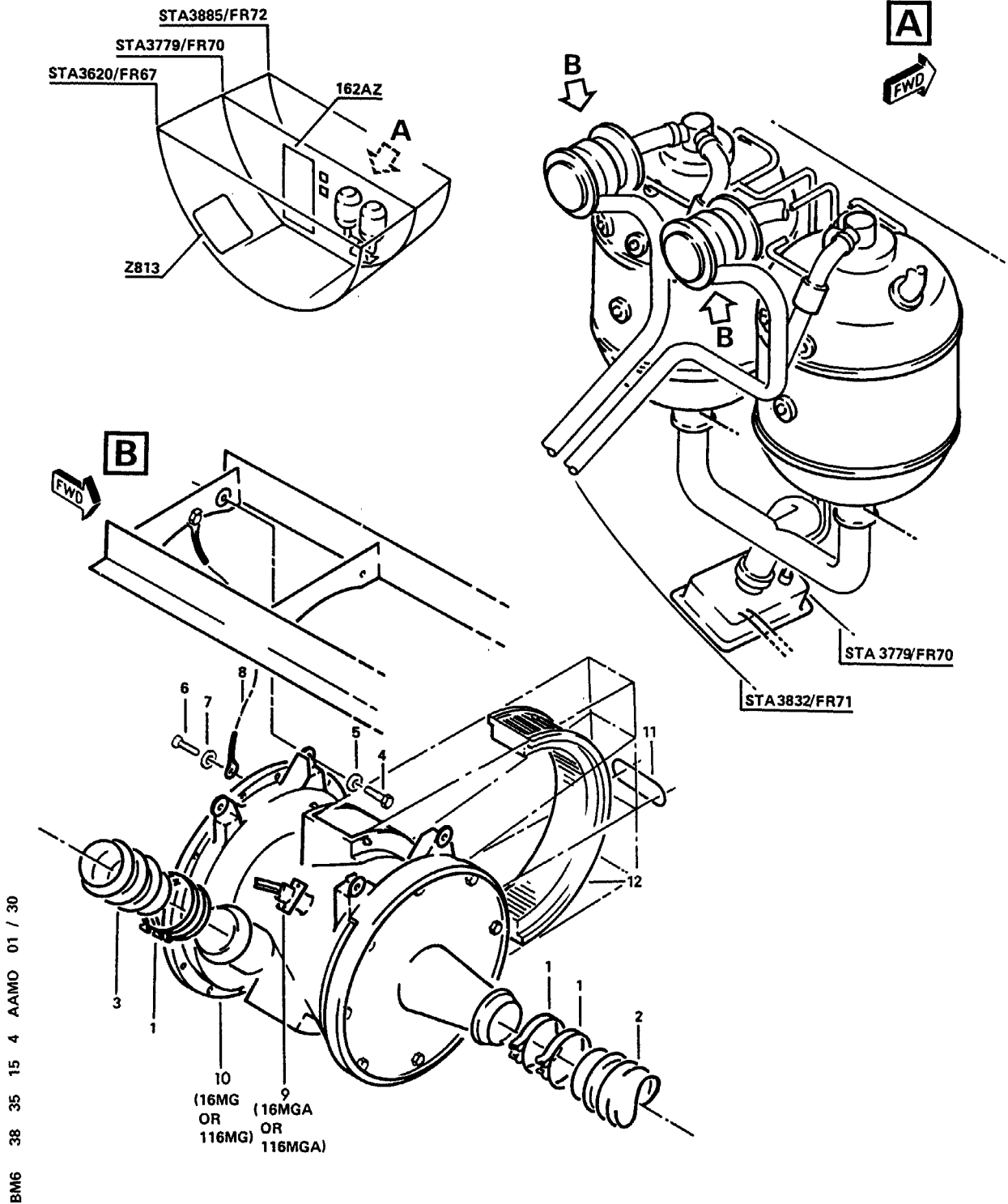
NOTE : If the filter assembly is not damaged, it can be cleaned a

R EFFECTIVITY: 404-500,

KSSU

38-35-15

Page 401
Jun 01/13



Vacuum Blower
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-15

Page 402
Jun 01/13

total of 5 times.

NOTE : Check the filter for marks or dates on it. The filter must be discarded and replaced if there are 5 marks or dates on it.

C. Installation (Ref. Fig. 401)

(1) Installation of Vacuum Blower

NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.

- (a) Position vacuum blower (10) and install washers (5) and bolts (4).
- (b) Remove caps, connect hoses (2, 3) and install clamps (1).
- (c) Install bonding strap (8), washer (7) and bolt (6).
- (d) Connect electrical connector (9) 16MG-A or 116MG-A.

(2) Installation of Filter Assembly

- (a) Install filter assembly (12).
- (b) Install preformed packings (11) and secure filter assembly (12) to vacuum blower (10).

D. Test

- (1) Remove safety clips and tags and close circuit breakers 11MG, 111MG, 10MG and 110MG.
- (2) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (3) Make certain that electronics racks ventilation is correct.
- (4) Make certain that waste service panel access door (171 AL) is closed.
- (5) Press flush switch of corresponding toilet system and check that vacuum blower operates immediately.

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Close access door (162AZ).
- (3) Close BULK cargo compartment door (Z813).
- (4) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
- (5) Replenish waste tank (Ref. 12-16-38, P. Block 1).
- (6) Remove access platform.



AIRCRAFT MAINTENANCE MANUAL

WASTE SYSTEM DUMP VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Spring Pins
D.	Circuit Breaker Safety Clips and Tags
E.	Packings

Referenced Procedure

- 12-16-38, P. Block 1

Replenishing Toilets

2. Procedure

A. Job Set-Up

(1) Drain and flush waste tanks (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3) Position access platform at BULK cargo compartment.

(4) Open BULK cargo compartment door (Z813).

(5) Open access door (162AZ).

R EFFECTIVITY: 404-500,

KSSU

38-35-17

Page 401
Jun 01/13

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B. Removal

(Ref. Fig. 401)

(1) Remove L/H waste system dump valve (9) as follows:

- (a) Disconnect control rod (2) by removing spring pin (3) and pin (4) with washer (5).
- (b) Remove clamp (6) at waste tank (1).
- (c) Open clamshell (7) and remove sleeve (8) from tube (11).
- (d) Remove waste system dump valve (9) with connecting tubes (10, 11).
- (e) Remove clamps (6) and connection tubes (10, 11) from waste system dump valve (9).
- (f) Remove and discard packings (12, 13) from waste system dump valve (9) and from connection tubes (10, 11).

NOTE : When L/H waste system dump valve is to be replaced, remove bolt (14), washer (15) and lever (16). Retain lever (16) for installation on replacement dump valve.

- (g) Fit blanking caps to openings in waste tank (1) and connection tube (17).

(2) Remove R/H waste system dump valve (9) as follows:

- (a) Disconnect control rod (2) by removing spring pin (3) and pin (4) with washer (5).
- (b) Remove clamp (6) at waste tank (1).
- (c) Open clamshell (7) and remove sleeve (8) from tube (17).
- (d) Remove waste system dump valve (9) with connection tube (17).
- (e) Remove clamp (6) and connection tube (17) from waste system dump valve (9).
- (f) Remove and discard packings (12, 13) from waste system dump valve (9) and from connection tube (17).
- (g) Fit blanking caps to openings in waste tank (1) and connection tube (17).

C. Preparation for Installation

- (1) Make certain that waste drain valves (9) operate freely.
- (2) Check that the correct lever (16) is fitted to the L/H waste system dump valve. If necessary, remove lever (18) from waste drain valve and replace retained lever (16) to replacement waste system dump valve.
- (3) Make sure that lever (16) is in the correct position.
- (4) Remove blanking caps from waste tanks (1) and connection tubes (10, 11, 17).
- (5) Fit new packings (12, 13) to the waste system dump valves (9) and the connection tubes (10, 11, 17).

D. Installation (Ref. Fig. 401)

(1) Install L/H waste system dump valve (9) as follows:

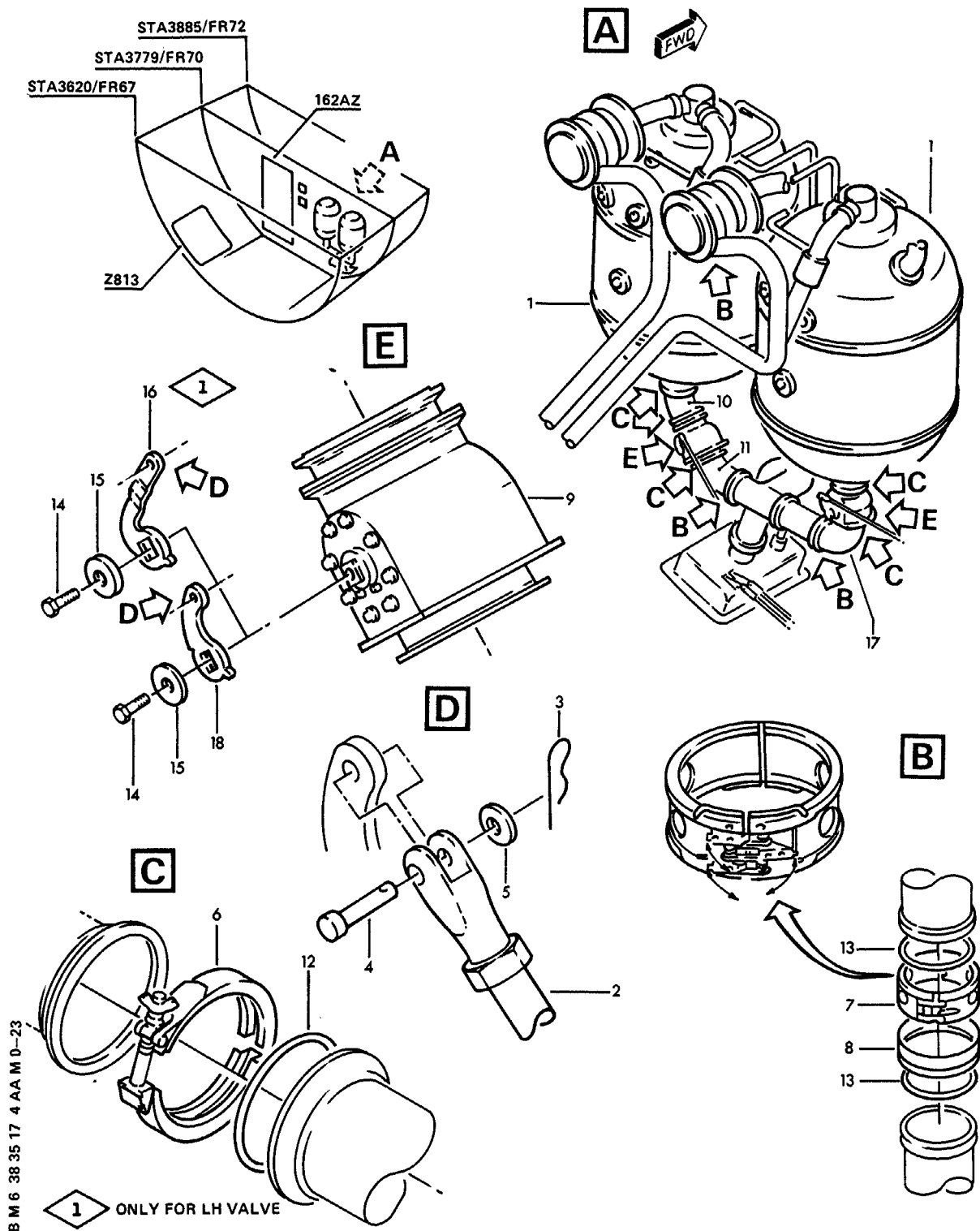
NOTE : Make certain that waste system dump valve arrow is in direction of flow.

- (a) Position connection tubes (10, 11) on waste system dump valve (9) and fit clamps (6). Do not tighten at this stage.
- (b) Position assembly between waste tank (1) and the waste drain line.
- (c) Fit clamp (6) at waste tank (1). Do not tighten at this stage.
- (d) Fit sleeve (8) and clamshell (7) to tube (11).
- (e) Tighten all clamps (6) and clamshell (7).

R EFFECTIVITY: 404-500,

KSSU

38-35-17Page 402
Jun 01/13



Waste System Dump Valve
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-17

Page 403
Jun 01/13

- (f) Connect control rod (2) with pin (4), washer (5) and spring pin (3).
- (2) Install R/H waste system dump valve (3) as follows:

NOTE : Make certain that waste system dump valve arrow is in direction of flow.

- (a) Position connection tube (17) on waste system dump valve (9) and fit clamp (6). Do not tighten at this stage.
- (b) Position assembly between waste tank (1) and the waste drain line.
- (c) Fit clamp (6) at waste tank (1). Do not tighten at this stage.
- (d) Fit sleeve (8) and clamshell (7) to tube (17).
- (e) Tighten all clamps (6) and clamshell (7).
- (f) Connect control rod (2) with pin (4), washer (5) and spring pin (3).

E. Test

- (1) Check waste drain lines by flushing and priming waste tanks (1) (Ref. 12-16-38, P. Block 1).
- (2) Inspect waste drain line connections for leakage.
NOTE : Leakage is not permissible.
- (3) Check operation of waste system dump valves (9) with dump valve control handles on service panel.

F. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Close access door (162AZ).
- (3) Close BULK cargo compartment door (Z813).
- (4) Remove access platform.
- (5) Remove all clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.
- (6) Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

R EFFECTIVITY: 404-500,

KSSU

38-35-17

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

CONTROL CABLE - WASTE SYSTEM DUMP VALVE& REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 2.7 m (9 ft.)
B.	Torque Wrench, up to 1.0 m.daN (88.5 lbf.in.)
C.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
D.	Cotter pins
E. Material No. 04-004	Common Greases (Ref. 20-31-00)
F. Material No. 05-020	Special Materials (Ref. 20-31-00)
G. Material No. 09-002	Sealants (Ref. 20-31-00)
H. Material No. 09-007	Sealants (Ref. 20-31-00)

Referenced Procedures

- 12-16-38, P. Block 1 Replenishing Toilets
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up

- (1) Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).
- (2) Position access platform at BULK cargo compartment door (Z813).
- (3) Open BULK cargo compartment door (Z813).
- (4) Open partition door (162AZ).

B. Removal (Ref. Fig. 401)

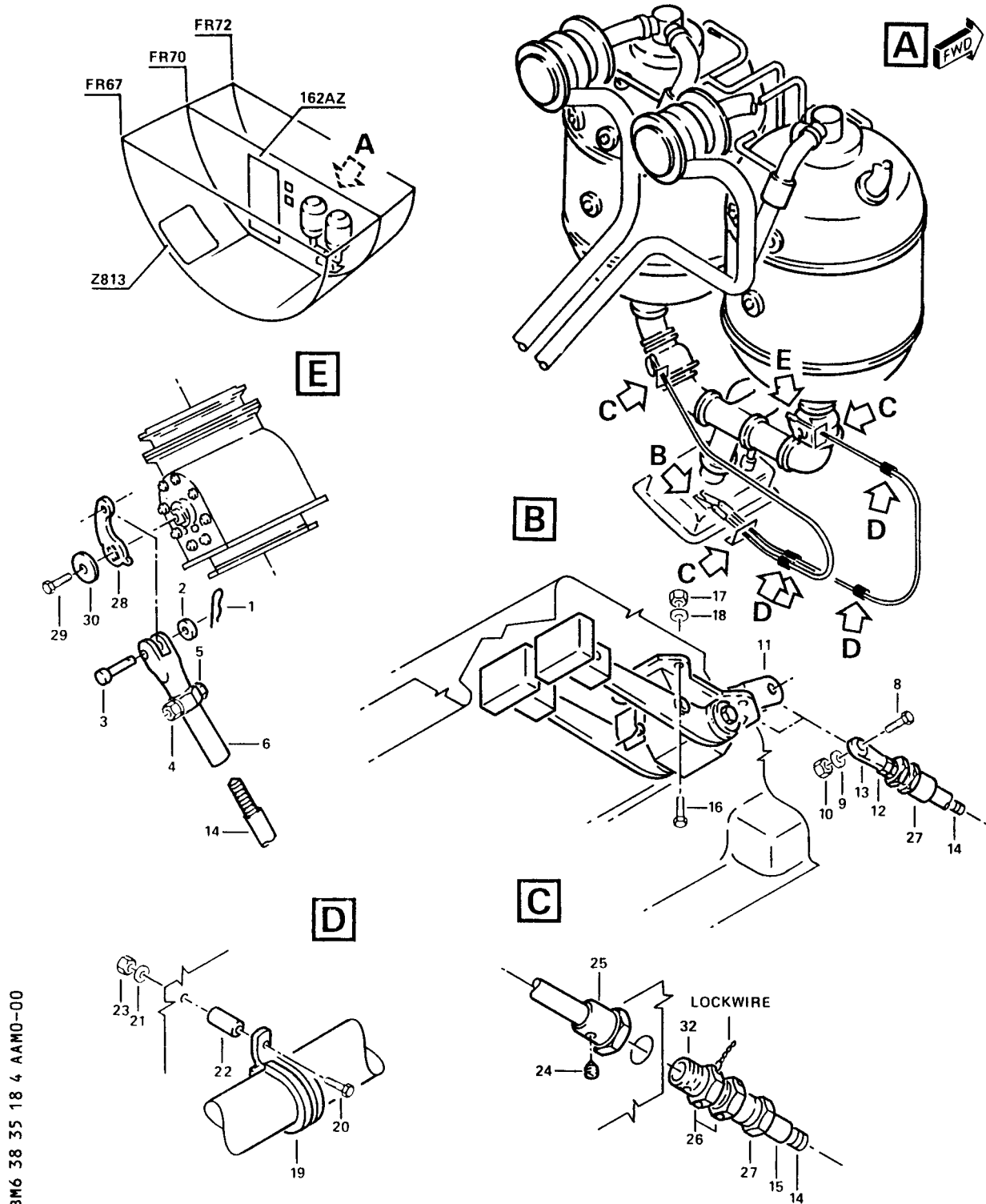
- (1) At dump valve:
 - (a) Remove and discard cotter pin (1).
 - (b) Remove washer (2) and pin (3) from valve lever (28).
 - (c) Loosen nut (4) and bolt (5).
 - (d) Unscrew clevis (6) from cable (14).
NOTE : Rotate clevis clockwise, left-hand thread.
 - (e) Remove lever (28) by removal of bolt (29) and washer (30).
- (2) At waste service panel:
 - (a) Remove nut (10), bolt (8) and washer (9) from dump lever assembly (11).
 - (b) Release lock nuts (12) and unscrew end fitting (13) to reveal cable (14).
 - (c) Pull cable (14) out of tube (15).
- (3) Removal of dump lever assembly (11)
 - (a) Remove nuts (17), bolts (16) and washers (18).
 - (b) Remove dump lever assembly (11).
- (4) Removal of tube (15)
 - (a) Remove all nuts (23), washers (21), spacers (22) and bolts (20).
 - (b) Remove all clamps (19).
 - (c) Release locknuts (27) and remove tube (15).
 - (d) Remove lockwire and release locknuts (26).
 - (e) Remove set screw (24), sleeve (25) and swivel end (32).

R EFFECTIVITY: 404-500,

KSSU

38-35-18

Page 401
Jun 01/13



BM6 38 35 18 4 AAM0-00

Waste System Dump Valve Control Cable
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-18

Page 402
Jun 01/13

C. Preparation for Installation

- (1) Make sure that cable is not kinked or broken.
- (2) Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation (Ref. Fig. 401)

- (1) Installation of tube (15)
 - (a) Install swivel end (32), sleeve (25) and set screw (24).
 - (b) Tighten locknuts (26) and secure with lock wire 0.8 mm (0.032 in.) dia.
 - (c) Install tube (15), tighten nuts (27) secure with lock wire 0.8 mm (0.032 in.) dia.
 - (d) Put clamps (19) in position.
 - (e) Install all bolts (20), spacers (22), washers (21) and nuts (23).
- (2) Installation of dump lever assembly (11)
 - (a) Remove old sealant from waste service panel and dump lever assembly (11).
 - (b) Apply release agent (Mat. No. 05-020) to dump lever assembly base and waste service panel.
 - (c) Put dump lever assembly (11) in position.
 - (d) Install bolts (16), washers (17) and nuts (18).
 - (e) Apply a fillet coating of sealant (Mat. No. 09-007) around base of dump lever assembly (11).
 - (f) Overcoat with sealant (Mat. No. 09-002) when fillet sealant has cured.
- (3) At dump valve:
 - (a) Put lever (28) in position.
 - (b) Install washer (30) and bolt (29).
 - (c) Insert cable (14) in tube (15).
 - (d) Rotate clevis (6) counterclockwise (left hand thread) onto cable (14) until pin hole of clevis (6) is in line with pin hole of lever (28).
 - (e) Temporarily connect clevis (6) to lever (28) with pin (3).
- (4) At waste service panel:

NOTE : Make sure that dump valve lever and handle are in closed position.

 - (a) Screw end fitting (13) on exposed thread of cable (14) and tighten lock nuts (12).
 - (b) Connect end fitting (13) to dump lever assembly (11) using bolt (8), washer (9) and nut (10).
- (5) Adjustment/Test
 - (a) Operate dump levers and make sure that dump valve open and close fully.

NOTE : If adjustment is required, turn clevis (6) in clockwise or counterclockwise direction.
 - (b) Connect clevis (6) to valve lever (28) using pin (3), washer (2) and new cotter pin (1).
 - (b) TORQUE nut (4) to 0.56 m.daN (50 lbf.in.).

E. Close-Up

- (1) Make certain that working area is clean, and clear of tools miscellaneous items of equipment.
- (2) Close partition door (162AZ).
- (3) Close BULK cargo compartment door (Z813)
- (4) Remove access platforms.
- (5) Replenish appropriate toilet system (Ref. 12-16-38, P. Block 1).

R EFFECTIVITY: 404-500,

KSSU

38-35-18Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

CHECK VALVE - VENT LINE - REMOVAL/INSTALLATION

WARNING : CLEANING AGENT (MAT. NO. 11-003) IS DANGEROUS.

NOTE : Removal/Installation procedure is identical for LH and RH
Check Valve - Vent Line.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps
C.	Blanking Plate
D.	Cotter Pins
E.	Circuit Breaker Safety Clips and Tags
F. Material No. 09-019	Sealants (Ref. 20-31-00)
G. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- 12-16-38, P. Block 1 Replenishing Toilets
- 20-28-11, P. Block 1 Electrical Bonding
- 51-76-10, P. Block 801 Repair of Sealing

2. Procedure

A. Job Set-Up

- (1) Drain and flush waste tanks (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tanks at this stage.

- (2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL LH	111MG	J10
800VU	FLUSH CTL RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

- (3) Position access platform and open BULK cargo compartment door (Z813).

- (4) Open access door (162AZ) to gain access to check valves - vent lines.

B. Removal

(Ref. Fig. 401)

- (1) Check Valve

- (a) Release clamps (1) and disconnect hoses (14).
- (b) Remove check valve (15).
- (c) Install blanking caps to disconnected hoses and check valve.

- (2) Vent Line

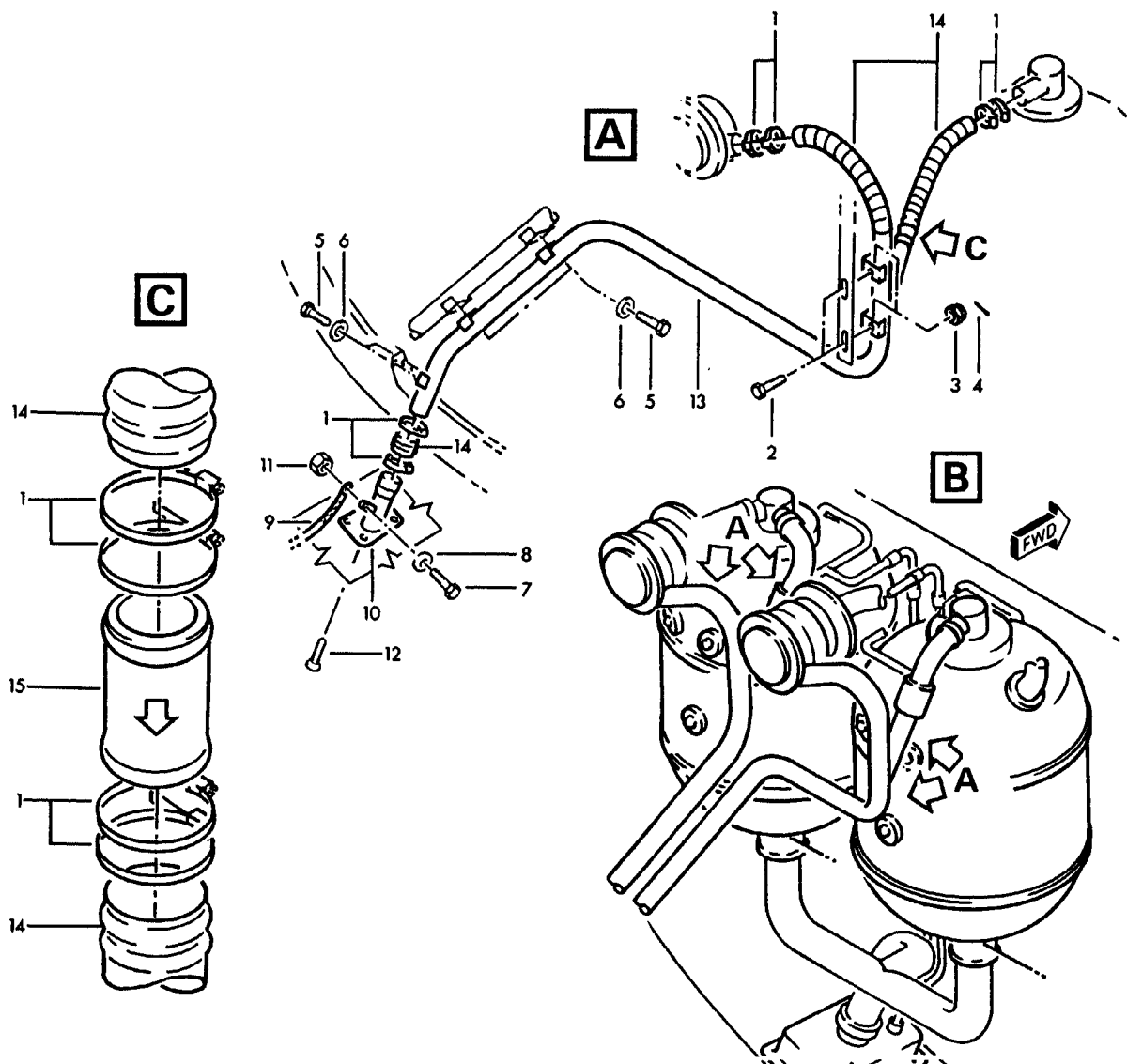
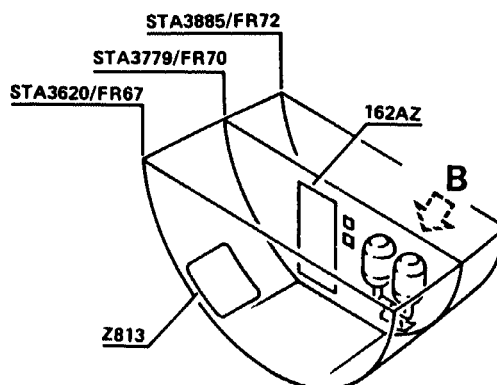
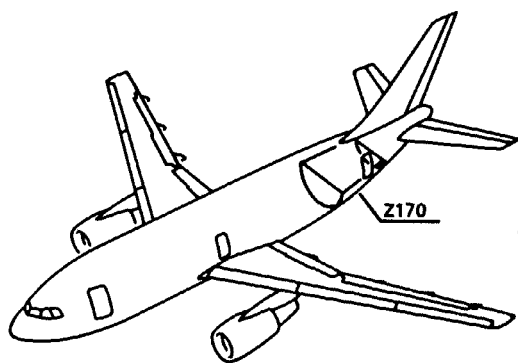
- (a) Remove nut (11), washer (8), screw (7) and bonding strap (9).
- (b) Remove bolts (5) and washers (6).
- (c) Release clamps (1) and disconnect flexible pipes (14).
- (d) Remove cotter pins (4), nuts (3), bolts (2) and vent line (13).

R EFFECTIVITY: 404-500,

KSSU

38-35-19

Page 401
Jun 01/13



Check Valve - Vent Line
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-19

Page 402
Jun 01/13

- (e) Discard cotter pins.
- (f) Remove sealant from plate (10).
- (g) Position access platform under vent line outlet.
- (h) Remove screws (12) and plate (10).
- WARNING** : CLEANING AGENT (MAT. NO. 11-003) IS DANGEROUS.
- (j) Remove sealant remnants from plate (10) and aircraft fuselage with cleaning agent (Mat. No. 11-003).
- (k) Install blanking caps to disconnected hoses and blanking plate to aircraft fuselage.

C. Installation (Ref. Fig. 401)

NOTE : For electrical bonding procedure, refer to (20-28-11, P. Block 1).

(1) Vent line

- (a) Remove blanking caps from disconnected hoses and blanking plate from aircraft fuselage.
- (b) Install plate (10) and screws (12).
- (c) Seal plate (10) with sealant (Mat. No. 09-019) (Ref. 51-76-10, P. Block 801).
- (d) Position vent line (13) and install bolts (2), nuts (3) and new cotter pins (4).
- (e) Connect flexible pipes (14) and secure with clamps (1).
- (f) Install washers (6) and bolts (5).
- (g) Install bonding strap (9), screw (7), washer (8) and nut (11).

(2) Check Valve

- (a) Remove blanking caps from disconnected hoses (14) and check valve (15).
- (b) Install check valve (15) to hoses (14) and secure with clamps (1).

NOTE : Make certain that check valve is installed with arrow towards overboard vent.

D. Close-Up

- (1) Remove safety clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.
- (2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (3) Close access door (162AZ) and BULK cargo compartment door (Z813).
- (4) Remove access platform.
- (5) Prime waste tanks (Ref. 12-16-38, P. Block 1), if necessary.



AIRCRAFT MAINTENANCE MANUAL

FLUSH LINE CHECK VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedure
- 12-16-38, P. Block 1

Replenishing Toilets

2. Procedure

A. Job Set-Up

(1) Drain and flush waste tanks (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3) Position access platform at BULK cargo compartment door (Z813).

(4) Open BULK cargo compartment door (Z813).

(5) Open access door (162AZ).

R EFFECTIVITY: 404-500,

KSSU

38-35-21

Page 401
Jun 01/13

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B. Removal

(Ref. Fig. 401)

(1) Check Valves (2)

- (a) Disconnect unions of hoses (3).
- (b) Remove check valves (2) from tubes (4).
- (c) Install blanking caps on open ends of hoses (3) and tubes (4).

(2) Flush Lines

- (a) Disconnect unions of hoses (6) at toilet service panel (18).
- (b) Remove nuts (9), washers (10) and screws (7).
- (c) Remove tubes (5) with hoses (3, 6).
- (d) Remove clamps (8) from tubes (5) and hoses (6).
- (e) Disconnect hoses (3, 6) from tubes (5).
- (f) Install blanking caps on tubes (5) and hoses (3, 6).
- (g) Remove nuts (15), washers (14) and screws (13).
- (h) Remove angle (12) and clamps (16).
- (j) Remove tubes (4) by disconnecting unions at T-fittings (19).
- (k) Remove tubes (11, 17) by disconnecting unions at waste tanks (1).
- (l) Disconnect tubes (11, 17) from T-fittings (19).
- (m) Install blanking caps to tubes (4, 11, 17), T-fittings (19) and waste tanks (1).

C. Installation (Ref. Fig. 401)**(1) Flush Lines**

- (a) Remove blanking caps from tubes (4, 11, 17), T-fittings (19) and waste tanks (1).
- (b) Connect tubes (11, 17) to T-fittings (19).
- (c) Position tubes (11, 17) on waste tanks (1) and connect unions.
- (d) Connect unions of tubes (4) to T-fittings (19).
- (e) Position clamps (16) and angle (12) on tubes (4, 17).
- (f) Install screws (13), nuts (15) and washers (14).
- (g) Remove blanking caps from hoses (3, 6) and tubes (5).
- (h) Install clamps (8) to tubes (5) and hoses (6).
- (j) Connect hoses (3, 6) to tubes (5).
- (k) Position tubes (5) and hoses (3, 6) on bulkhead.
- (l) Connect unions of hoses (6) at toilet service panel (18).
- (m) Install screws (7), nuts (9) and washers (10).

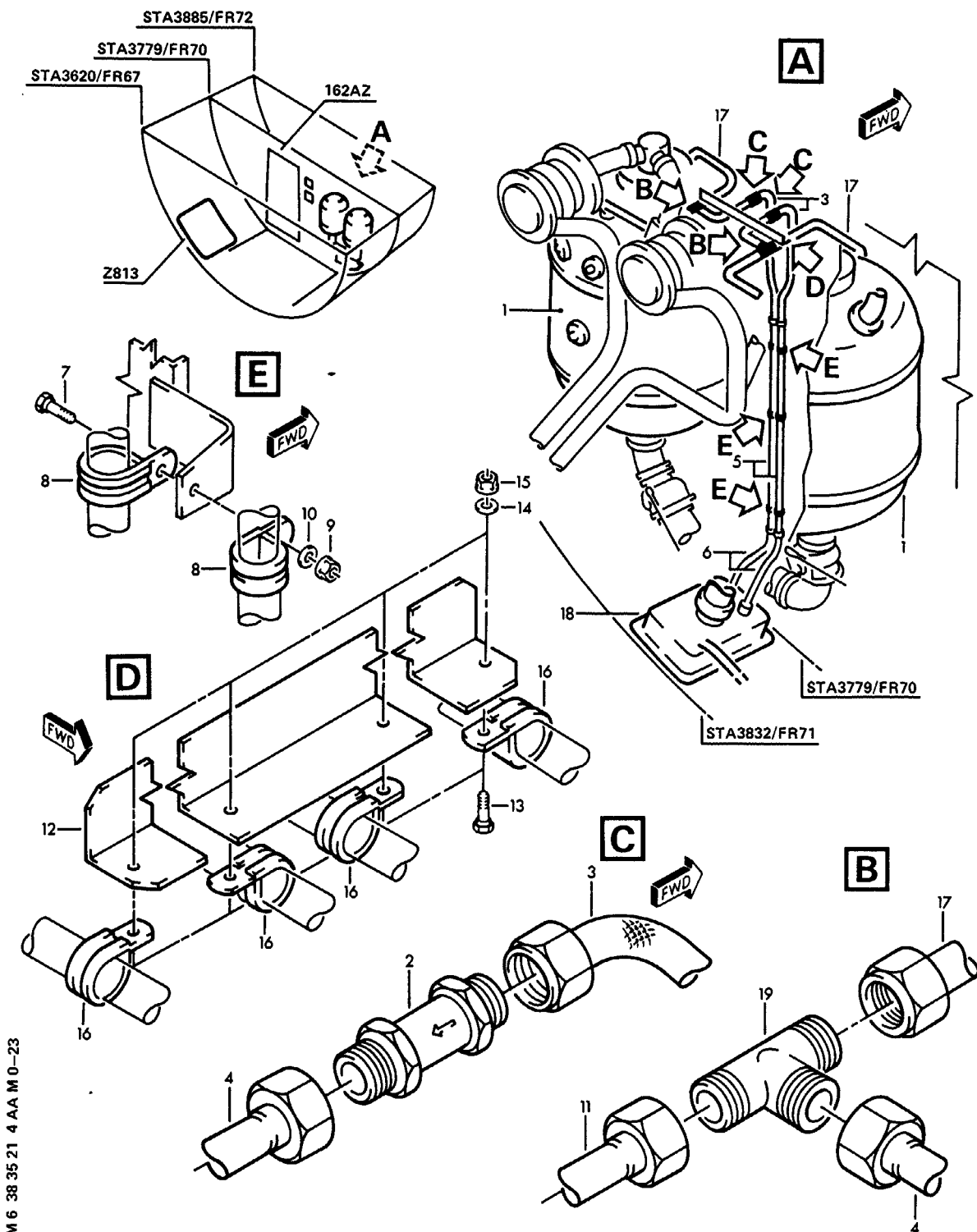
(2) Check Valves (2)

- (a) Remove blanking caps from hoses (3) and tubes (4).
- (b) Install check valves (2) in tubes (4).
- NOTE :** Make certain that check valve arrow is in direction of flow.
- (c) Connect unions of hoses (3) to check valves (2).

R EFFECTIVITY: 404-500,

KSSU

38-35-21Page 402
Jun 01/13



Flush Line - Check Valve
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-21

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

D. Test

(1) Check flush line by flushing and priming waste tanks (1) (Ref. 12-16-38, P. Block 1).

(2) Inspect flush line connections for leakage.

NOTE : Leakage is not permissible.

E. Close-Up

(1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

(2) Close access door (162AZ).

(3) Close BULK cargo compartment door (Z813).

(4) Remove access platform.

(5) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG, 111MG.

(6) Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

R EFFECTIVITY: 404-500,

KSSU

38-35-21

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

SHUTOFF VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire, 0.6 mm (0.024 in.) dia
E.	O-Rings
F.	Packing

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.

(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

R EFFECTIVITY: 404-500,

KSSU

38-35-23

Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

(1) Remove shutoff valve (1) as follows:

NOTE : The removal of all shutoff valves in all toilet assemblies is similar; therefore, only the removal of one shutoff valve is described and applies to LH and RH toilet assemblies.

(a) Remove clamshell (7) and slide sleeve (6) over tube (8).

NOTE : Quick-disconnect action of the clamshell (7) enables assembly/ removal by one hand. All three latch pawls must be lifted simultaneously to disengage the latch.

(b) Loosen set screw (15) and slide arm (14) from shaft (13).

(c) Remove lockwire and loosen nut (4).

(d) Remove nuts (12), washers (11) and screws (10).

(e) Remove shutoff valve (1) from flush valve (2).

(f) Remove shim (9) and retain for reinstallation.

(g) Remove sleeve (6) from tube (8).

(h) Remove and discard O-rings (5).

(j) Remove and discard packing (3).

(k) Install blanking caps to tube (8) flush valve (2) and shutoff valve (1).

C. Preparation for Installation (Ref. Fig. 401)

(1) Make certain that shutoff valve (1) is clean and no external damage is visible.

(2) Remove blanking caps from tube (8), flush valve (2) and shutoff valve (1).

D. Installation (Ref. Fig. 401)

(1) Install new packing (3) to shutoff valve (1).

(2) Slide sleeve (6) over tube (8) and install new O-rings (5) to tube (8) and shutoff valve (1).

(3) Position shutoff valve (1) on flush valve (2).

(4) Slide sleeve (6) over O-rings (5) and install clamshell (7).

(5) Hand tighten nut (4).

(6) Install shim (9) and screws (10) with washers (11) and nuts (12).

(7) Tighten nut (4) and safety with lockwire.

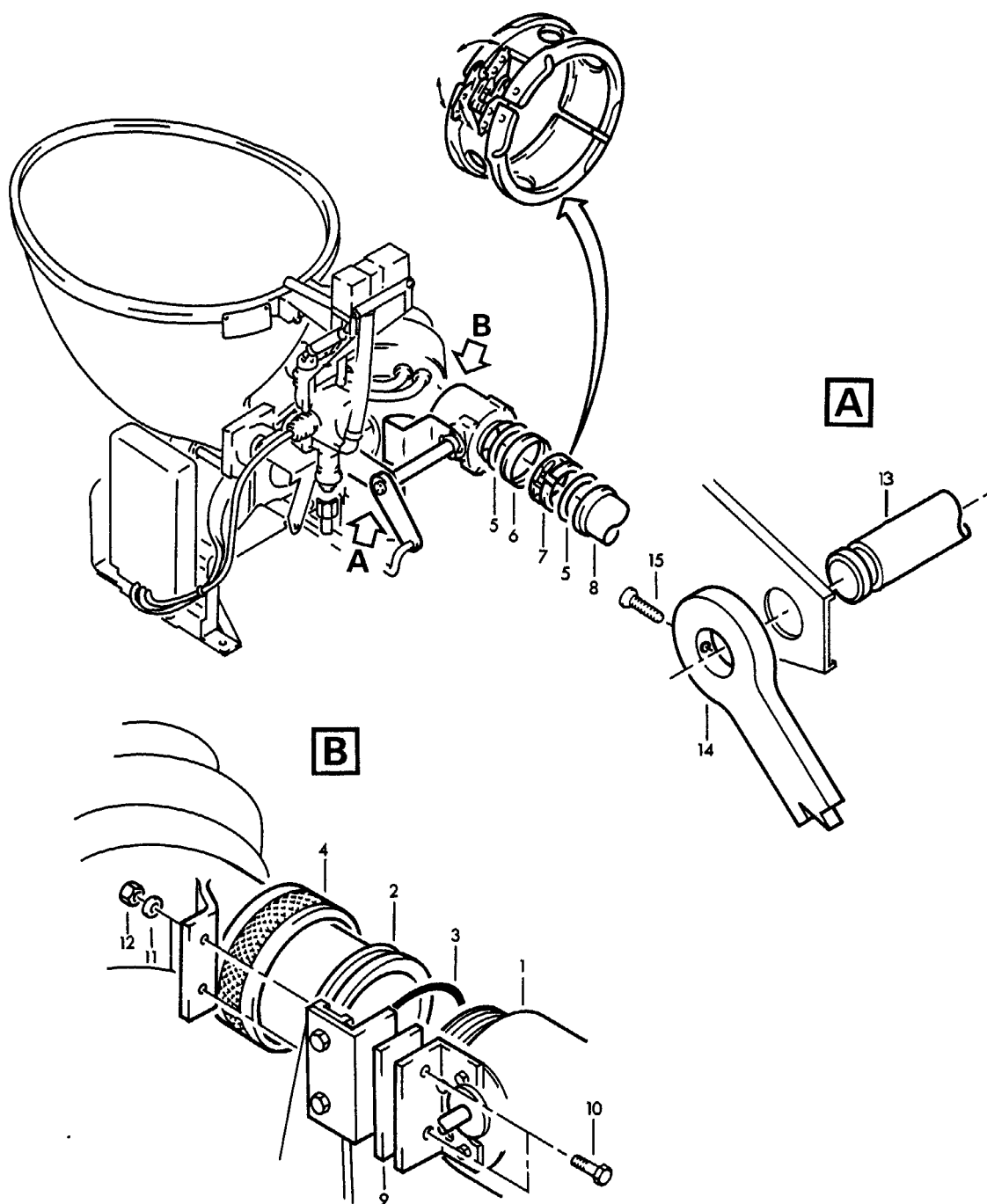
(8) Slide arm (14) over shaft (13).

(9) Tighten setscrew (15).

R EFFECTIVITY: 404-500,

KSSU

38-35-23Page 402
Jun 01/13



Shutoff Valve
Figure 401

BM 6 38 35 23 4 AA M 0-23

R EFFECTIVITY: 404-500,

KSSU

38-35-23

Page 403
Jun 01/13

E. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
- (4) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
- (5) Open manual shutoff valve in sanitary unit cabinet.
- (6) Flush toilet assy a few times and check for normal operation.
- (7) Inspect shutoff valve connections for leakage.

NOTE : Leakage is not permissible.

F. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

R EFFECTIVITY: 404-500,

KSSU

38-35-23

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

ANTISYPHON VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Packing
E.	Torque Wrench, up to 0.5 m.daN (44 lbf.in.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2) Close manual shutoff valve in sanitary unit cabinet.

(3) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

R EFFECTIVITY: 404-500,

KSSU

38-35-25

Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

(1) Remove antisiphon valve (1) as follows:

NOTE : The removal of antisiphon valve in all toilet assemblies is similar, therefore, only the removal of one antisiphon valve is described and applies to LH and RH toilet assemblies.

(a) Remove upper nuts (8), washers (7) and screws (6).

(b) Pull antisiphon valve (1) upwards to free it from tube (9) and hoses (4, 5).

(c) Remove retainer (17).

(d) Remove tube (3) from antisiphon valve (1).

(2) If necessary, remove attachment assemblies as follows:

(a) Remove lower nuts (8), washers (7), screws (6) and spacers (15).

(b) Remove bracket (18) from water valve (2) by removing screws (21), spacers (20) and Belleville washers (19).

(c) Disconnect unions of hoses (4, 5) at water valve (2).

(d) Remove bracket (12) and retainer (16) from toilet bowl (23) by removing bolts (10), washers (11) and nuts (22).

(e) Pull tube (9) from toilet bowl (23).

(f) Remove and discard packings (13, 14) from tubes (3, 9) and hoses (4, 5).

(3) Install blanking caps to all openings in antisiphon valve (1), water valve (2), toilet bowl (23), tubes (3, 9) and hoses (4, 5).

C. Preparation for Installation (Ref. Fig. 401)

(1) Make certain that antisiphon valve (1) and all other parts are clean and no external damage is visible.

(2) Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)

(1) Remove all blanking caps from antisiphon valve (1), water valve (2), toilet bowl (23), tubes (3, 9) and hoses (4, 5).

(2) Install new packings (13, 14) to tubes (3, 9) and hoses (4, 5).

(3) If removed, install attachment assemblies as follows:

(a) Insert tube (9) in toilet bowl (23).

(b) Install bracket (12) and retainer (16) to toilet bowl (23) by installing bolts (10), washers (11) and nuts (22).

(c) TORQUE bolts (10) to 0.395 m.daN (35 lbf.in.).

(d) Connect unions of hoses (4, 5) to water valve (2).

(e) Install bracket (18) to water valve (2) by installing screws (21), spacers (20) and Belleville washers (19).

(f) Install lower screws (6), washers (7), spacers (15) and nuts (8).

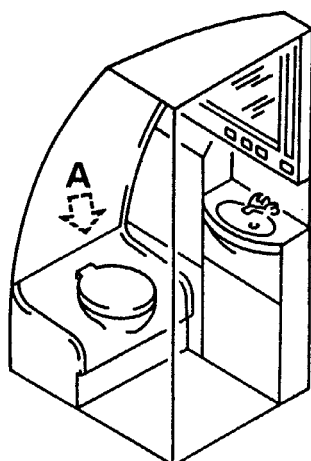
(4) Install antisiphon valve (1) as follows:

(a) Position retainer (17).

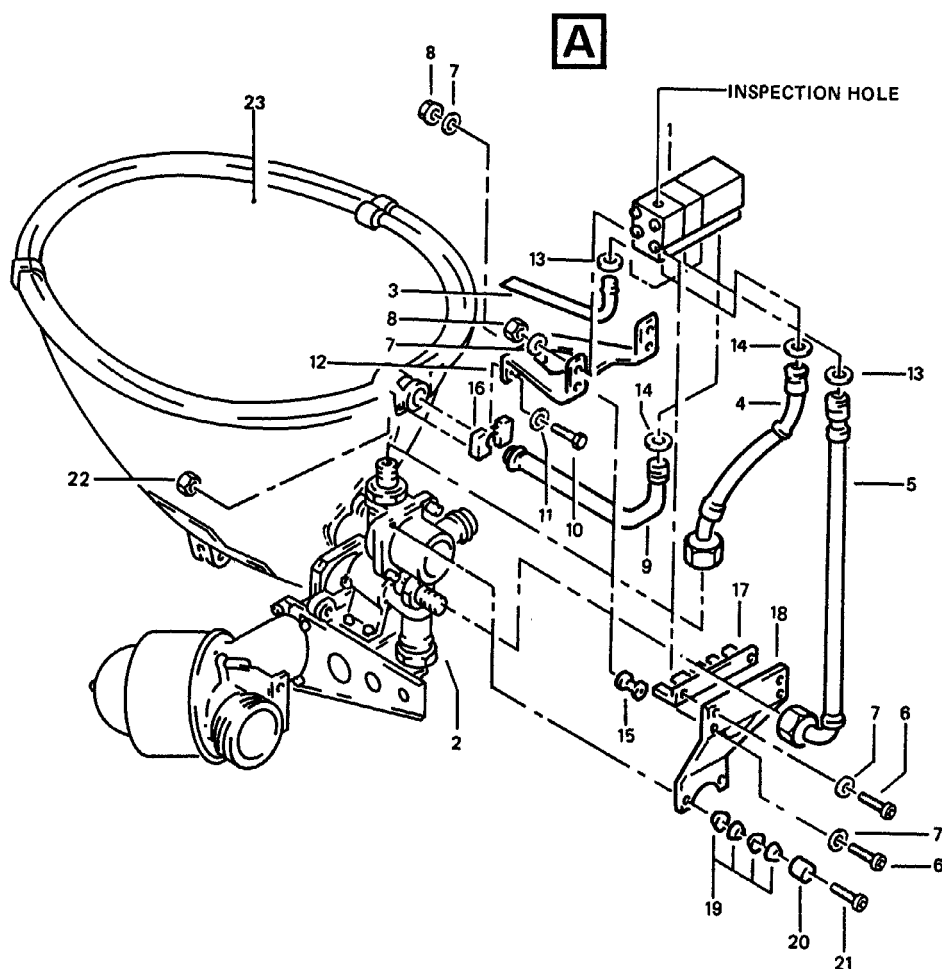
(b) Insert tube (3) in antisiphon valve (1).

(c) Push antisiphon valve (1) down to connect tube (9) and hoses (4, 5).

(d) Install upper nuts (8), washers (7), screws (6).



TYPICAL



Antisiphon Valve
Figure 401

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R EFFECTIVITY: 404-500,

KSSU

38-35-25

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

E. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Replenish portable water system (Ref. 12-15-38, P. Block 1).
- (4) Pressurize water system (Ref. 38-40-00, P. Block 301).
- (5) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
- (6) Check through inspection hole in antisiphon valve that spring is extended.
- (7) Open manual shutoff valve in sanitary unit cabinet.
- (8) Check through inspection hole in antisiphon valve that spring is compressed.
- (9) Flush toilet assy a few times and check for normal operation.
- (10) Inspect all previously disconnected connections for leakage.

NOTE : Leakage is not permissible.

F. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

NOTE : Leakage is not permissible.

R EFFECTIVITY: 404-500,

KSSU

38-35-25

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

FLUSH VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire, 0.5 mm (0.020 in.) dia
E.	Packing

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.

(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

R EFFECTIVITY: 404-500,

KSSU

38-35-27

Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

(1) Remove flush valve (2) as follows:

NOTE : The flush valve is installed in all toilet assemblies therefore only the removal of one flush valve is described and applies to LH and RH toilet assemblies.

- (a) Remove shutoff valve (1) (Ref. 38-35-23, P. Block 401).
- (b) Remove lockwire and disconnect plug (9) from flush valve (2).
- (c) Remove nuts (7), washers (4), bolts (3) and bracket (8).
- (d) Remove flush valve (2) from flange (5).
- (e) Remove and discard packing (6).
- (f) Install blanking caps to flange (5) and flush valve (2).

C. Preparation for Installation (Ref. Fig. 401)

- (1) Make certain that flush valve (2) is clean and free from unwanted material.
- (2) Remove blanking caps from flange (5) and flush valve (2).

D. Installation (Ref. Fig. 401)

- (1) Install new packing (6) to flush valve (2).
- (2) Position flush valve (2) on flange (5).
- (3) Position bracket (8) on flush valve (2).
- (4) Install bolts (3), washers (4) and nuts (7).
- (5) Connect plug (9) to flush valve (2) and safety with lockwire.
- (6) Install shutoff valve (1) (Ref. 38-35-23, P. Block 401).

E. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
 - (2) Make certain that electronics racks ventilation is correct.
 - (3) Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
 - (4) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
 - (5) Open manual shutoff valve in sanitary cabinet.
 - (6) Flush toilet assy a few times and check for normal operation.
 - (7) Inspect flush valve (2) and shutoff valve (1) connections for leakage.
- NOTE** : Leakage is not permissible.

F. Close-Up

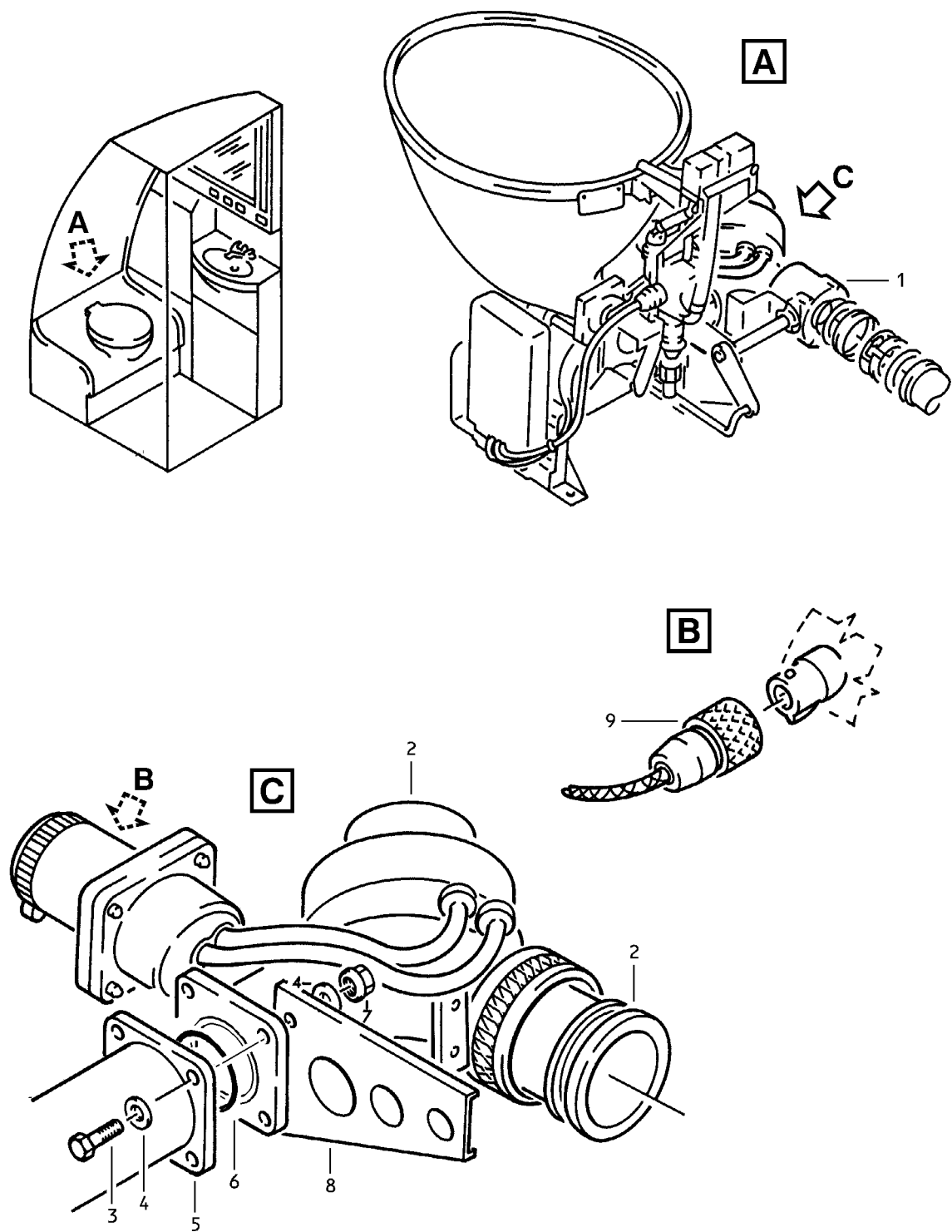
- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

R EFFECTIVITY: 404-500,

KSSU

38-35-27Page 402
Jun 01/13

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Flush Valve
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-27

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

NOZZLE-RINSE - MAINTENANCE PRACTICES

1. Reason for the Job

- A. Removal/Installation of rinse nozzle
- B. Cleaning of rinse nozzle

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags
D.	O-Rings
E.	Torque Wrench, up to 0.8 m.daN (70 lbf. in.)
F. Material No. 04-012	Common Greases (Ref. 20-31-00)
G. Material No. 08-007	Bonding and Adhesive Compounds (Ref. 20-31-00)
H. Decalcification Detergent	Commercial
J.	Metal Vessel

Referenced Procedure

- 12-16-38, P. Block 1 Replenishing Toilets

3. Procedure

A. Job Set-Up

- (1) Drain and flush waste tank (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

- (2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

- (3) Position access platform at BULK cargo compartment.

- (4) Open BULK cargo compartment door (Z813).

- (5) Open access door (162AZ).

R EFFECTIVITY: 404-500,

KSSU

38-35-28

Page 201
Jun 01/13

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B. Removal

(Ref. Fig. 201)

- (1) Remove rinse nozzle (6) as follows:

NOTE : Each waste tank (1) is fitted with two rinse nozzles (6).

All rinse nozzles (6) are identical, therefore the removal of only one rinse nozzle (6) is described.

- (a) Remove and cap flush line (5) from rinse nozzle (6).
- (b) Remove self-locking bolts (4) and washers (3).
- (c) Pull rinse nozzle (6) from waste tank (1).
- (d) Remove and discard O-Ring (2).
- (e) Install blanking cap to opening in waste tank (1).

C. Cleaning**NOTE** : There are two cleaning procedures for the rinse nozzle. One for the assembled nozzle and one for the disassembled nozzle. You can use either procedure.

- (1) Cleaning of rinse nozzle assembly.

- (a) Soak rinse nozzle (6) in decalcification detergent for a while.
- (b) Rinse nozzle with clear water.
- (c) Blow out nozzle caps (8) and floodjet (9) holes with compressed air.

- (2) Cleaning of disassembled rinse nozzle.

- (a) Disassemble rinse nozzle (6).

- 1 Remove (two) nozzle caps (8) and (one) floodjet (9) from rinse nozzle body (6).

- (b) Clean the following parts using decalcification detergent:

- 1 Nozzle caps (8), floodjet (9) and rinse nozzle body (6).

- 2 Let fluid affect parts for a while.

- 3 Clean parts using a brush and wipe dry with a cloth.

- (c) Assemble rinse nozzle (6) as follows:

- 1 Apply LOCKTITE (Mat. No. 08-007) to the threads of the nozzle caps (8) and the floodjet (9).

- 2 Install (one) floodjet (9) and (two) nozzle caps (8).

- 3 Orient the nozzles as shown in detail C on the illustration.

- 4 TORQUE the nozzle caps (8) and the floodjet (9)

- to 0.678 \pm 0.112 m.daN (60 \pm 10 lbf. in.).

D. Preparation for Installation

- (1) Make certain that rinse nozzle (6) is clean.

- (2) Install new O-Ring (2) to rinse nozzle (6).

- (a) Apply grease (Mat. No. 04-012) to the O-ring (2) prior to installation.

- (3) Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

E. Installation (Ref. Fig. 201)

- (1) Remove blanking cap from waste tank (1).

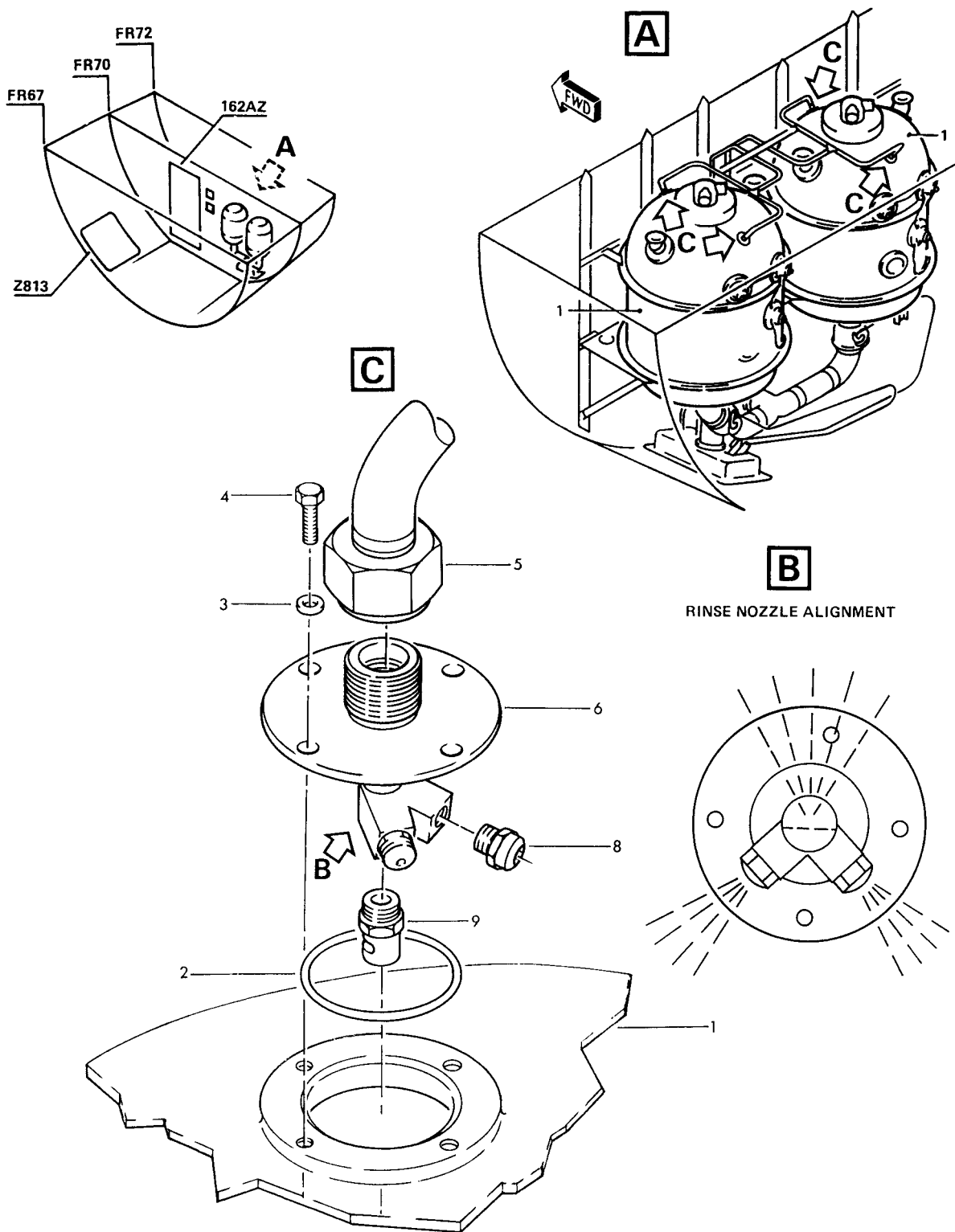
- (2) Install rinse nozzle (6) as follows:

NOTE : Rinse nozzle assembly has an offset bolt hole for nozzle position orientation.

- (a) Insert rinse nozzle (6) in waste tank (1).

- (b) Install self-locking bolts (4) and washers (3).

- (c) TORQUE self-locking bolts (4) to 0.339 \pm 0.056 m.daN (30 \pm 5 lbf. in.).



Rinse Nozzle
Figure 201

BM6 38 35 28 2 AAMO 01

R EFFECTIVITY: 404-500,

KSSU

38-35-28

Page 203
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

(d) Remove blanking cap from flush line (5) and connect flush line (5) to rinse nozzle (6).

F. Test

(1) Flush waste tank (1) (Ref. 12-16-38, P. Block 1) and inspect flush line connection and rinse nozzle flange for leakage.

NOTE : Leakage is not permissible.

G. Close-Up

(1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

(2) Close access door (162AZ).

(3) Close BULK cargo compartment door (Z813).

(4) Remove access platform.

(5) Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.

(6) Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

R EFFECTIVITY: 404-500,

KSSU

38-35-28

Page 204
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

WATER SEPARATOR - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Bristle Brush
D.	Circuit Breaker Safety Clips and Tags
E.	O-Rings
F.	Seals
G. Material No. 11-001	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- 12-16-38, P. Block 1

Replenishing Toilets

2. Procedure

A. Job Set-Up

(1) Drain and flush waste tank (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3) Position access platform at BULK cargo compartment.

(4) Open BULK cargo compartment door (Z813).

(5) Open access door (162AZ).

R EFFECTIVITY: 404-500,

KSSU

38-35-29

Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

(1) Remove water separator assemblies as follows:

NOTE : LH and RH water separator assemblies are identical therefore the removal of only one water separator is described.

- (a) Remove clamps (3) and disconnect hoses (4).
- (b) Remove clamp (2) at waste tank (1).
- (c) Remove air outlet cap (5) with O-ring (6).
- (d) Remove water separator filter element (7) with seal (8).
- (e) Remove water separator inlet assembly (9) from waste tank (1).
- (f) Discard used O-ring (6) and seal (8).
- (g) Fit blanking caps to waste tank and disconnected hoses.

C. Preparation for Installation

(1) Make sure that water separator assembly is clean.

(2) If necessary clean water separator assembly as follows:

(a) Clean the water separator components in warm water, 40°C (104°F) max. and detergent (Mat. No. 11-001).

1 Scrub inlet assembly (9) with bristle brush.

2 Hand agitate the separator filter element (7) to clean filter.

3 If the filter element (7) can not be cleaned, replace it.

D. Installation (Ref. Fig. 401)

(1) Remove blanking caps from waste tank and disconnected hoses.

(2) Insert water separator inlet assembly (9) in waste tank (1)

(3) Insert water separator filter element (7) with new seal (8) into separator inlet assembly (9).

(4) Fit air outlet cap (5) with new O-ring (6).

(5) Fit clamp (2) at waste tank (1).

NOTE : At this stage do not tighten clamp.

(6) Position air outlet cap (5) so that hoses (4) can be easily connected.

(7) Connect hoses (4) to air outlet cap (5).

(8) Fit clamps (3) to hoses (4).

(9) Tighten all clamps (2) and (3).

E. Close-Up

(1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

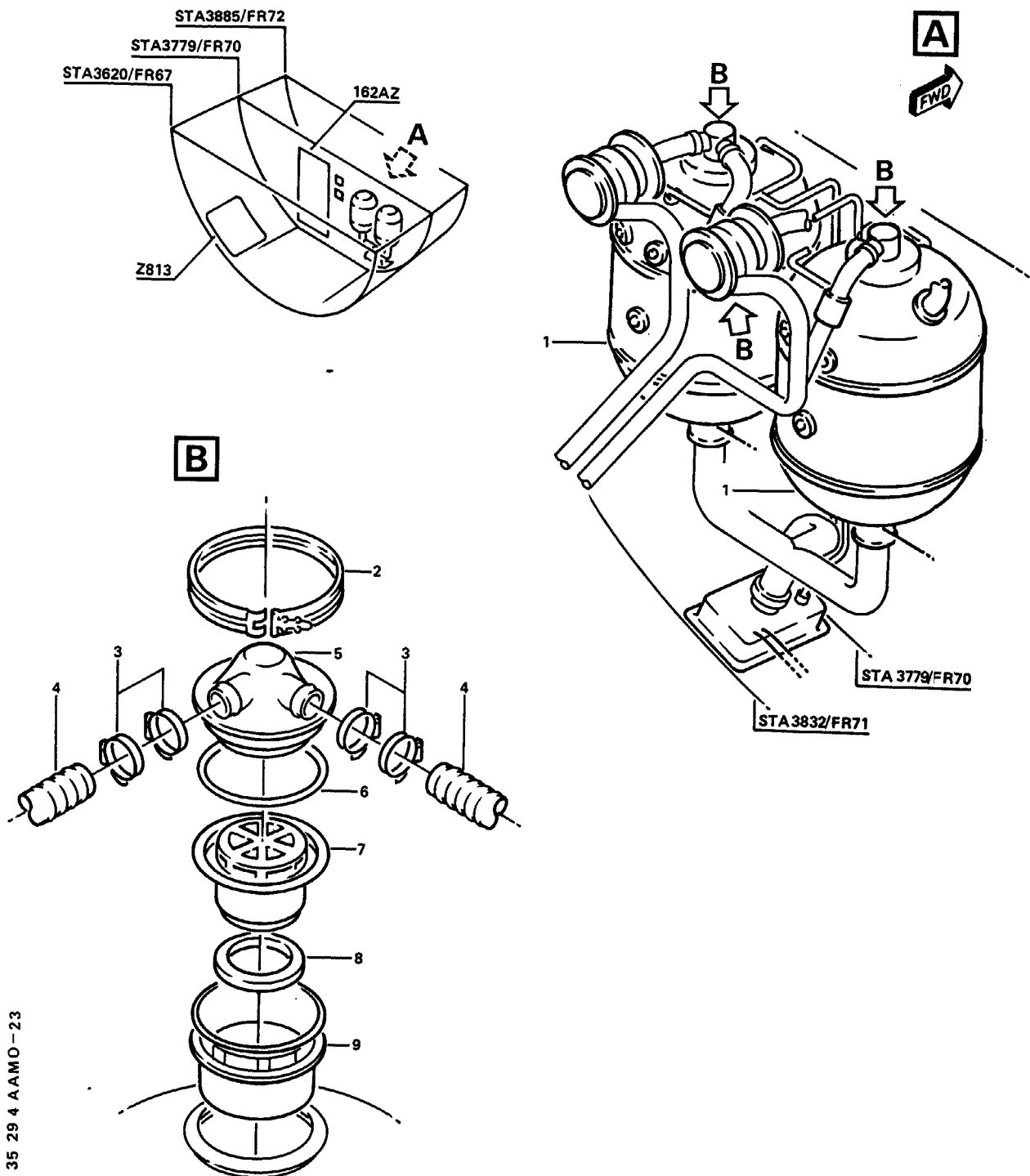
(2) Close access door (162AZ).

(3) Close BULK cargo compartment door (Z813).

(4) Remove access platform.

(5) Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.

(6) Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.



BM 6 38 35 29 4 AAMO-23

Water Separator
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-29

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

LOGIC CONTROL UNIT - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps
C.	Access Platform, 2.3 m (7.5 ft.)

Referenced Procedure

- 38-35-31, P. Block 501

Logic Control Unit

2. Procedure

A. Job Set-Up

(1) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

(2) Position access platform at BULK cargo compartment.

(3) Open BULK cargo compartment door (Z813).

(4) Open access door (162AZ).

B. Removal

(Ref. Fig. 401)

(1) Remove logic control unit:

(a) Disconnect electrical connectors (1) and fit blanking caps.

(b) Remove bolts (2), washers (3) and logic control unit (4).

C. Installation (Ref. Fig. 401)

(1) Install logic control unit:

(a) Position logic control unit (4), install washers (3) and bolts (2).

(b) Make sure that the switch is in the OFF position.

(c) Remove blanking caps and connect electrical connectors (1).

D. Test

(1) Remove safety clips and tags and close circuit breakers 11MG and 111MG.

(2) Do the LCU functional test (Ref. 38-35-31, P. Block 501).

E. Close-Up

(1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

(2) Close access door (162AZ)

(3) Close BULK cargo compartment door (Z813).

(4) Remove access platform.

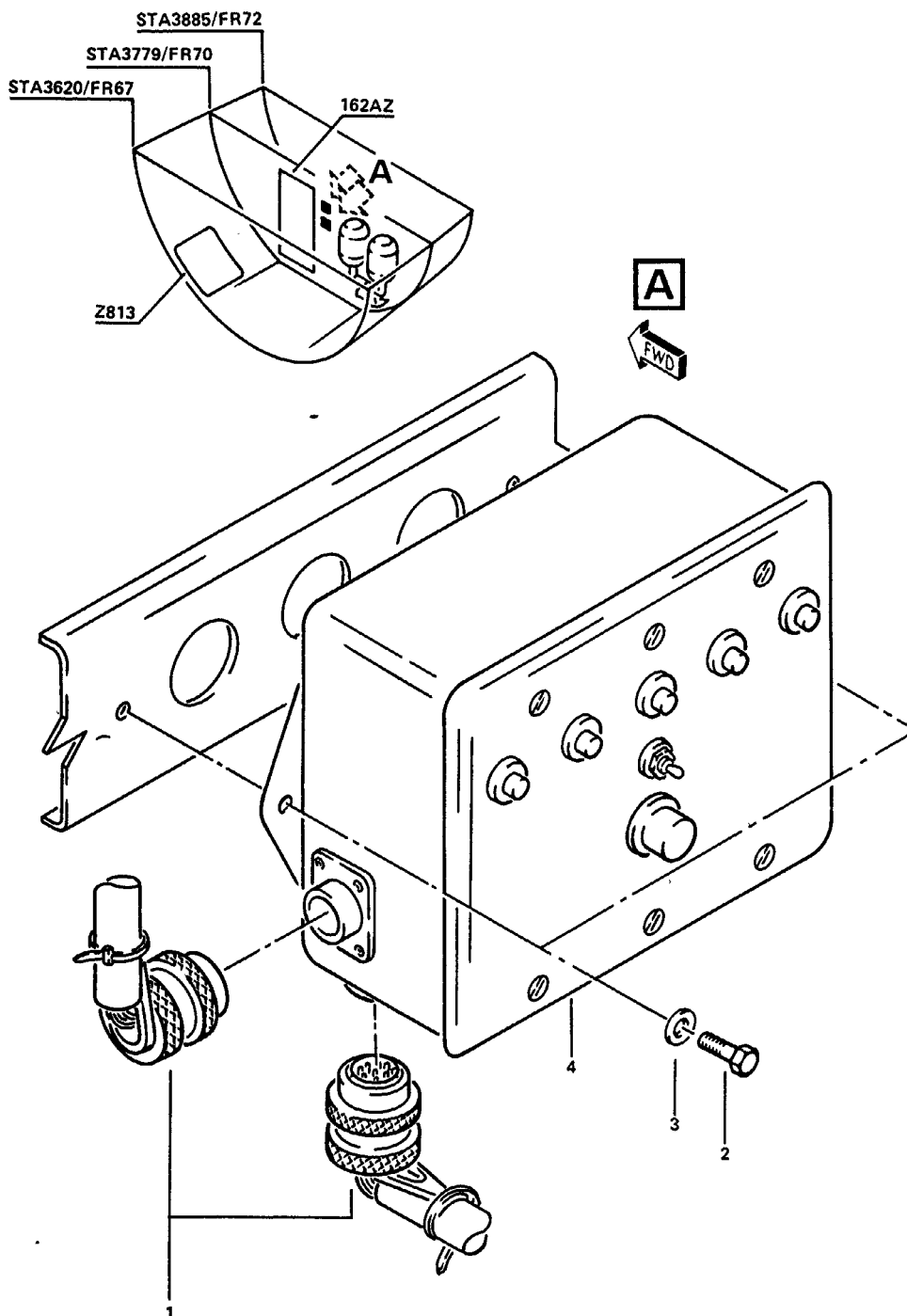
R EFFECTIVITY: 404-500,

KSSU

38-35-31

Page 401
Jun 01/13

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Logic Control Unit
Figure 401

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R EFFECTIVITY: 404-500,

KSSU

38-35-31

Page 402
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

LOGIC CONTROL UNIT - ADJUSTMENT/TEST

1. Reasons for the Job

To make certain that logic control unit and level sensor operate correctly.

- Functional Test of Logic Control Unit
- Functional Test of Waste Level Sensors

2. Equipment and Materials

ITEM	DESIGNATION
A.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
B.	Access Platform, 2.3 m (7.5 ft.)
C.	Metal Vessel
D.	Stopwatch

Referenced Procedures

- | | |
|--------------------------|---------------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 20-28-11, P. Block 1 | Electrical Bonding |
| - 24-41-00, P. Block 301 | AC External Power Control |
| - 38-35-32, P. Block 401 | Waste Level Sensor |

R EFFECTIVITY: 404-500,

KSSU

38-35-31

Page 501
Jun 01/13

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3. Operational Test from Purser's Panel (863VU)

A. Job Set-Up

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

B. Test

ACTION	RESULT
1. On Purser's panel (863VU): - Pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG) is in normal position.	On Purser's panel (863VU): - Integral indicator light in pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG) is off.
2. On Purser's panel (863VU): - Press pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG).	On Purser's panel (863VU): - Integral indicator light in pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG) comes on. NOTE : Tank full indication light (15MG) or (115MG) when pushed to test will remain on until test cycle is completed.

C. Close-Up

- (1) Make certain that working area is clean and clear of miscellaneous items of equipment.
- (2) De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

R EFFECTIVITY: 404-500,

KSSU

38-35-31

Page 502
Jun 01/13

4. LCU - Functional Test

A. Job Set-Up

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

- (4) Position access platform at BULK cargo compartment.
 - (5) Open BULK cargo compartment door (Z813).
 - (6) Open access door (162AZ).
 - (7) Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
- NOTE** : Do not prime waste tank at this stage.

B. Test

(Ref. Fig. 501)

ACTION	RESULT
1. On LCU - BITE TEST: - switch is in OFF position.	On LCU: LED indication of: - sensor A is OFF - sensor B is OFF - sensor C is OFF - TANK FULL is OFF - POWER ON is ON. On Purser's panel: Indication light WASTE TANK FULL/LH115MG or FULL/RH15MG: Integral indicator light is off.
2. On LCU - LAMP TEST: - position and hold switch to LAMP TEST.	On LCU: LED indication of: - sensor A comes ON - sensor B comes ON - sensor C comes ON - TANK FULL comes ON - POWER ON remains ON. On Purser's panel: Indication light WASTE TANK FULL/LH115MG or FULL/RH15MG: Integral indicator light is OFF.
3. On LCU - SENSOR TEST: - position and hold switch to SENSOR TEST.	On LCU: LED indication of: - sensor A comes ON - sensor B comes ON

R EFFECTIVITY: 404-500,

KSSU

38-35-31

ACTION	RESULT
	<ul style="list-style-type: none"> - sensor C comes ON - TANK FULL comes ON - POWER ON remains ON. On Purser's panel: Indication light FULL/LH115MG or FULL/RH15MG comes on.

C. Close-Up

- (1) Make certain that working area is clean and clear of miscellaneous items of equipment.
- (2) Close access door (162AZ).
- (3) Close BULK cargo compartment door and remove access platform.
- (4) De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

5. LEVEL SENSOR - Functional Test

A. Job Set-Up

NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

- (4) Remove waste level sensors (Ref. 38-35-32, P. Block 401).

NOTE : Reconnect electrical connectors and bonding straps to waste level sensors.

- (5) Prepare a test fluid by mixing 3.3 l (0.871 US gal.) of water with 0.013 kg (0.028 lb.) of salt.
- (6) Connect metal vessel via bonding strap to bonding point at waste tank.
- (7) Pour 25.4 mm (1.0 in.) test fluid into metal vessel.

B. Test

ACTION	RESULT
1. On LCU - SENSOR DELAY TIMER TEST: - switch is in OFF position. - submerge the sensing surface of sensor A in 12.7 mm (0.5 in.) of test fluid in prepared metal vessel and start stopwatch	ON LCU: LED indication of: - sensor A comes ON after 18 - 30 secs - sensor B remains OFF - sensor C remains OFF

R EFFECTIVITY: 404-500,

KSSU

38-35-31

ACTION	RESULT
simultaneously.	- TANK FULL comes ON after 18 - 30 secs
- repeat test with sensor B.	- POWER ON remains ON. LED indication of: - sensor A is OFF - sensor B comes ON after 18 - 30 secs
- repeat test with sensor C.	- sensor C remains OFF - TANK FULL comes ON after 18 - 30 secs - POWER ON remains ON. LED indication of: - sensor A remains OFF - sensor B is OFF - sensor C comes ON after 18 - 30 secs - TANK FULL is OFF - POWER ON remains ON.
2. On LCU - OPEN SENSOR TEST:	
- switch is in OFF position.	On LCU, LED indication of: - sensor A is OFF
- submerge sensing surfaces of sensors A, B and C in test fluid in prepared metal vessel.	- sensor B is ON - sensor C is ON - TANK FULL is ON - POWER ON remains ON.
- Disconnect harness from sensor A.	On Purser's panel (863VU): - TANK FULL light comes ON - TANK 2/3 FULL light comes ON. <u>NOTE</u> : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.
- Connect electrical connector 119MG-A LH and 19MG-A RH to sensor A.	On LCU, LED indication of: - sensor A comes ON
- Disconnect electrical connector 120MG-A LH and 20MG-A RH from sensor B.	- sensor B goes OFF - sensor C remains ON - TANK FULL remains ON - POWER ON remains ON. On Purser panel (863VU): - TANK FULL light remains ON - TANK 2/3 FULL light remains ON. <u>NOTE</u> : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.

R EFFECTIVITY: 404-500,

KSSU

38-35-31

Page 505
Jun 01/13

ACTION	RESULT
<ul style="list-style-type: none"> - Connect electrical connector 120MG-A LH and 20MG-A RH to sensor B. - Disconnect electrical connector 121MG-A LH and 21MG-A RH from sensor C. 	<p>On LCU, LED indication of:</p> <ul style="list-style-type: none"> - sensor A remains ON - sensor B comes ON - sensor C goes OFF - TANK FULL remains ON - POWER ON remains ON. <p>On Purser panel (863VU):</p> <ul style="list-style-type: none"> - TANK FULL light remains ON - TANK 2/3 FULL light goes OFF. <p><u>NOTE</u> : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.</p>
<ul style="list-style-type: none"> - Connect electrical connector 121MG-A LH and 21MG-A RH to sensor C. - Disconnect electrical connector 119/120 MG-A LH and 19/20MG-A RH from sensor A and B. 	<p>On LCU, LED indication of:</p> <ul style="list-style-type: none"> - sensor C comes ON - sensor A goes OFF - sensor B goes OFF - TANK FULL goes OFF - POWER ON remains ON. <p>On Purser's panel (863VU):</p> <ul style="list-style-type: none"> - TANK FULL light goes OFF - TANK 2/3 FULL light comes ON. <p><u>NOTE</u> : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.</p>

(Ref. Fig. 501)

C. Close-Up

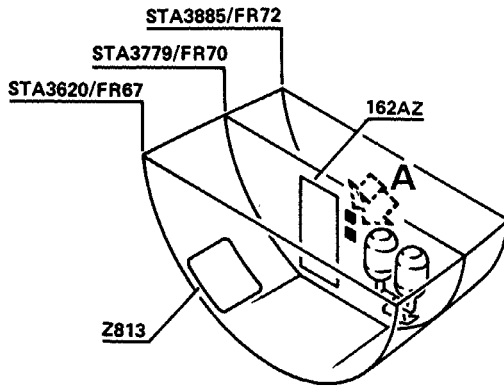
- (1) Install waste level sensors (Ref. 38-35-32, P. Block 401).
- (2) Remove metal vessel.
- (3) Make certain that working area is clean and clear of miscellaneous items of equipment.
- (4) Close access door (162AZ).
- (5) Close BULK cargo compartment door and remove access platform.
- (6) De-energize aircraft electrical network, and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

R EFFECTIVITY: 404-500,

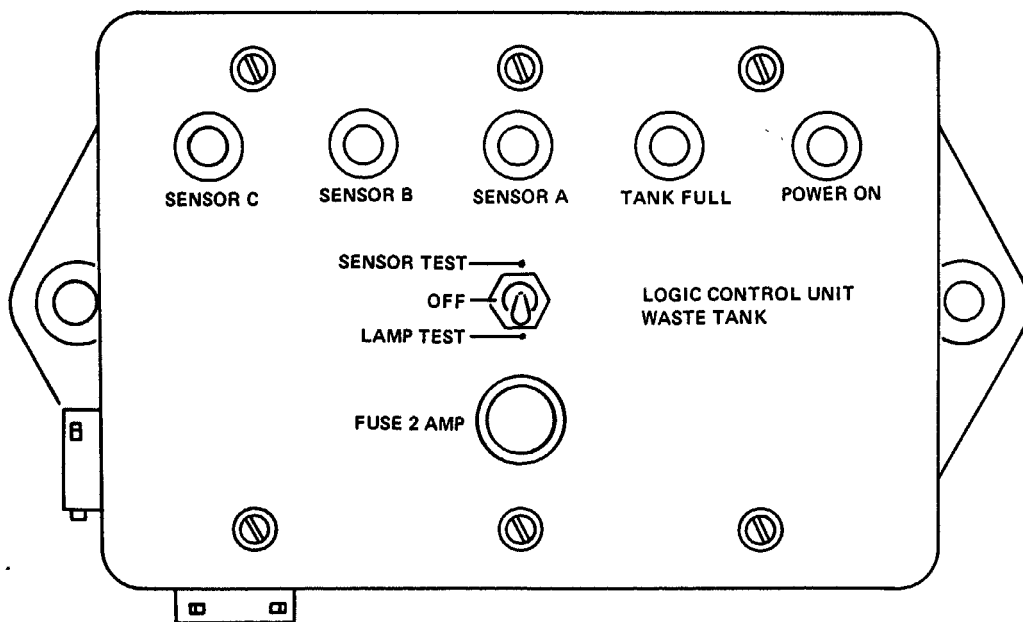
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38-35-31

Page 506
Jun 01/13



A



Logic Control Unit
Figure 501

BM 6 38 35 31 5 AA M 0-23

R EFFECTIVITY: 404-500,

KSSU

38-35-31

Page 507
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

WASTE LEVEL SENSOR - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags
D.	O-Ring
E.	Torque Wrench, up to 0.5 m.daN (44 lbf.in.)
F. Material No. 04-012	Common Greases (Ref. 20-31-00)

Referenced Procedures

- | | |
|--------------------------|----------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 20-28-11, P. Block 1 | Electrical Bonding |
| - 38-35-31, P. Block 501 | Logic Control Unit |

2. Procedure

A. Job Set-Up

- (1) Drain and flush waste tank (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

- (2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

- (3) Position access platform at BULK cargo compartment (Z813).

- (4) Open BULK cargo compartment door (Z813).

- (5) Open access door (162AZ).

R EFFECTIVITY: 404-500,

KSSU

38-35-32

Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

(1) Remove waste level sensor (5) as follows:

NOTE : Each waste tank (1) is fitted with three level sensors (5). All level sensors are identical therefore the removal of only one sensor is described.

(a) Disconnect electrical plug (7) from waste level sensor (5).

(b) Remove bolts (2) with washers (3) and disconnect bonding straps (4).

(c) Pull waste level sensor (5) from waste tank (1).

(d) Remove and discard O-ring (6).

(e) Install blanking cap to opening in waste tank (1).

C. Preparation for Installation

(1) Make certain that waste level sensor (5) is clean.

(2) Install new O-ring (6) to waste level sensor (5).

NOTE : O-Ring must be coated with petrolatum (Mat. No. 04-012) prior to installation.

D. Installation (Ref. Fig. 401)

NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.

(1) Remove blanking cap from waste tank (1).

(2) Install waste level sensor (5) as follows:

(a) Insert waste level sensor (5) in waste tank (1).

(b) Position bonding straps (4) on waste level sensor (5) and install bolts (2) with washers (3).

(c) TORQUE bolts to 0.28 ± 0.06 m.daN (25 ± 5 lbf.in.).

(d) Connect electrical plug (7) to waste level sensor (5).

E. Test

(1) Flush waste tank (1) (Ref. 12-16-38, P. Block 1) and inspect waste level sensor flange for leakage.

NOTE : Leakage is not permissible.

(2) Carry out waste level sensor test (Ref. 38-35-31, P. Block 501).

F. Close-Up

(1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

(2) Close access door (162AZ).

(3) Close BULK cargo compartment door (Z813).

(4) Remove access platform.

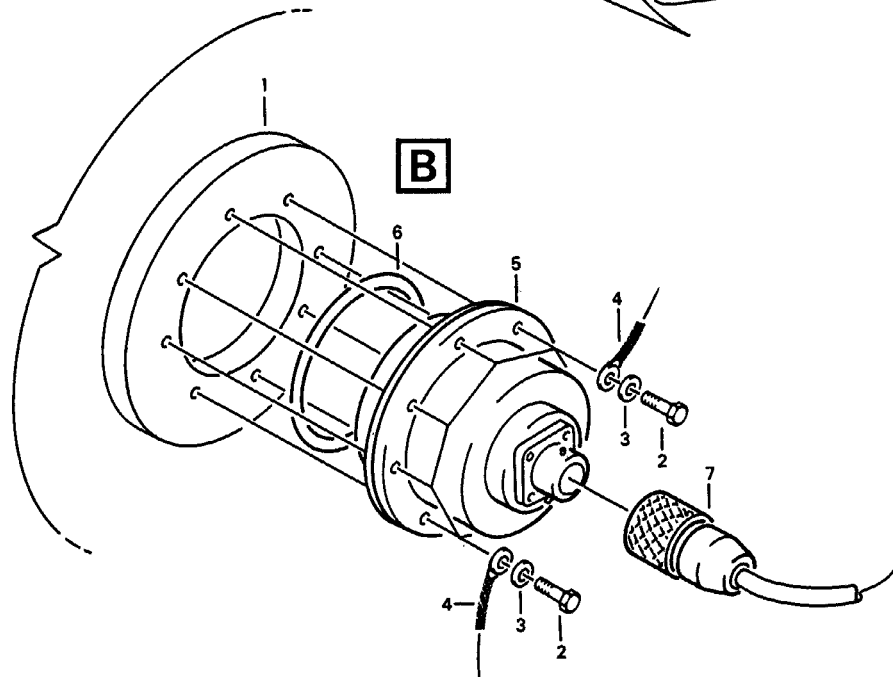
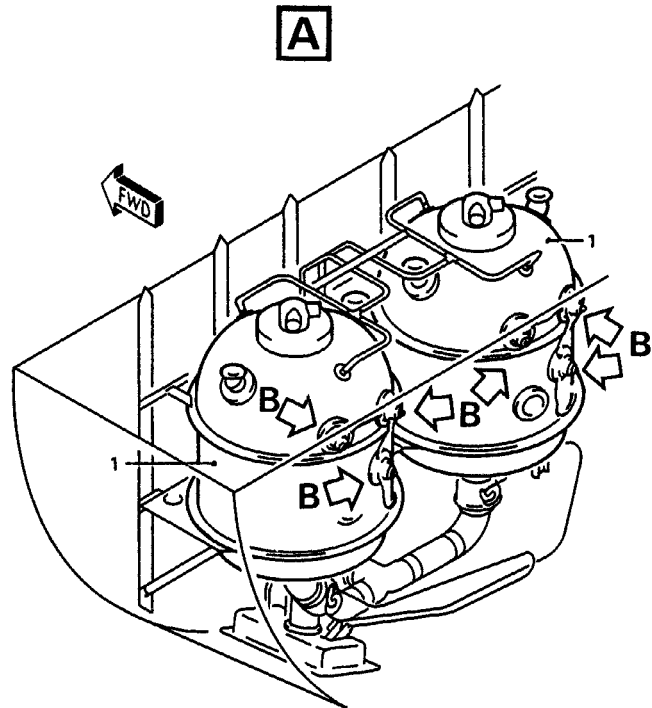
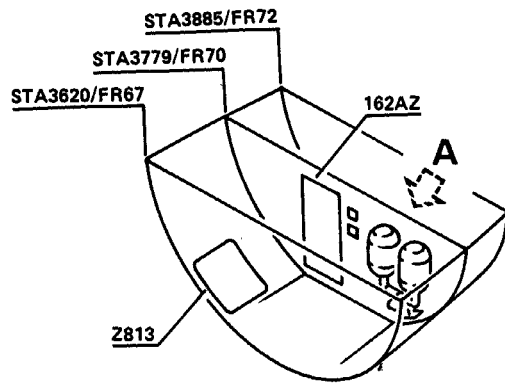
(5) Remove safety clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.

(6) Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

R EFFECTIVITY: 404-500,

KSSU

38-35-32Page 402
Jun 01/13



Waste Level Sensor
Figure 401

B M 6 38 35 32 4 AA M 0-23

R EFFECTIVITY: 404-500,

KSSU

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38-35-32

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

FLUSH CONTROL UNIT - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire 0.6 mm (0.024 in.) dia.
E.	Torque Wrench up to 0.5 m.daN (44 lbf.in.)
F.	Material No. 08-007 Bonding and Adhesive Compounds (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2) Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal

(Ref. Fig. 401)

(1) Remove flush control unit (1) as follows:

NOTE : The removal of flush control unit in all toilet assemblies is similar therefore only the removal of one flush control unit is described and applies to LH and RH toilet assemblies.

(a) Remove lockwire and disconnect plugs (11, 16, 17).

(b) Install blanking caps and plugs to all plugs and receptacles.

(c) Remove nuts (14), washers (13) and screws (12) to disconnect receptacle (15).

(d) Remove nuts (9), washers (8), screws (7) and clamps (10).

(e) Remove lockwire, screws (3) and washers (4).

(f) Remove cover (1) from toilet assembly.

(g) Pull PC-board (2) from flush control unit.

(h) Remove screws (18) and washers (19).

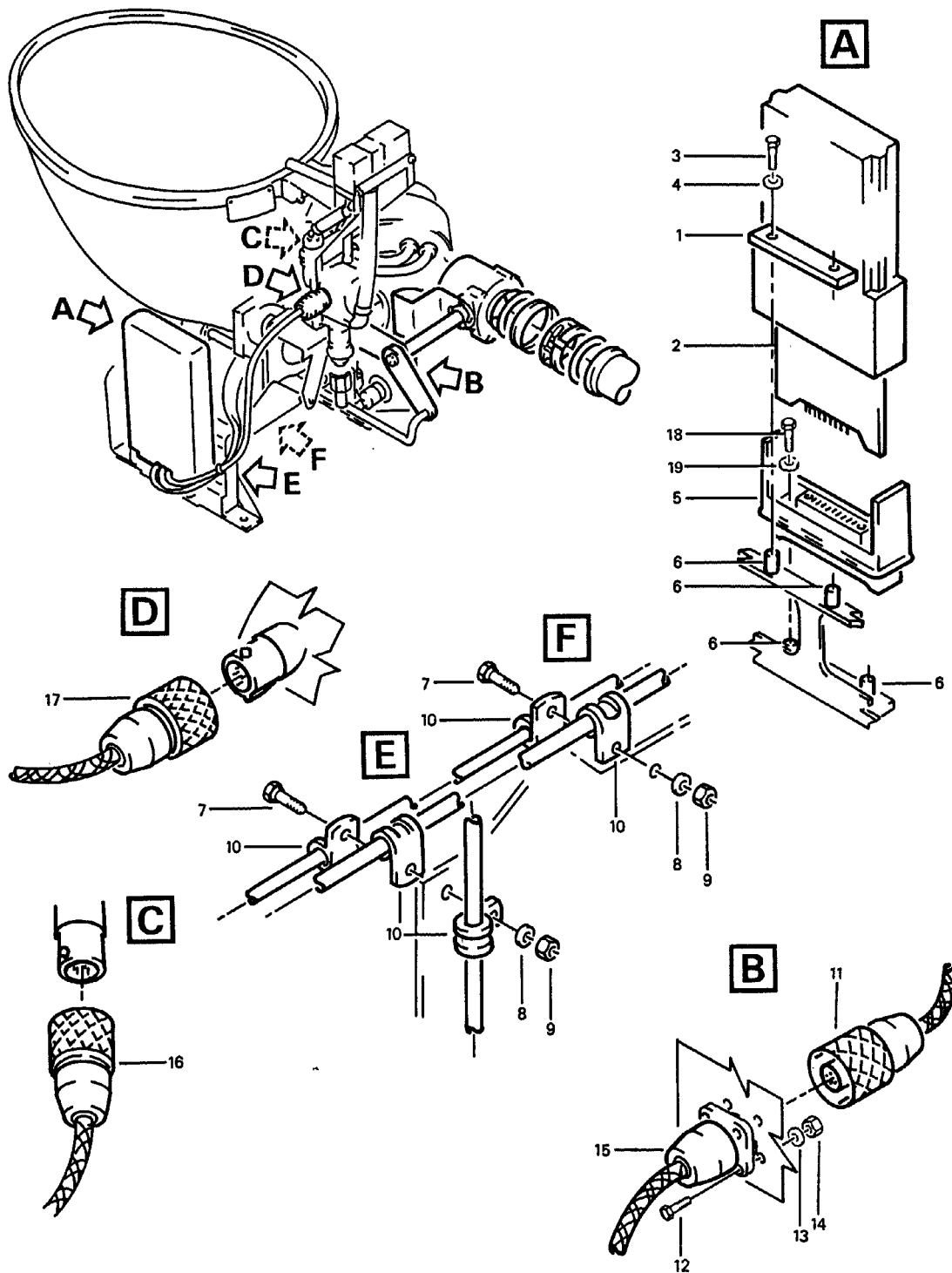
(j) Remove flush control unit base (5) from toilet assembly.

R EFFECTIVITY: 404-500,

KSSU

38-35-33

Page 401
Jun 01/13



Flush Control Unit
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-33

Page 402
Jun 01/13

C. Installation (Ref. Fig. 401)

- (1) Install flush control unit (1) as follows:
 - (a) Position flush control unit base (5) on toilet assembly.
 - (b) Install screws (18) and washers (19).
 - (c) TORQUE screws (18) to 0.23 m.daN (20 lbf.in.) and safety with adhesive compound (Mat. No. 08-007).
 - (d) Insert PC-board (2) into base (5).
 - (e) Position cover (1) on base (5).
 - (f) Install screws (3) and washers (4).
 - (g) TORQUE screws (3) to 0.23 m.daN (20 blf.in.).
 - (h) Safety screws (3) with lockwire.
 - (j) Position receptacle (15) in cutout of toilet assembly and install screws (12), washers (13) and nuts (14).
 - (k) Remove blanking plugs and caps from plugs and receptacles. Connect plugs (11, 16, 17) and safety with lockwire.
 - (l) Position clamps (10) on cable looms and install screws (7), washers (8) and nuts (9).

D. Test

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
- (4) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
- (5) Flush toilet assembly a few times and check for normal operation.

E. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.



AIRCRAFT MAINTENANCE MANUAL

ALTITUDE PRESSURE SWITCH - REMOVAL/INSTALLATION

NOTE : The removal/installation procedure is identical for RH and LH pressure switches.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 4 m (13 ft.)
B.	Protective Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedure

- 38-35-00, P. Block 501

Vacuum Toilet System

2. Procedure

A. Job Set-Up

(1) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL LH	111MG	J10
800VU	FLUSH CTL RH	11MG	J12

(2) Position access platform and open access door (312AR)

B. Removal

(Ref. Fig. 401)

(1) Disconnect electrical connector (2) (13MG-A or 113MG-A as applicable).

(2) Install protective cap to electrical connector.

(3) Remove screws (3), washers (4) and pressure switch (1).

C. Installation (Ref. Fig. 401)

(1) Install pressure switch (1), washers (4) and screws (3).

(2) Remove protective cap and connect electrical connector (2) (13MG-A or 113MG-A as applicable).

D. Close-Up

(1) Remove safety clips and tags and close circuit breakers 11MG and 111MG.

(2) Carry out vacuum toilet functional test (Ref. 38-35-00, P. Block 501).

(3) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(4) Close access door (312AR) and remove access platform.

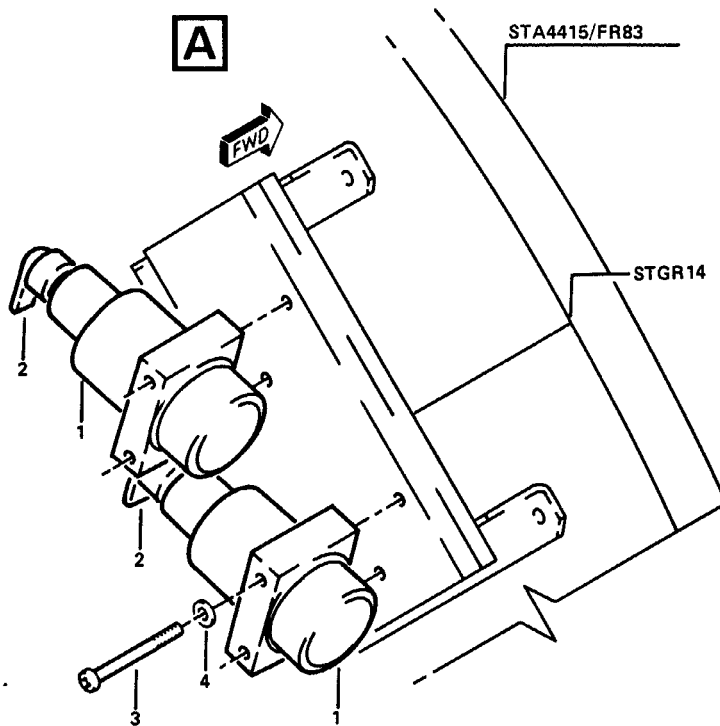
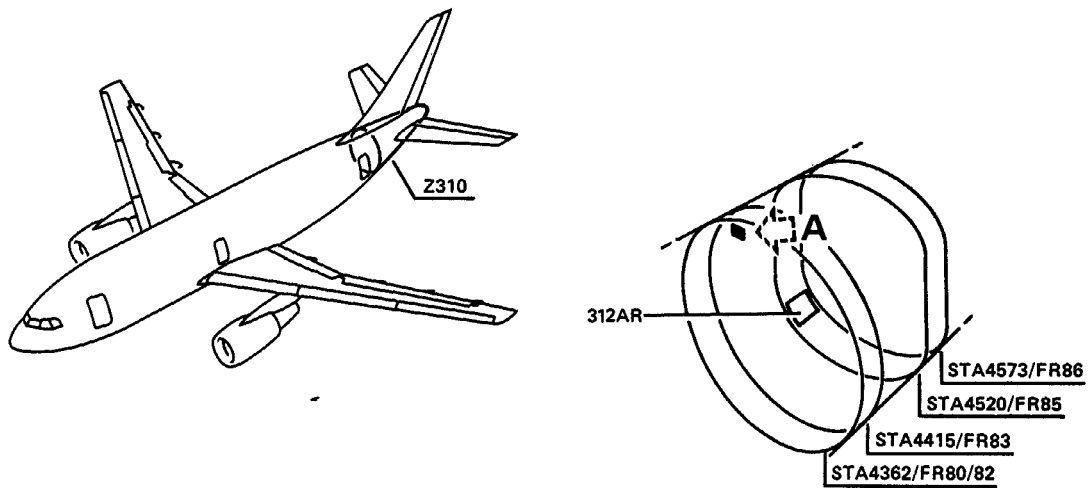
R EFFECTIVITY: 404-500,

KSSU

38-35-35

Page 401
Jun 01/13

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B M 6 38 35 35 4 A A M 0-23

Altitude Pressure Switch
Figure 401

R EFFECTIVITY: 404-500,

KSSU

38-35-35

Page 402
Jun 01/13

Printed in France



AIRCRAFT MAINTENANCE MANUAL

WATER VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire 0.5 mm (0.020 in.) dia
E.	Packing
F.	Torque Wrench, up to 1 m.daN (88.5 lbf.in.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-35-25, P. Block 401	Anti Syphon Valve
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.

(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

R EFFECTIVITY: 404-500,

KSSU

38-35-37

Page 401
Jun 01/13

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B. Removal

(Ref. Fig. 401)

(1) Remove strainer (4) as follows:

(a) Disconnect tube (5).

(b) Remove strainer (4) with packing (3). Discard packing.

(c) Install blanking caps to tube (5) and water valve (1).

(2) Remove water valve (1) as follows:

NOTE : The removal of water valve in all toilet assemblies is similar, therefore only the removal of one water valve is described and applies to LH and RH toilet assemblies.

(a) Remove anti syphon valve and attachment assemblies (Ref. 38-35-25, P. Block 401).

(b) Remove lockwire and disconnect plug (2).

(c) Remove screws (6) with washers (7).

(d) Remove water valve from brackets (8, 9).

(e) Install blanking caps to all remaining openings in water valve (1).

C. Preparation for Installation (Ref. Fig. 401)

(1) Make certain that water valve (1) and strainer (4) are clean and no external damage is visible.

(2) Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)

(1) Install water valve (1) as follows:

(a) Remove all blanking caps from water valve (1).

(b) Install new packing (3) to strainer (4).

(c) Position water valve (1) on brackets (8, 9).

(d) Install bolts (6) with washers (7).

(e) **TORQUE** bolts (6) to 0.395 m.daN (35 lbf.in.).

(f) Connect plug (2) to water valve (1) and safety with lockwire.

(g) Install anti syphon valve (Ref. 38-35-25, P. Block 401).

(2) Install strainer (4) as follows:

(a) Remove blanking cap from tube (5).

(b) Insert strainer (4) in water valve (1).

(c) Connect tube (5) to water valve (1).

E. Test

(1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(2) Make certain that electronics racks ventilation is correct.

(3) Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).

(4) Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.

(5) Open manual shutoff valve in sanitary unit cabinet.

(6) Flush toilet assy a few times and check for normal operation.

(7) Inspect all previously disconnected connections for leakage.

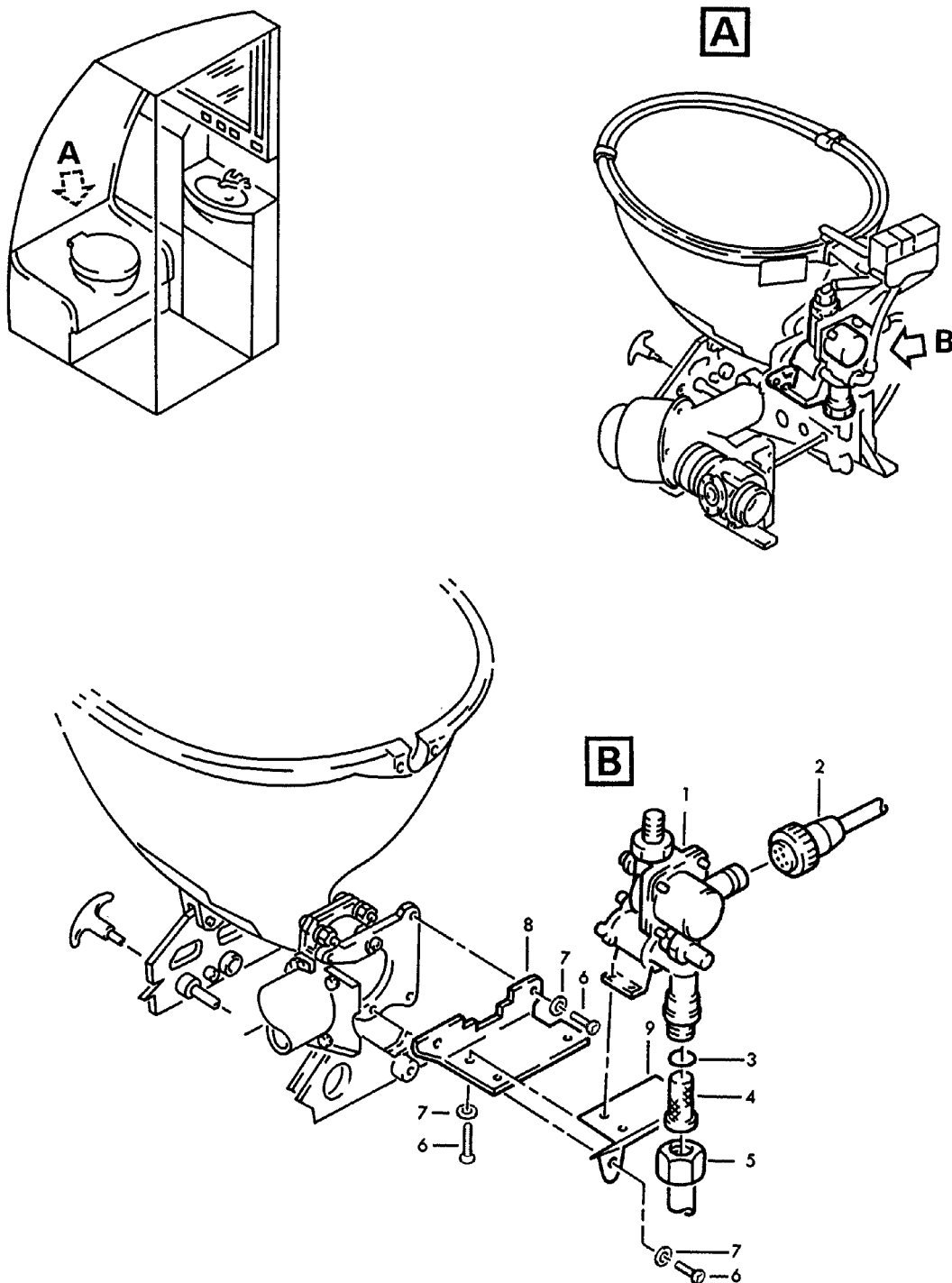
NOTE : Leakage is not permissible.

F. Close-Up

R EFFECTIVITY: 404-500,

KSSU

38-35-37Page 402
Jun 01/13



Water Valve
Figure 401

BM6 38 35 37 4 AAMO 00

R EFFECTIVITY: 404-500,

KSSU

38-35-37

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install toilet shroud (Ref. 25-45-11, P. Block 401).
- (3) De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301). and disconnect ground power unit.

R EFFECTIVITY: 404-500,

KSSU

38-35-37

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

DRAIN AND CAP ASSY - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platforms up to 2.30 m (7.50 ft.)
B. Material No. 05-002	Special Materials (Ref. 20-31-00)
C. Material No. 05-013	Special Materials (Ref. 20-31-00)
D. Material No. 09-019	Sealants (Ref. 20-31-00)
E. Material No. 11-004	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- | | |
|--------------------------|--------------------------|
| - 12-16-38, P. Block 1 | Replenishing Toilets |
| - 51-75-10, P. Block 801 | Repair of Paint Coatings |

2. Procedure

A. Job Set-Up

- (1) Position access platform at toilet service panel access door (171BL).
- (2) Open access door (171BL) to gain access to toilet service panel.
- (3) Make certain that waste system dump valves are closed.
- (4) Display warning notices at waste system dump valve control lever prohibiting operation of waste system dump valves.
- (5) Position access platform at BULK cargo compartment.
- (6) Open BULK cargo compartment door (Z813).
- (7) Open access door (162AZ).

R EFFECTIVITY: 404-500,

KSSU

38-35-39

Page 401
Jun 01/13

B. Removal

(Ref. Fig. 401)

- (1) Remove clamp (3).
- (2) Open cap (4).
- (3) Remove and discard cover seal (5).
- (4) Remove countersunk screws (2).
- (5) Remove drain and cap assy (1).

C. Preparation for Installation

- (1) Clean mating surfaces of toilet servicing panel and drain and cap assy (1) with cleaning agent (Mat. No. 11-004).
- (2) Apply release agent (Mat. No. 05-013) to mating surfaces of toilet servicing panel and drain and cap assy (1).
- (3) Apply sealant (Mat. No. 09-019) to mating surface of drain and cap assy (1) (Ref. 51-76-10, P. Block 801).
- (4) Check anchor nuts for damage and replace if necessary.

D. Installation (Ref. Fig. 401)

- (1) Position drain and cap assy (1).
- (2) Apply corrosion-preventive paste (Mat. No. 05-002) to countersunk screws (2).
- (3) Install countersunk screws (2).
- (4) Install new cover seal (5) onto cap (4).
- (5) Close cap (4).
- (6) Install clamp (3).

E. Test

- (1) Drain and flush waste tanks (Ref. 12-16-38-, P. Block 1).
NOTE : Do not prime waste tanks at this stage.
- (2) Check hose connection of drain and cap assy for leakage.
NOTE : Leakage is not permissible.

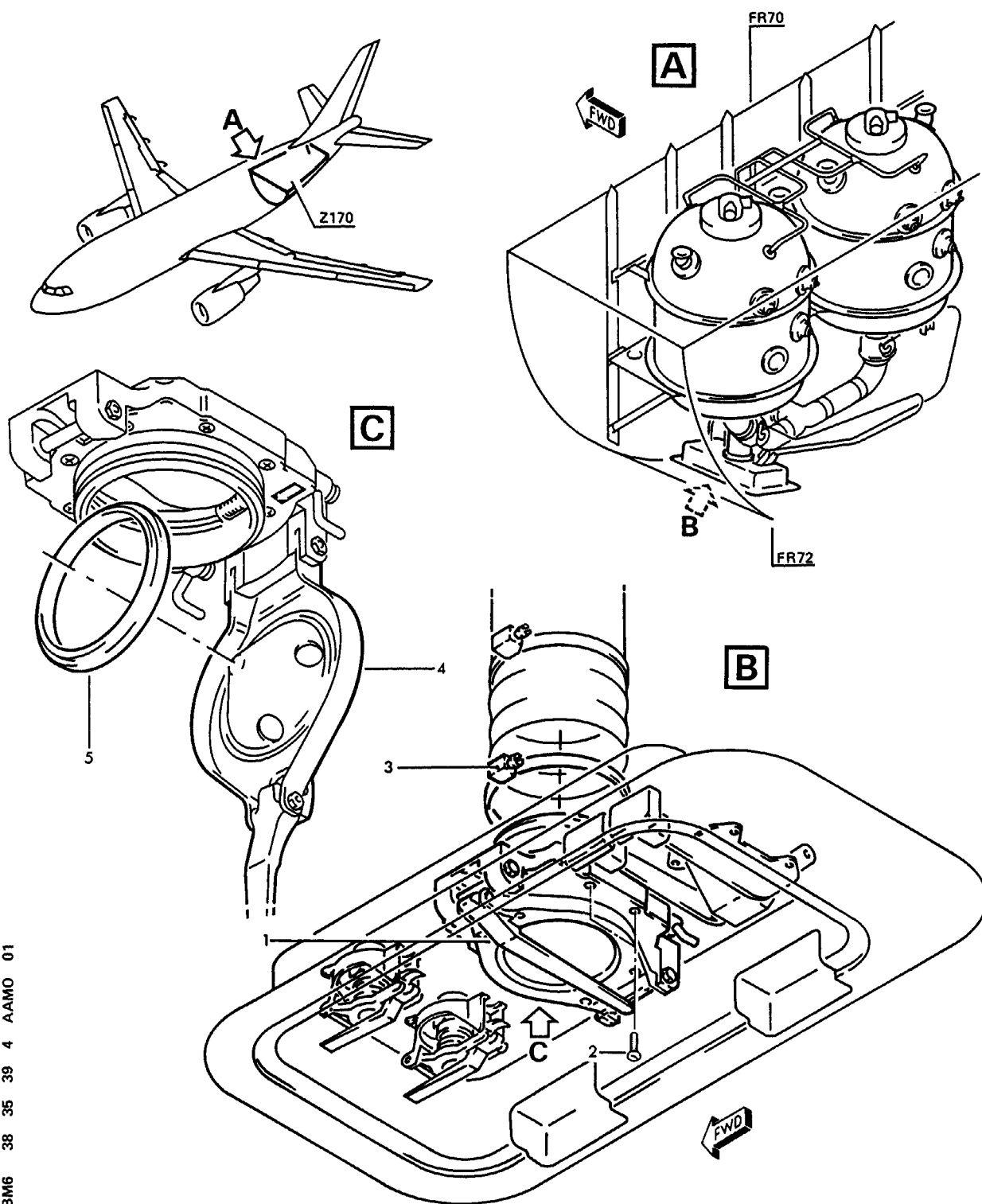
F. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Close access door (162AZ).
- (3) Close BULK cargo compartment door (Z813).
- (4) Remove warning notice from waste system dump valve control levers.
- (5) Prime waste tanks (Ref. 12-16-38, P. Block 1).
- (6) Close access door (171BL).
- (7) Remove access platforms.

R EFFECTIVITY: 404-500,

KSSU

38-35-39Page 402
Jun 01/13



Drain and Cap Assy
Figure 401

BM6 38 35 39 4 AAMO 01

R EFFECTIVITY: 404-500,

KSSU

38-35-39

Page 403
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

AIR SUPPLY - DESCRIPTION AND OPERATION

1. General

For an effective distribution, the potable water system is pressurized with an air pressure of 22 - 25 psi (1.52 - 1.72 bar).

Compressed air is obtained from the following pneumatic system sources to meet the pressurization requirements:

- Engine Bleed Air
- Auxiliary Power Unit (APU)
- Ground Compressed Air Supply Unit.

To compensate any drop of pressure in the water tank(s) an auxiliary air compressor (21MD) is installed. The compressor is activated by pressure switch (22MD).

Air pressure is indicated via pressure transmitter (20MA) on two pressure gages. One pressure gage (21MA) is installed on potable water service panel and the other on combi gage (22MA) at purser's panel (863VU).

2. Component Location

****ON A/C 226-226, 229-249,**

(Ref. Fig. 001)

R ****ON A/C 401-401, 404-500,**

(Ref. Fig. 002)

****ON A/C ALL**

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R **ON A/C 401-401, 404-500,					
9MA	PUSHBUTTON - PUSH FOR IND	863VU	221		
10MA	SWITCH - DOOR MICRO		136	136BR	38-42-13
20MA	TRANSMITTER - PRESSURE		138		38-42-11
21MA	GAGE - PRESSURE		136	136BR	38-42-12
22MA	GAGE - COMBI	863VU	221		38-13-12
21MD	COMPRESSOR - AIR		132		38-41-15
22MD	SWITCH - PRESSURE		138		38-41-17

EFFECTIVITY: ALL

KSSU

38-40-00

Page 1
Jun 01/13

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AIRCRAFT MAINTENANCE MANUAL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
384101	VALVE - SHUTTLE		138		38-41-11
384111	VALVE - CHECK		138		38-41-14
384113	VALVE - CHECK		138		38-41-14
384121	VALVE - PRESSURE REDUCING/RELIEF		138		38-41-13
384130	FILTER - AIR		138		38-41-12
384131	FILTER - AIR		138		38-41-12
384134	FILTER - AIR		138		38-41-15
1	PANEL - POTABLE WATER SERVICE		136	136BR	
2	PORT - GROUND PRESSURE SUPPLY		136	136BR	

****ON A/C 226-226, 229-249,**

9MA	PUSHBUTTON - PUSH FOR IND	863VU	221		
10MA	SWITCH - DOOR MICRO		136	136BR	38-42-13
20MA	TRANSMITTER - PRESSURE		138		38-42-11
21MA	GAGE - PRESSURE		136	136BR	38-42-12
22MA	GAGE - COMBI	863VU	221		38-13-12
21MD	COMPRESSOR - AIR		132		38-41-15
22MD	SWITCH - PRESSURE		138		38-41-17
384113	VALVE - CHECK		138		38-41-14
384114	VALVE - CHECK		138		38-41-14
384115	VALVE - CHECK		138		38-41-14
384121	VALVE - PRESSURE REDUCING/RELIEF		138		38-41-13
384131	FILTER - AIR		138		38-41-12
384132	FILTER - AIR		138		38-41-15

****ON A/C ALL**

3. Description

The pressurized air supply system includes the following components:

A. On Purser's Panel (863VU)

- A pressure indicator on combi gage (22MA)
- A pushbutton switch PUSH FOR IND (9MA)

****ON A/C 226-226, 229-249,**

B. On Main Water Tank

- Three check valves
- Two air filters

R **ON A/C 401-401, 404-500,

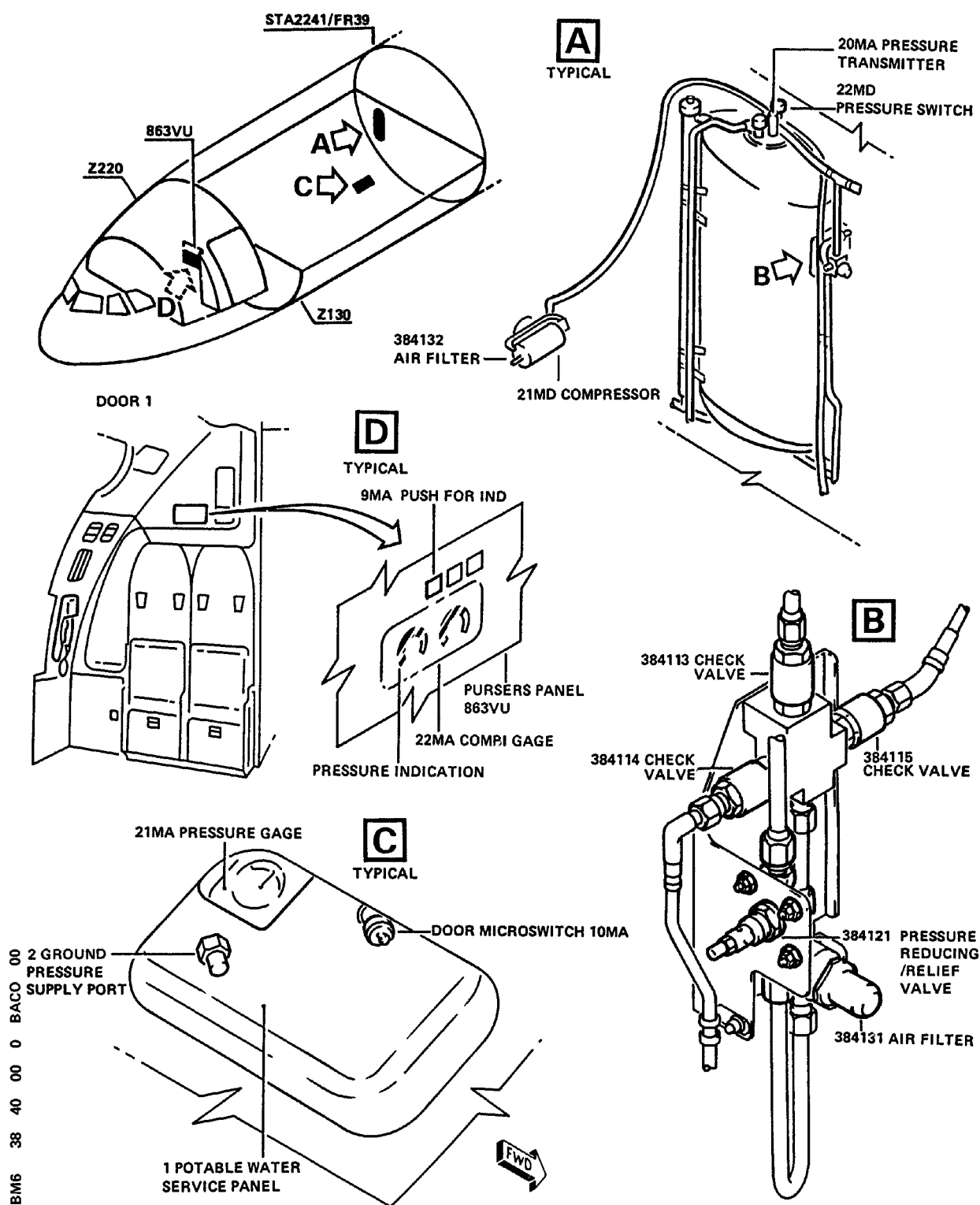
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38-40-00

Page 2
Jun 01/13

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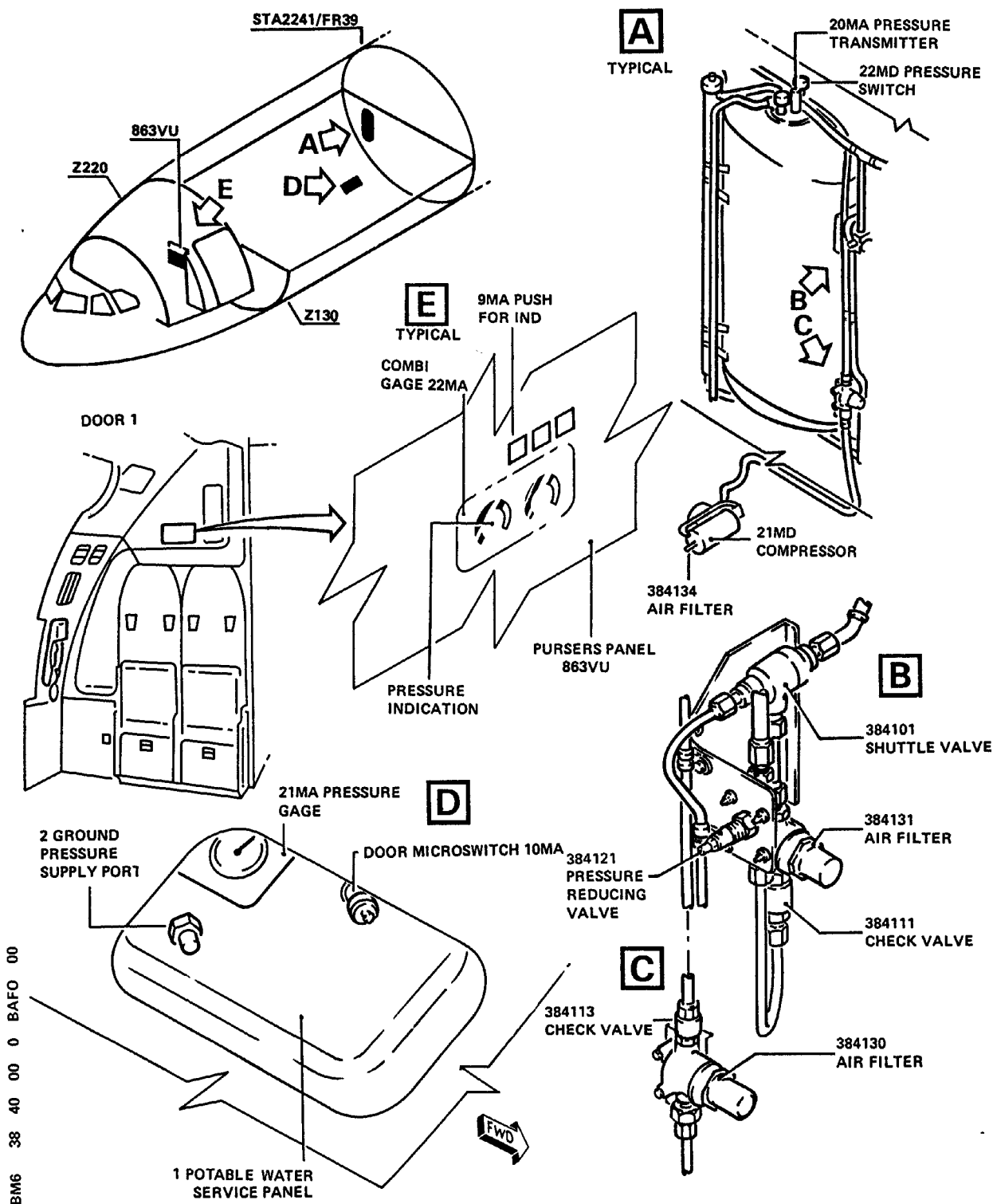
Component Location
Figure 001

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-40-00

Page 3
Jun 01/06



Component Location
Figure 002

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-40-00

Page 4
Jun 01/13

- B. On Main Water Tank
- A shuttle valve
 - Three air filters
 - Two check valves
 - A pressure switch (22MD)

**ON A/C ALL

- A combined pressure reducing/relief valve
- A pressure transmitter (20MA)

- C. On Potable Water Service Panel
- A pressure gage (21MA)
 - A door microswitch (10MA)
 - A ground pressure supply port for ground servicing

**ON A/C 226-226, 229-249,

- D. In Zone 132 between FR 38.0-38.1, STG 33
- Air Compressor (21MD)

R **ON A/C 401-401, 404-500,

- D. In Zone 132 between FR 38.1-38.2, STG 49
- Air Compressor (21MD)

**ON A/C ALL

4. Operation

(Ref. Fig. 003)

(Ref. Fig. 004)

**ON A/C 226-226, 229-249,

The compressed air, irrespective of the supply source, flows via check valves, air filter and pressure reducing/relief valve to the water tank(s).

R **ON A/C 401-401, 404-500,

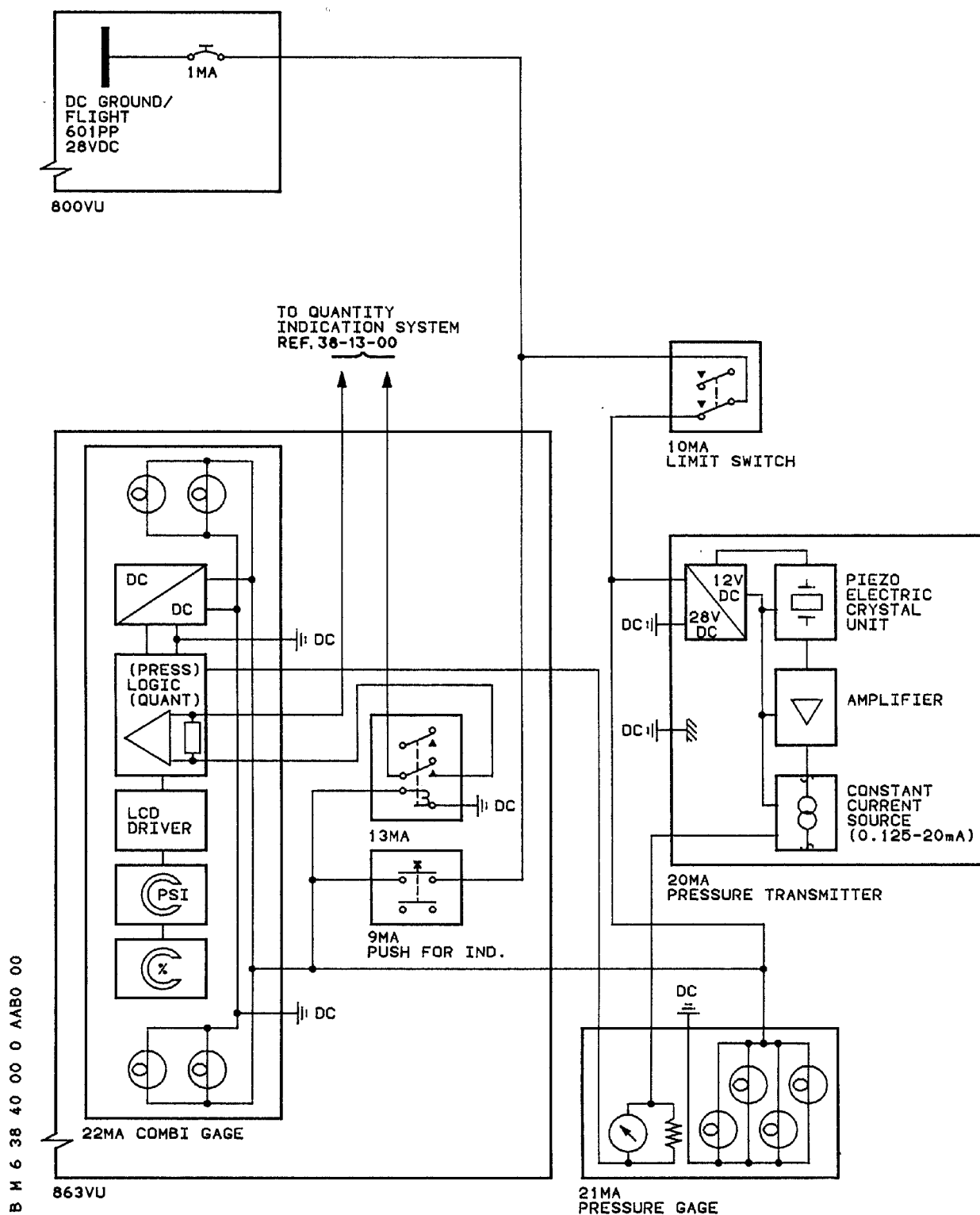
The compressed air, except auxiliary compressor source, flows via shuttle valve, air filter, check valve and pressure reducing/relief valve to the water tank(s).

EFFECTIVITY: ALL

KSSU

38-40-00

Page 5
Jun 01/13



Electrical Schematic
Figure 003

EFFECTIVITY: ALL

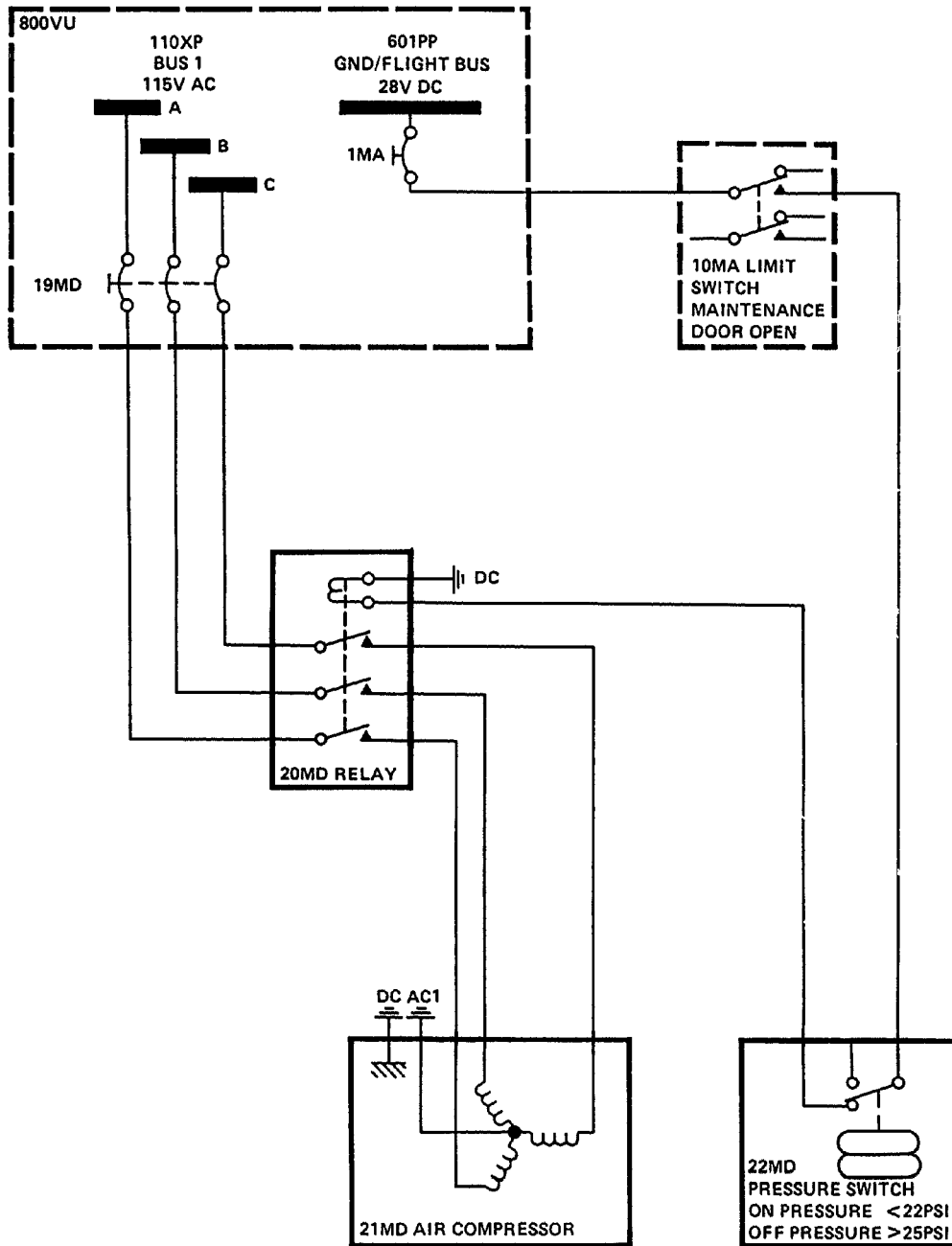
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KSSU

38-40-00

Page 6
Jun 01/07

Printed in France



Electrical Schematic
Figure 004

EFFECTIVITY: ALL

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KSSU

38-40-00

Page 7
Jun 01/07



AIRCRAFT MAINTENANCE MANUAL

****0N A/C 226-226, 229-249,**

The auxiliary compressor (21MD) supplies the water tank(s) with compressed air via a check valve and a filter.

R **0N A/C 401-401, 404-500,

The auxiliary compressor (21MD) supplies the water tank(s) with compressed air via a filter and a check valve.

The shuttle valve directs pressurized air, either from the bleed air cross-feed line or from the ground compressed air supply line, to the air filter. Any impurities in the compressed air are filtered by the air filter.

****0N A/C 226-226, 229-249,**

Three check valves prevent water tank air pressure from bleeding back into the charging system.

****0N A/C ALL**

The pressure reducing/relief valve reduces the pressure from 44 psi (3.0 bar) to system working pressure of 22 - 25 psi (1.52 - 1.72 bar).

The pressure relief valve opens when system pressure exceeds 34 \pm 2 psi (2.35 \pm 0.14 bar) and reseats at a pressure of 30 psi (2.07 bar).

R **0N A/C 401-401, 404-500,

A check valve, installed between the air filter and pressure reducing/relief valve prevents water tank air pressure from bleeding back into the charging system.

****0N A/C ALL**

The auxiliary compressor (21MD) is activated by pressure switch (22MD) when pressure in the water tank(s) drops below 22 psi (1.5 bar) and deactivates it when pressure reaches 25 psi (1.72 bar).

In flight, air pressure is indicated on the purser's panel (863VU) by combi gage (22MA) when pushbutton switch PUSH FOR IND (9MA) is pressed.

On ground, with power supply on and potable water service panel access door (136BR) open, air pressure is indicated on both purser's and service panel pressure gages (22MA, 21MA).

EFFECTIVITY: ALL

KSSU

38-40-00

Page 8
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

AIR SUPPLY - SERVICING

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 1m (3ft)
B.	Air Supply Cart
C.	Electrical Ground Power Unit, 3-Phase, 115/200 V, 400 Hz
D.	Circuit Breaker Safety Clip and Tag
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 36-11-00, P. Block 1	Engine Bleed Air Supply System
- 49-00-00, P. Block 501	Airborne Auxiliary Power
- 71-00-00, P. Block 501	Power Plant

2. Procedure

A. Job Set-Up

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) If required, replenish potable water system (Ref. 12-15-38, P. Block 1).

- (4) Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

- (5) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

B. Pressurize Air Supply System

- (1) Using Engines/APU
 - (a) Start engines (Ref. 71-00-00, P. Block 501) or APU (Ref. 49-00-00, P. Block 501).
 - (b) Select bleed air controls to required positions (Ref. 36-11-00, P. Block 1).

EFFECTIVITY: ALL

KSSU

38-40-00

Page 301
Jun 01/01

R **NOTE** : There are 3 types of pressure reducing valves, the PAS 129-155,
R the HTE510010, and the HTE510010-1, which are fully
R interchangeable.

R **NOTE** : The potable water system is automatically pressurized via the
R bleed air system, either by the APU or by the engines. The bleed
R air pressure of 44 psi (3.0 bar) is reduced by the pressure
R reducing valve to a system working pressure of 22-26 psi
R (1.52-1.79 bar) for PAS 129-155 and 23-27 psi (1.59-1.86 bar)
R for HTE510010 and HTE510010-1. Excessive pressure is relieved
R via pressure reducing valve.

R (c)When a working pressure of 22-26 psi (1.52-1.79 bar) for PAS 129-155
R or 23-27 psi (1.59-1.86 bar) for HTE510010 and HTE510010-1 is attained
R switch off engines (Ref. 71-00-00, P. Block 501) or APU
R (Ref. 49-00-00, P. Block 501).

(2)Using Air Supply Cart

(a)Position access platform and open potable water service panel access
door (136BR).

(b)Remove dust cap from pressure port and connect supply cart.

(c)Start supply cart and pressurize potable water system to 25 psi
(1.72 bar).

(d)When system pressure is reached, switch off and disconnect supply cart.

(e)Install dust cap to pressure port and close potable water service panel
access door (136BR).

(f)Remove access platform.

(3)Using Compressor

(a)Make certain that potable water service panel access door (136BR)
is closed.

(b)Remove safety clip and tag and close circuit breaker 19MD and check
that compressor is operating.

R **NOTE** : Pressure stabilizes at 22-26 psi (1.52-1.79 bar) for PAS
R 129-155 and at 23-27 psi (1.59-1.86 bar) for HTE510010 and
R HTE510010-1 and then, the compressor ceases to operate.

R (c)When a working pressure of 22-26 psi (1.52-1.79 bar) for PAS129-155 and
R 23-27 psi (1.59-1.86 bar) for HTE510010 and HTE510010-1 has been
R attained, open and safety circuit breaker 19MD.

C. Check Air Pressure

(1)Check pressure indication by pressing pushbutton PUSH FOR IND (9MA) on
purser's panel (863VU).

R **NOTE** : Pressure should be stabilized between 22-26 psi (1.52-1.79 bar)
R for PAS 129-155 and 23-27 psi (1.59-1.86 bar) for HTE510010
R and HTE510010-1.

D. Depressurize Air Supply System

(1)Position access platform and open potable water service panel access
door (136BR).

(2)Make certain that cap is tight on fill/drain port.

(3)Turn and pull fill/overflow and drain valve control handle from
NORMAL to FILL.

NOTE : System pressure will escape via overflow port.

EFFECTIVITY: ALL

KSSU

38-40-00

Page 302
Jun 01/01



AIRCRAFT MAINTENANCE MANUAL

- (4) When water system is depressurized turn fill/overflow and drain valve from FILL to NORMAL position.
 - (5) Remove cap from fill/drain port and allow remaining water to drain.
 - (6) Install cap to fill/drain port and close potable water service panel access door (136BR).
 - (7) Remove access platform.
- E. Close-Up
- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
 - (2) De-energize the aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).
 - (3) Remove safety clip and tag and close circuit breaker 19MD.

EFFECTIVITY: ALL

KSSU

38-40-00

Page 303
Jun 01/01



AIRCRAFT MAINTENANCE MANUAL

AIR SUPPLY - ADJUSTMENT/TEST

1. Functional Test of System

A. Equipment and Materials

ITEM	DESIGNATION

**0N A/C 226-226, 229-249,	
(1)	Calibrated Container, Capacity 0.5 l (0.13 US gal.)
(2)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
(3)	Circuit Breaker Safety Clip and Tag
(4)	Access Platform 1 m (3 ft.)
(5)	Corrosion-Resistant Steel Lockwire 0.6mm (0.024 in.) dia.

R **0N A/C 401-401, 404-500,

(1)	Calibrated Container, Capacity 0.5 l (0.13 US gal.)
(2)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
(3)	Circuit Breaker Safety Clip and Tag
(4)	Access Platform 1 m (3 ft.)

**0N A/C ALL

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- Position access platform under potable water service panel access door (136BR).
- Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- Make certain that electronics racks ventilation is correct.

- Make certain that the following circuit breaker is closed:

EFFECTIVITY: ALL

KSSU

38-40-00

Page 501
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R

(e)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

R

(f)If required, replenish potable water system (Ref. 12-15-38, P. Block 1).

(g)Pressurize potable water system (Ref. 38-40-00, P. Block 301).

EFFECTIVITY: ALL

KSSU

38-40-00

Page 502
Dec 01/95

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AIRCRAFT MAINTENANCE MANUAL

(2)Test

ACTION	RESULT
1. On potable water service panel: - Open potable water service panel access door (136BR)	On potable water service panel: - Dial light in pressure gage (21MA) comes on.

****ON A/C 226-226, 229-249,**

- Pressure gage (21MA) indicates approx. 25 psi (1.72 bar).
NOTE : When pressure is incorrect remove lockwire, release locknut on body of pressure reducing valve and turn barrel until reading is 25 psi (1.72 bar).
Tighten locknut and secure with lockwire 0.6 mm (0.024 in.) dia.
NOTE : For adjustment of the pressure reducing valve a pressure of 44 psi (3.03 bar) max. at the valve inlet is required.
NOTE : Do not disturb relief valve when setting adjustment cap.

R **ON A/C 401-401, 404-500,

- Pressure gage (21MA) indicates approx. 25 psi (1.72 bar).
NOTE : When pressure is incorrect, turn slot of pressure reducing adjuster on body of the water pressure reducing and relief valve until reading is 25 psi (1.72 bar).
NOTE : For adjustment of the pressure reducing valve a pressure of 44 psi (3.03 bar) max. at the valve inlet is required.

****ON A/C ALL**

On purser's panel (863VU):

EFFECTIVITY: ALL

KSSU

38-40-00

Page 503
Jun 01/13

ACTION	RESULT
<p>2. On potable water service panel:</p> <ul style="list-style-type: none"> - Press and hold microswitch (10MA). <p>NOTE: This action simulates closed potable water service panel access door (136BR).</p> <p>3. On potable water service panel:</p> <ul style="list-style-type: none"> - Release microswitch (10MA) and close potable water service panel access door (136BR). <p>4. On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Press and hold pushbutton PUSH FOR IND (9MA). - Release pushbutton PUSH FOR IND (9MA). <p>5. In each lavatory:</p> <ul style="list-style-type: none"> - Place calibrated container under water faucet and initiate a continuous water flow for a period of approx. 10 sec. 	<ul style="list-style-type: none"> - Background lighting in combi gage (22MA) comes on and a pressure of approx. 25 psi (1.72 bar) is indicated. <p>On potable water service panel:</p> <ul style="list-style-type: none"> - Dial light in pressure gage (21MA) goes off. - Pressure gage (21MA) indicates 0 psi (0 bar). <p>On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) goes off. <p>On purser's panel (863VU):</p> <ul style="list-style-type: none"> - Background lighting in combi gage (22MA) comes on. - Combi gage (22MA) indicates a pressure of approx. 25 psi (1.72 bar). - Background lighting in combi gage (22MA) goes off. <p>In each lavatory:</p> <ul style="list-style-type: none"> - Water collected in container to be 0.22 l (0.058 US gal.) minimum.

(3)Close-Up

- R
- (a)De-pressurize air supply system (Ref. 38-40-00, P. Block 301), if necessary.
 - (b)Drain potable water system (Ref. 12-24-38, P. Block 1), if necessary.
 - (c)De-energize aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).
 - (d)Remove safety clip and tag and close circuit breaker 19MD.
 - (e)Remove access platform.
 - (f)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

KSSU

38-40-00

Page 504
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

SHUTTLE VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	O-Ring
D. Material No. 05-001	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 38-40-00, P. Block 301 Air Supply
- 38-40-00, P. Block 501 Air Supply
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401 FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1) Position access platform under FWD cargo compartment door (Z811).
- (2) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (3) Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (4) Depressurize air supply system (Ref. 38-40-00, P. Block 301).

B. Removal

(Ref. Fig. 401)

- (1) Disconnect unions (1) from shuttle valve (2) and adapter (3).
 - (2) Release clamp (4) and remove shuttle valve (2).
 - (3) Remove adapter (3) from shuttle valve (2) and discard O-ring (5).
- NOTE** : Retain adapter for reinstallation.
- (4) Fit blanking caps to hoses, shuttle valve and adapter.

C. Installation

(Ref. Fig. 401)

- (1) Remove blanking caps from hoses, shuttle valve and adapter.
 - (2) Install adapter (3) with new O-ring (5) on shuttle valve (2).
- NOTE** : Apply grease (Mat. No. 05-001) to O-ring (5) prior to installation.
- (3) Position shuttle valve (2) and secure with clamp (4).
 - (4) Connect unions (1) to shuttle valve (2) and adapter (3).

D. Test

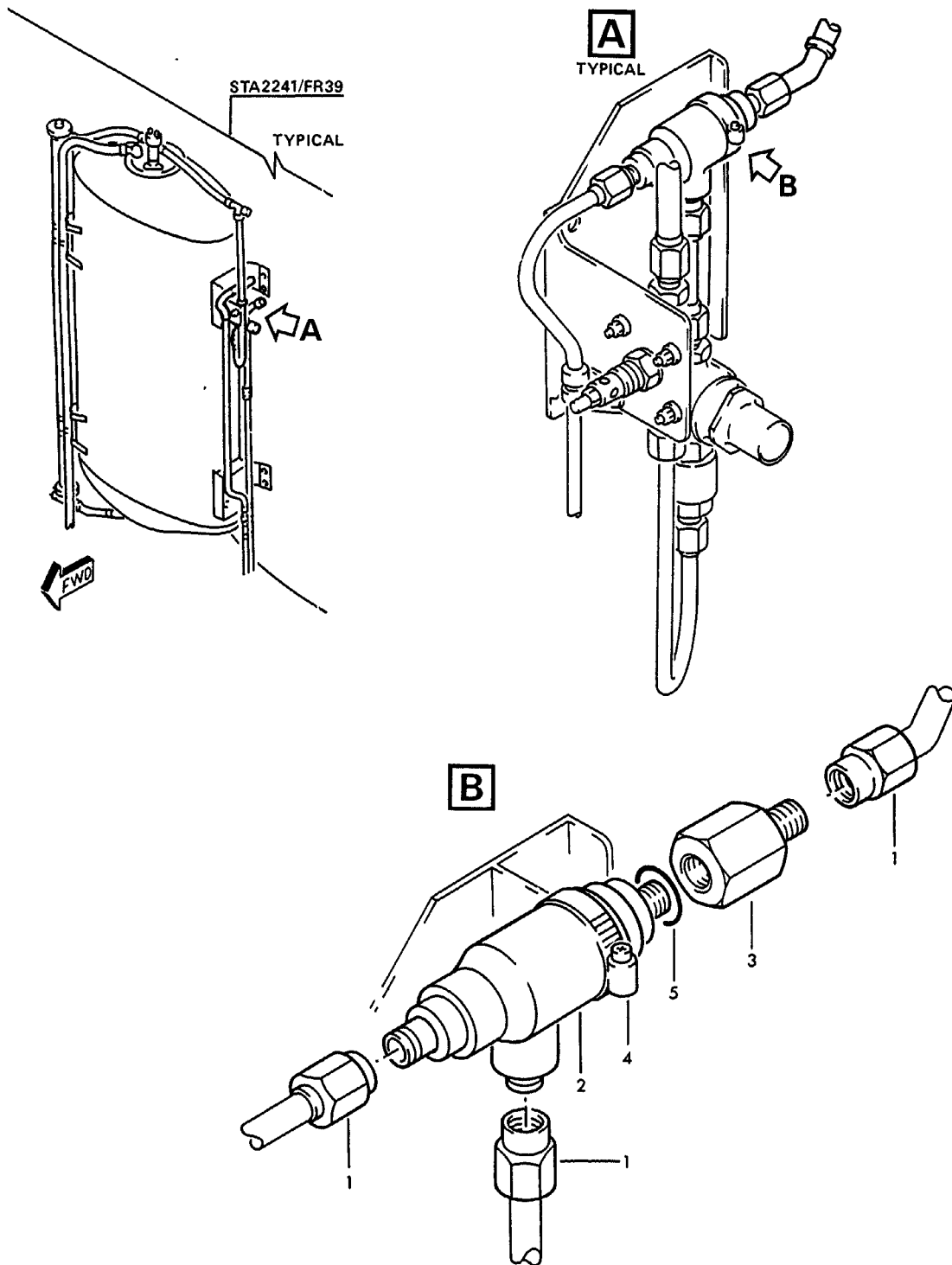
- (1) Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).
 - (2) Inspect shuttle valve connections and unions for leakage.
- NOTE** : Leakage is not permissible.

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-11

Page 401
Jun 01/13



Shuttle Valve
Figure 401

BM6 38 41 11 4 BAMO 00

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-11

Page 402
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4) Remove access platform.

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-11

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

AIR FILTER - REMOVAL/INSTALLATION

1. Reason for the Job

- A. Replace air supply filter element.
R B. Replace compressor outlet filter element.
- R **NOTE** : Removal/Installation procedures of air supply filter element and
R air compressor outlet filter element are identical.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps
C.	Corrosion-Resistant Steel Lockwire, 0.6 mm (0.024 in.) dia.
D.	Torque Wrench, 0.85 m.daN (75 lbf.in.)
E.	Filter Element
F.	O-Rings
G.	Circuit Breaker Safety Clip and Tag
H. Material No. 05-001	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 38-40-00, P. Block 301	Air Supply
- 38-41-14, P. Block 401	Check Valve
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

3. Procedure

A. Job Set-Up

- (1)Position access platform under FWD cargo compartment door (Z811).
- (2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (3)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (4)Depressurize air supply system, if necessary (Ref. 38-40-00, P. Block 301).

- (5)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

EFFECTIVITY: ALL

KSSU

38-41-12

Page 401
Jun 01/14

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AIRCRAFT MAINTENANCE MANUAL

B. Removal

****0N A/C 226-226, 229-249,**

(Ref. Fig. 401)

****0N A/C 401-401, 404-500,**

(Ref. Fig. 402)

(1) Removal of Filter Assembly

- (a) Disconnect unions (1) from adaptor (11) and check valve (3).
- (b) If necessary, remove check valve (3) (Ref. 38-41-14, P. Block 401).
- (c) If necessary, remove adaptor (11) and O-ring (12), discard O-ring.
- (d) Remove filter assy (2) by removing bolts (4), washers (5) and nuts (6).
- (e) Fit blanking caps to filter assy, check valve, adaptor and unions.

(2) Removal of Filter Element

NOTE : The following operations for changing the filter element are to be carried out under clean conditions.

- (a) Remove lockwire and cover (7).
- (b) Remove and discard filter element (8) and O-rings (9, 10).

****0N A/C 226-226, 229-249,**

(1) Removal of Filter Assembly

- (a) Disconnect unions (1) from adaptors (2).
- (b) If necessary, remove adaptors (2) and O-rings (3), discard O-rings.
- (c) Remove filter assy (11), by removing bolts (4), washers (5) and nuts (6).
- (d) Fit blanking caps to filter assy, adaptors and unions.

(2) Removal of Filter Element

NOTE : The following operations for changing the filter element are to be carried out under clean conditions.

- (a) Remove lockwire and cover (7).
- (b) Remove and discard filter element (8) and O-rings (9, 10).

****0N A/C ALL**

C. Installation

****0N A/C 226-226, 229-249,**

(Ref. Fig. 401)

****0N A/C 401-401, 404-500,**

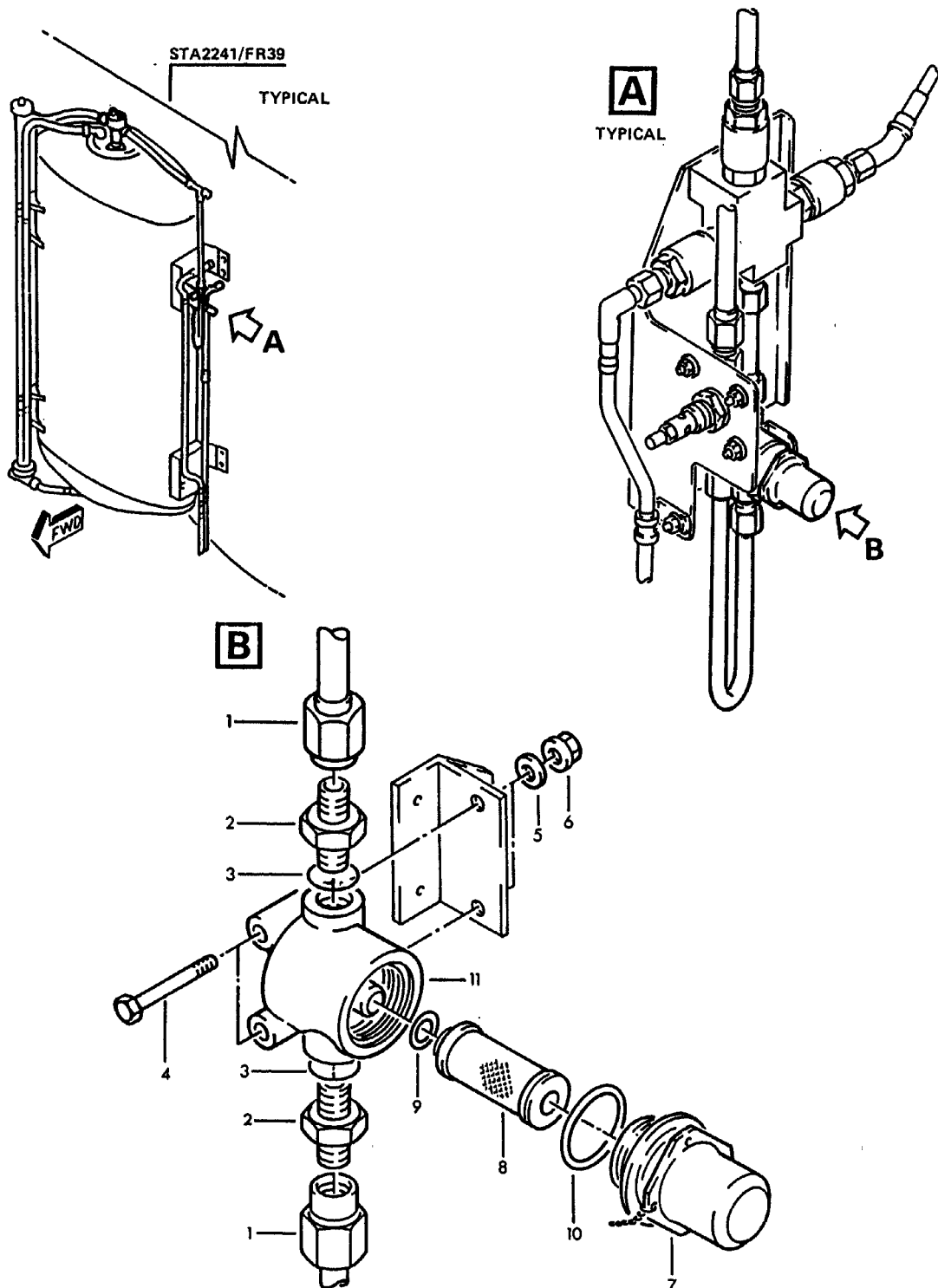
EFFECTIVITY: ALL

R

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38-41-12

Page 402
Jun 01/14



Air Filter
Figure 401

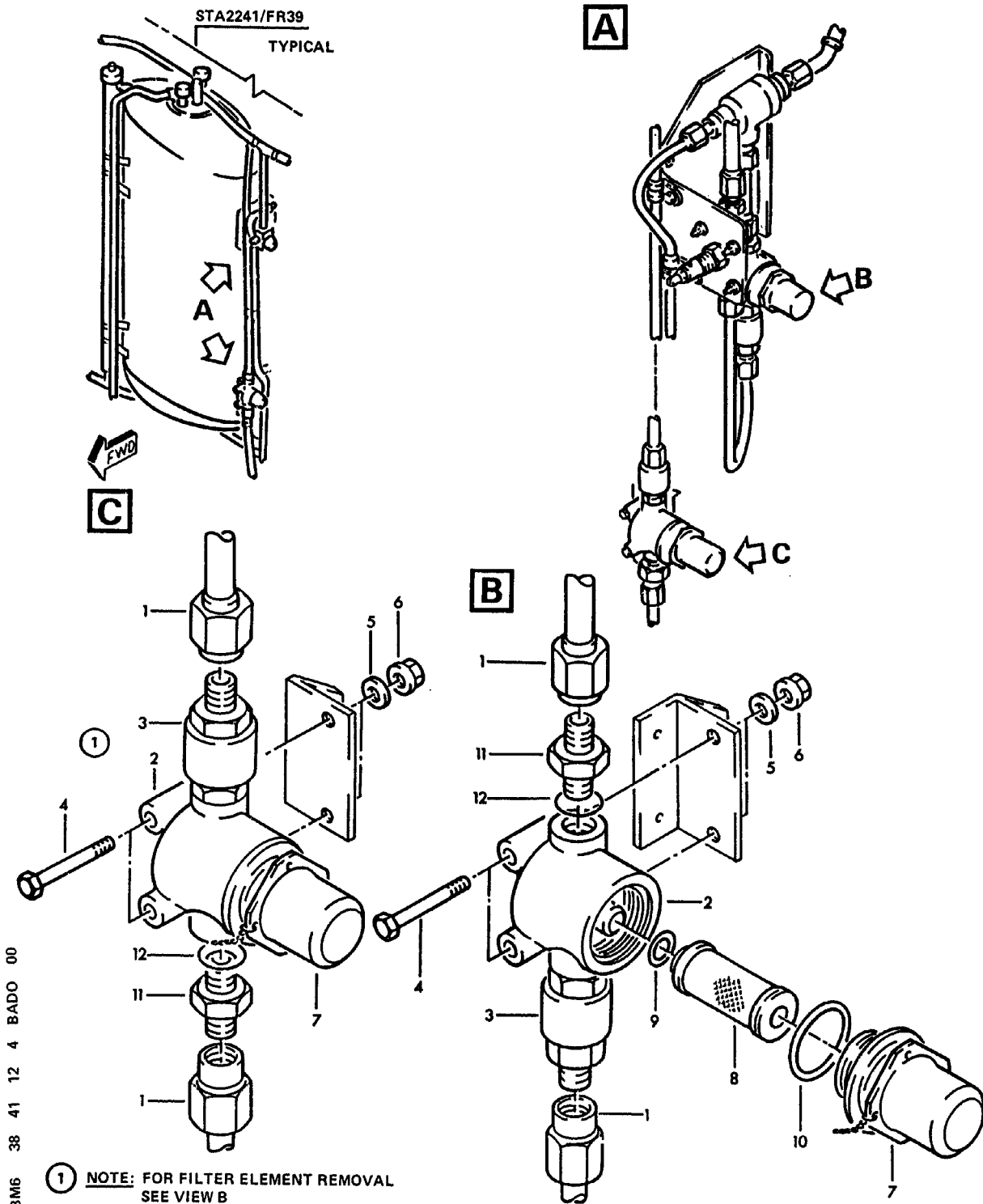
BM6 38 41 12 4 BABO 00

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-41-12

Page 403
Jun 01/06



Air Filter
Figure 402

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-12

Page 404
Jun 01/13

(Ref. Fig. 402)

(1) Installation of Filter Assembly.

(a) Remove blanking caps from filter assy, check valve, adaptor and unions.

(b) Position filter assy (2) and install bolts (4), washers (5) and nuts (6).

(c) If removed, install adaptor (11) and new O-ring (12).

NOTE : Apply grease (Material No. 05-001) to O-ring (12) prior to installation.

(d) If removed, install check valve (3) (Ref. 38-41-14, P. Block 401).

(e) Connect unions (1) to adaptor (11) and check valve (3).

(2) Installation of Filter Element

(a) Install new O-rings (9, 10), new filter element (8) and cover (7).

NOTE : Apply grease (Material No. 05-001) to O-ring (10) prior to installation.(b) **TORQUE** cover (7) to 0.85 m.daN (75 lbf.in.) and secure with lockwire 0.6 mm (0.024 in.) dia.****ON A/C 226-226, 229-249,**

(1) Installation of Filter Assembly

(a) Remove blanking caps from filter assy, adaptors and unions.

(b) Position filter assy (11) and install bolts (4), washers (5) and nuts (6).

(c) If removed, install adaptors (10) with new O-rings (11).

NOTE : Apply grease (Material No. 05-001) to O-rings (11) prior to installation.

(d) Connect unions (1) to adaptors (10).

(2) Installation of Filter Element

(a) Install new O-rings (9, 10), new filter element (8) and cover (7).

NOTE : Apply grease (Material No. 05-001) to O-ring (10) prior to installation.(b) **TORQUE** cover (7) to 0.85 m.daN (75 lbf.in.) and secure with lockwire 0.6 mm (0.024 in.) dia.****ON A/C ALL****D. Test**

(1) Pressurize potable water system (Ref. 38-40-00, P. Block 301).

(2) Inspect check valve connections and unions for leakage.

NOTE : Leakage is not permissible.

EFFECTIVITY: ALL

R

KSSU

38-41-12Page 405
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4) Remove access platform.
- (5) Remove safety clip and tag and close circuit breaker 19MD.

EFFECTIVITY: ALL

R

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38-41-12

Page 406
Jun 01/07

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AIRCRAFT MAINTENANCE MANUAL

PRESSURE REDUCING VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps

Reference Procedures

- 38-40-00, P. Block 301 Air Supply
- 38-40-00, P. Block 501 Air Supply
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401 FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1)Position access platform under FWD cargo compartment door (Z811).
- (2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (3)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (4)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

B. Removal

****0N A/C 226-226, 229-249,**

(Ref. Fig. 401)

R **0N A/C 401-401, 404-500,

(Ref. Fig. 402)

****0N A/C ALL**

- (1)Disconnect unions (3) from adaptors (2) of pressure reducing valve (1).
- (2)Remove nuts (5), washers (4) and pressure reducing valve (1).
- (3)Fit blanking caps to pressure reducing valve and unions.

C. Installation

****0N A/C 226-226, 229-249,**

(Ref. Fig. 401)

R **0N A/C 401-401, 404-500,

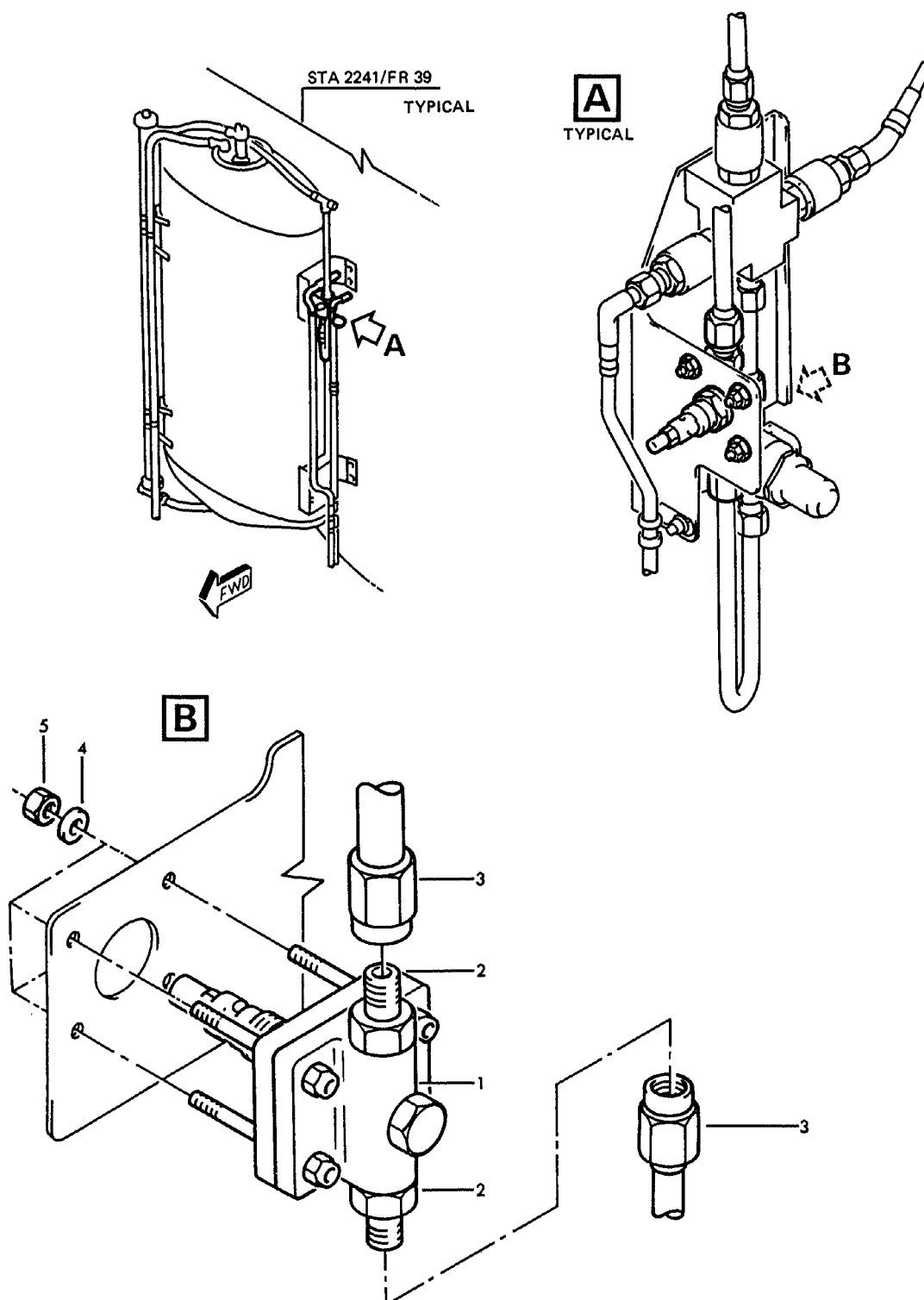
(Ref. Fig. 402)

EFFECTIVITY: ALL

KSSU

38-41-13

Page 401
Jun 01/13



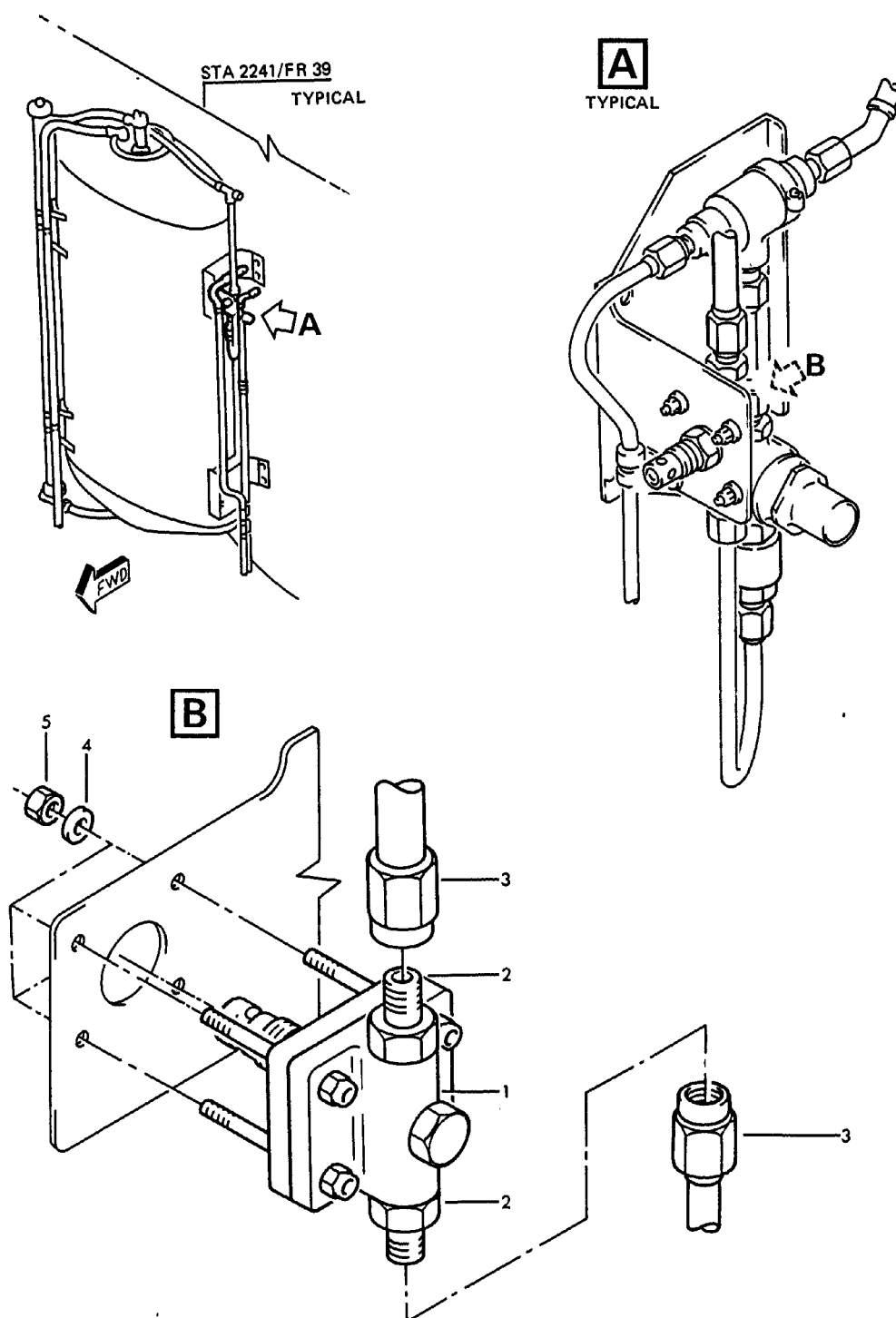
Pressure Reducing Valve
Figure 401

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-41-13

Page 402
Jun 01/06



Pressure Reducing Valve
Figure 402

BM6 38 41 13 4 BANO 00

R EFFECTIVITY: 401-401, 404-500,

KSSU

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38-41-13

Page 403
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

****ON A/C ALL**

- (1) Remove blanking caps from pressure reducing valve and unions.
- (2) Position pressure reducing valve (1) and secure with washers (4) and nuts (5).
- (3) Connect unions (3) to adapters (2) of pressure reducing valve (1).

D. Tests

- (1) Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).
- (2) Inspect pipe connections and unions for leakage.
NOTE : Leakage is not permissible.

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4) Remove access platform.

EFFECTIVITY: ALL

KSSU

38-41-13

Page 404
Dec 01/89

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AIRCRAFT MAINTENANCE MANUAL

R

PRESSURE REDUCING VALVE - ADJUSTMENT/TEST

1. Functional Test of Pressure Reducing Valve

A. Equipment and Materials

ITEM	DESIGNATION
1.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
2.	Circuit Breaker Safety Clip and Tag
3.	Access Platform 1 m (3 ft.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1) Job Set-Up

- (a) Position access platform under potable water service panel access door (136BR).
- (b) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (c) Make certain that electronics racks ventilation is correct.
- (d) Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

- (e) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

- (f) If required, replenish potable water system (Ref. 12-15-38, P. Block 1).
- (g) Pressurize potable water system (Ref. 38-40-00, P. Block 301).

EFFECTIVITY: ALL

KSSU

38-41-13

Page 501
Jun 01/02

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(2)Test

ACTION	RESULT
1. On potable water service panel: - Open potable water service panel access door (136BR).	On potable water service panel: - Dial light in pressure gage (21MA) comes on. - Pressure gage (21MA) indicates approx. 25 psi (1.72 bar). On purser's panel (863VU): - Dial light in pressure gage (22MA) comes on and a pressure of approx. 25 psi (1.72 bar) is indicated.
2. On potable water service panel: - Slowly increase the pressure at the ground air-supply cart to 44 psi (3.0336 bar).	In the potable water sytem: - The potable water system is pressurized. - The pressure reducing valve operates and stops the air supply to the water tanks. On purser's panel (863VU): - When the airflow to the tank stops, pressure gage (22MA) indicates approx. 25 psi (1.7236 bar). On potable water service panel: - When the airflow to the tank stops, pressure gage (21MA) indicates approx. 25 psi (1.7236 bar). <u>NOTE</u> : When pressure is incorrect replace pressure reducing valve (Ref. 38-41-13, P. Block 401). <u>NOTE</u> : Adjust pressure reducing valve off A/C refer the applicable CMM.

R

R

(3)Close-Up

- (a)De-pressurize air supply system (Ref. 38-40-00, P. Block 301) if necessary.
- (b)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary.
- (c)De-energize aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).
- (d)Remove safety clip and tag and close circuit breaker 19MD.
- (e)Remove access platform.
- (f)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

KSSU

38-41-13

Page 502
Jun 01/01



AIRCRAFT MAINTENANCE MANUAL

CHECK VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	O-Ring
C.	Blanking Caps
D.	Corrosion Resistant Steel Lockwire 0.6 mm (0.024 in.) dia.
E.	Circuit Breaker Safety Clip and Tag
F. Material No. 05.001	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1) Position access platform under FWD cargo compartment door (Z811).
- (2) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (3) Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (4) Depressurize air supply system, if necessary (Ref. 38-40-00, P. Block 301).

- (5) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

B. Removal

****ON A/C** 226-226, 229-249,

(Ref. Fig. 401)

R **ON A/C 401-401, 404-500,

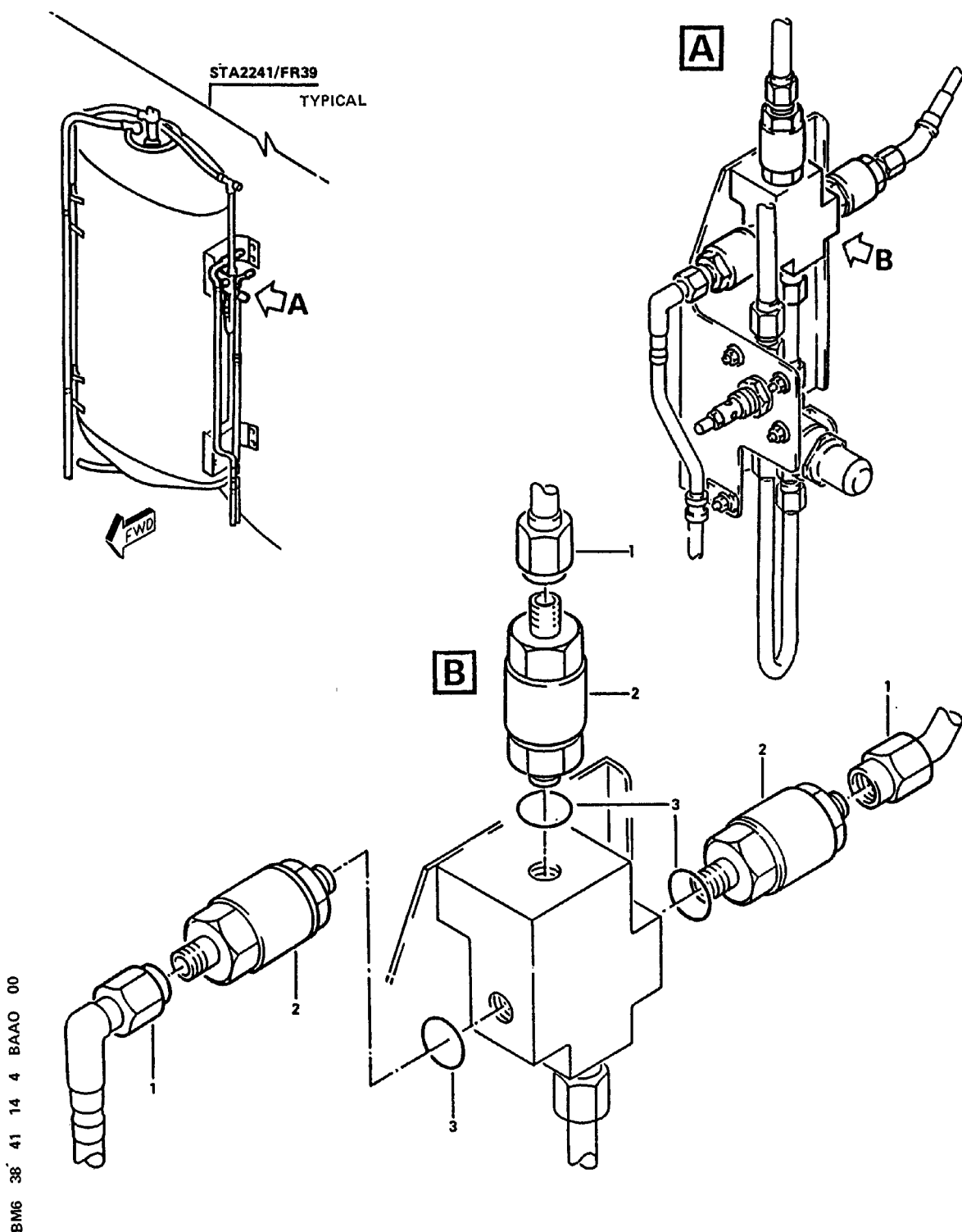
(Ref. Fig. 402)

EFFECTIVITY: ALL

KSSU

38-41-14

Page 401
Jun 01/13



Check Valve
Figure 401

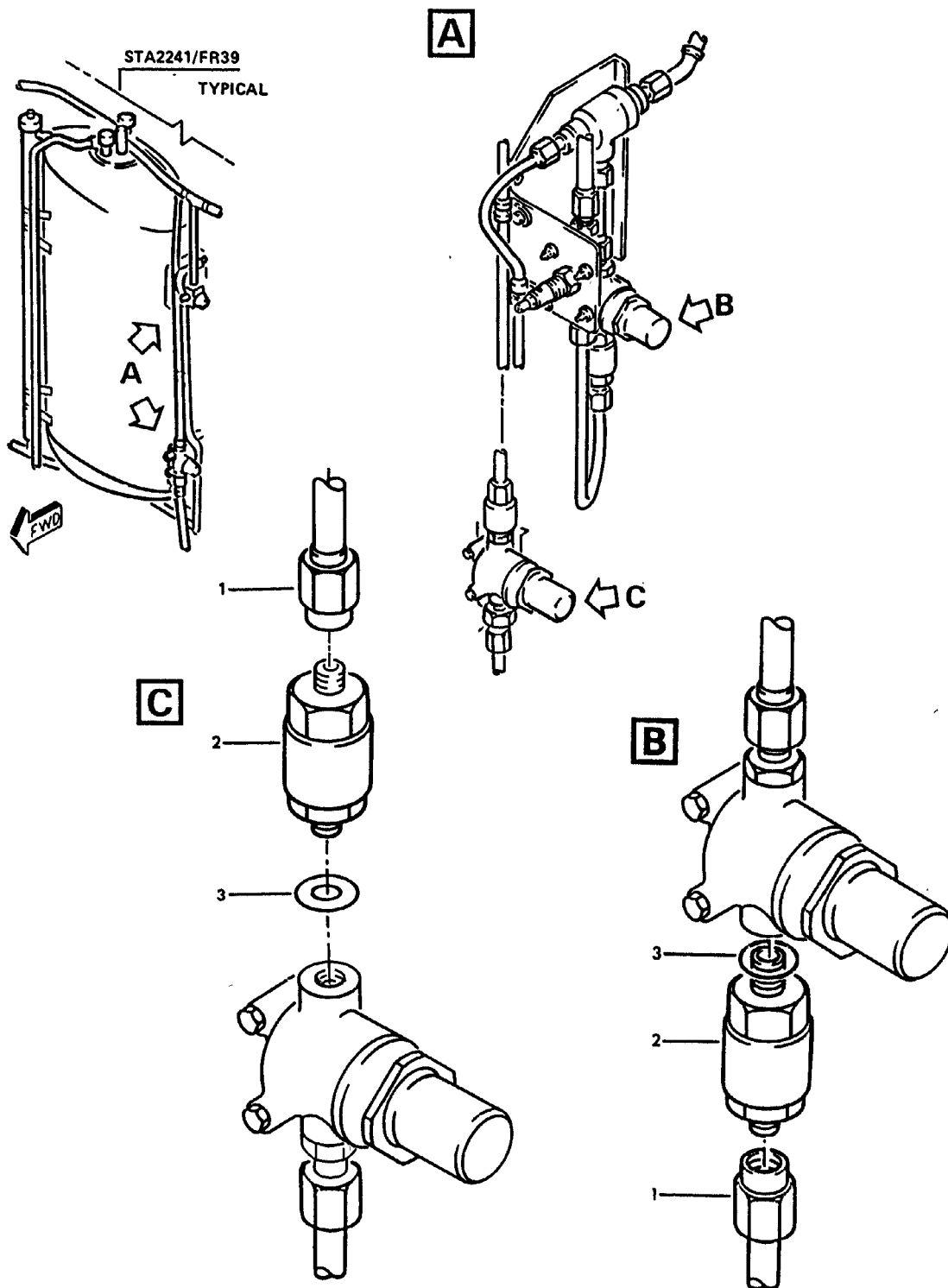
R EFFECTIVITY: 226-226, 229-249,

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38-41-14

Page 402
Jun 01/06

BM6 38 41 14 4 BAGO 00



Check Valve
Figure 402

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-14

Page 403
Jun 01/13

****ON A/C ALL**

(1) Disconnect union (1) from check valve (2).

(2) Remove check valve (2) and O-ring (3).

NOTE : Discard O-ring.

(3) Fit blanking caps to all openings.

C. Installation

****ON A/C 226-226, 229-249,**

(Ref. Fig. 401)

R **ON A/C 401-401, 404-500,

(Ref. Fig. 402)

****ON A/C ALL**

(1) Remove blanking caps and install check valve (2) with new O-ring (3).

NOTE : Apply grease (Mat. No. 05-001) to O-ring prior to installation.

NOTE : Make certain that check valve arrow is in direction of flow.

(2) Secure check valve end fittings with lockwire 0.6 mm (0.024 in.) dia.

(3) Connect union (1) to check valve (2).

D. Test

(1) Pressurize potable water system (Ref. 38-40-00, P. Block 301).

(2) Inspect check valve connections and unions for leakage.

NOTE : Leakage is not permissible.

E. Close-Up

(1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(2) Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).

(3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).

(4) Remove access platform.

(5) Remove safety clip and tag and close circuit breaker 19MD.

EFFECTIVITY: ALL

KSSU

38-41-14

Page 404
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

AIR COMPRESSOR - REMOVAL/INSTALLATION

R 1. Reason for the Job

R A. Replace compressor inlet filter element.

R 2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	O-Rings
C.	Blanking Caps
D.	Circuit Breaker Safety Clip and Tag
E.	Electrical Ground Power Unit - 3-phase, 115/200 V, 400 Hz
Referenced Procedures	
- 20-28-11, P. Block 1	Electrical Bonding
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

**0N A/C 226-226, 229-249,

- 25-54-10, P. Block 201 FWD Cargo Compartment Linings

**0N A/C ALL

R 3. Procedure

A. Job Set-up

- (1) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (2) Make certain that electronics racks ventilation is correct.
- (3) Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

**0N A/C 226-226, 229-249,

- (4) Position access platform under FWD cargo compartment door (Z811).
- (5) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
- (6) Remove FWD cargo compartment sidewall panel (132QW) (Ref. 25-54-10, P. Block 201).

EFFECTIVITY: ALL

KSSU

38-41-15

Page 401
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

(7)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

****ON A/C 401-401, 404-500,**

(4)Position access platform and remove access panel (136AR).

(5)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

****ON A/C ALL**

B. Removal

****ON A/C 226-226, 229-249,**

(Ref. Fig. 401)

****ON A/C 401-401, 404-500,**

(Ref. Fig. 402)

****ON A/C ALL**

(1)Disconnect electrical connector (1).

(2)Disconnect union (2) from adapter (11).

(3)Remove adapter (11) and O-ring (3), discard O-ring.

(4)Remove nuts (4), washers (5), bolts (6) and bonding strap (10).

(5)Remove compressor (7).

R (6)Remove and discard filter element (8) and O-ring (9).

(7)Install blanking caps to all openings.

C. Installation

****ON A/C 226-226, 229-249,**

(Ref. Fig. 401)

****ON A/C 401-401, 404-500,**

(Ref. Fig. 402)

****ON A/C ALL**

(1)Remove blanking caps from all openings.

R (2)Install new filter element (8) with new O-ring (9).

(3)Install compressor (7) and bonding strap (10) using bolts (6), washers (5) and nuts (4).

NOTE : For electrical bonding procedure (Ref. 20-28-11, P. Block 1).

(4)Install adapter (11) with new O-ring (3).

(5)Connect union (2) to adaptor (11).

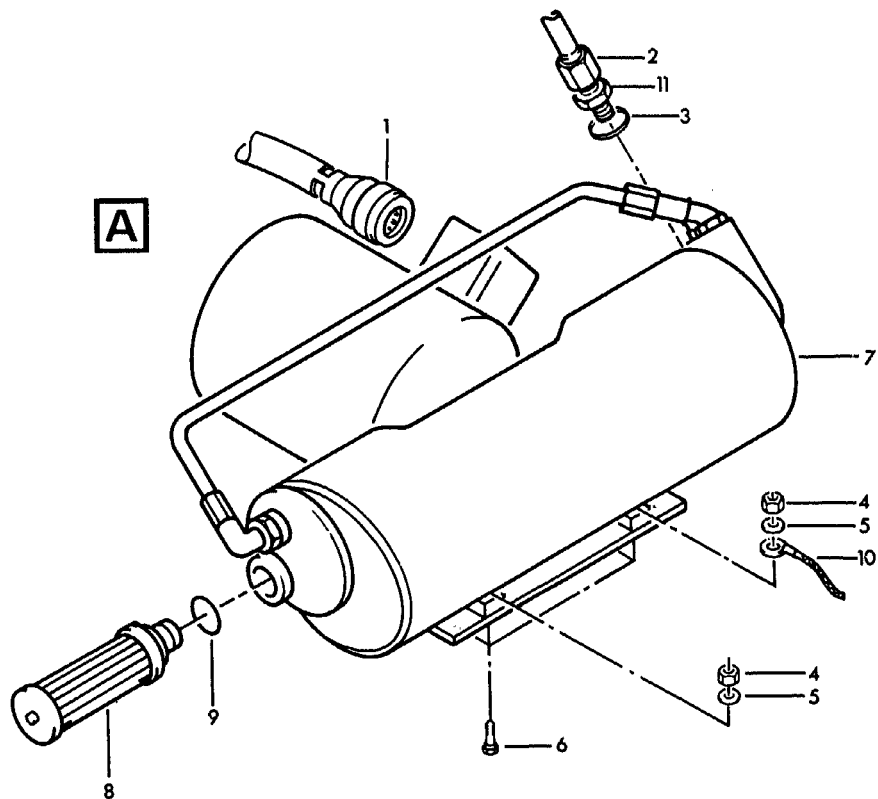
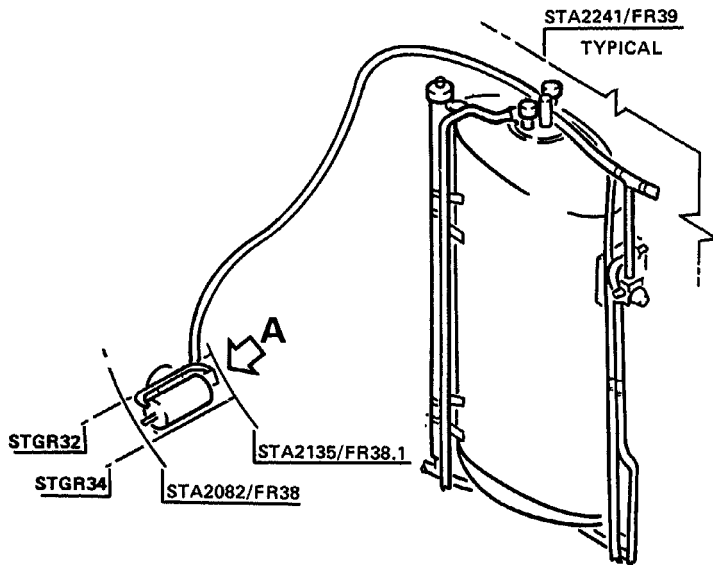
(6)Connect electrical connector (1).

EFFECTIVITY: ALL

KSSU

38-41-15

Page 402
Jun 01/14



Air Compressor - 21MD
Figure 401

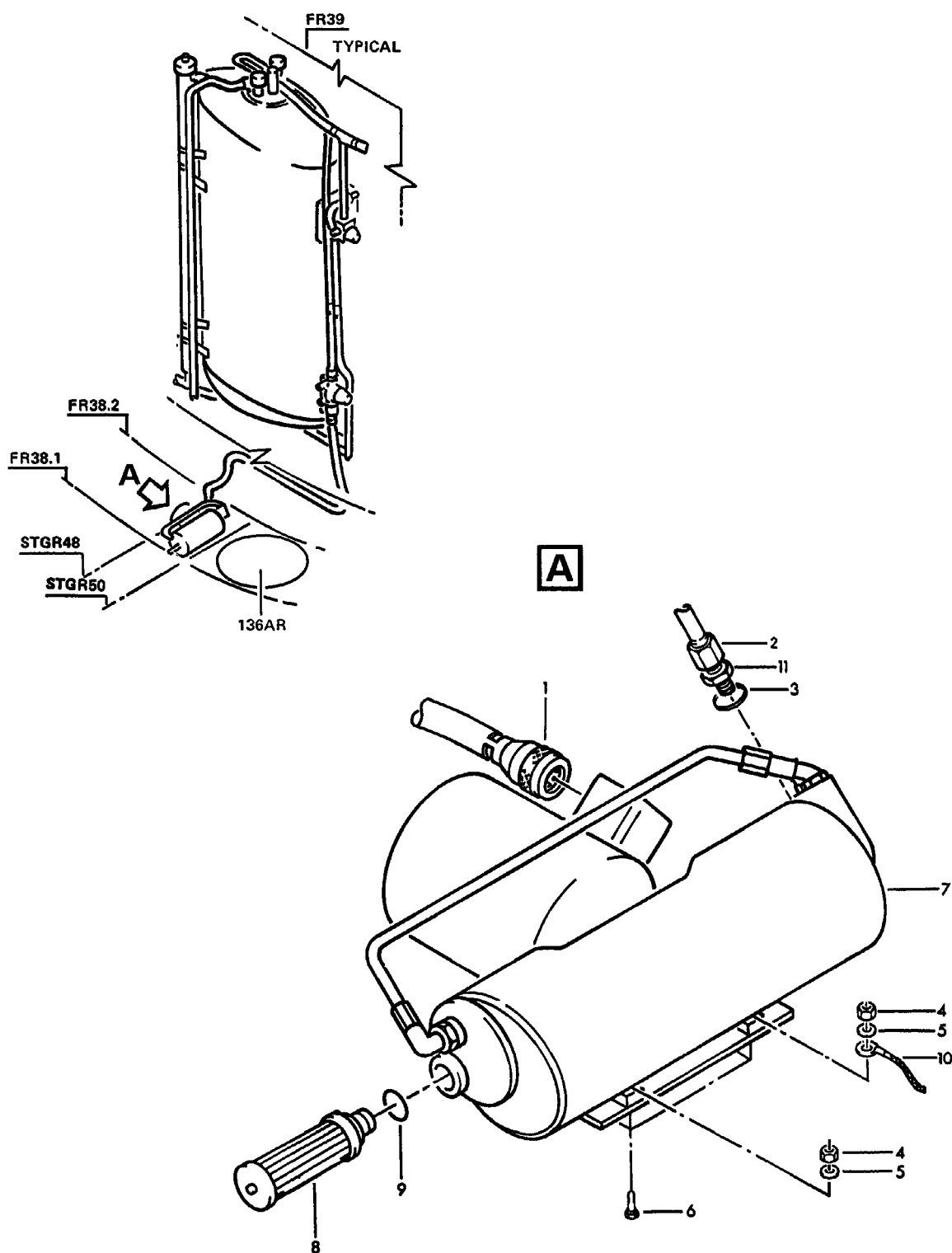
BM6 38 41 15 4 BANO 00

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-41-15

Page 403
Jun 01/07



Air Compressor - 21MD
Figure 402

BM6 38 41 15 4 BAP0 01

R

EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-15

Page 404
Jun 01/14

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AIRCRAFT MAINTENANCE MANUAL

D. Test

- (1) Make certain that potable water service panel access door (136BR) is closed.
- (2) Remove safety clip and tag and close circuit breaker 19MD.
- (3) Ensure compressor is operating.
- (4) Inspect pipe connections and unions for leakage.
NOTE : Leakage is not permissible.
- (5) Inspect pressure gages for correct pressure.
NOTE : System working pressure is between 22-25 psi (1.52-1.72 bar).

E. Close-up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

****ON A/C 226-226, 229-249,**

- (2) Install FWD cargo compartment sidewall panel (132QW) (Ref. 25-54-10, P. Block 201).
- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4) Remove access platform.
- (5) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

****ON A/C 401-401, 404-500,**

- (2) Install access panel (136AR) and remove access platform.
- (3) De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

EFFECTIVITY: ALL

R

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38-41-15

Page 405
Jun 01/14



AIRCRAFT MAINTENANCE MANUAL

PRESSURE SWITCH - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

R

- 38-12-00, P. Block 501 Distribution
- 38-40-00, P. Block 301 Air Supply
- 38-40-00, P. Block 501 Air Supply
- 52-30-00, P. Block 301 FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401 FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

- (1) Open, safety and tag the following circuit breakers:

R

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R

800VU	WATER COMPRESSOR	19MD	H2
-------	------------------	------	----

R

- (2) Position access platform under FWD cargo compartment door (Z811).
(3) Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(4) Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(5) Depressurize air supply system (Ref. 38-40-00, P. Block 301).

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38-41-17

Page 401
Dec 01/95

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B. Removal

(Ref. Fig. 401)

****0N A/C 226-226, 229-249,**

(Ref. Fig. 402)

R **0N A/C 401-401, 404-500,

(Ref. Fig. 403)

****0N A/C ALL**

(1) Disconnect electrical connector (4).

(2) Disconnect union (2).

(3) Remove pressure switch (1).

(4) Put blanking caps on all openings.

C. Preparation for Installation

NOTE : This step is only necessary if a replacement pressure switch without a union is to be installed.

(1) Remove blanking cap from pressure switch (1).

(2) Put a new union (2) in position.

(3) Secure union with a new pin (3).

D. Installation

(1) Remove all blanking caps.

(2) Put pressure switch (1) in position.

(3) Connect union (2).

(4) Connect electrical connector (4).

E. Test

(1) Test pressure switches 19MA (Ref. 38-12-00, P. Block 501) and 22MD (Ref. 38-40-00, P. Block 501).

(2) Inspect pipe connections and unions for leakage.

NOTE : Leakage is not permissible.

F. Close-Up

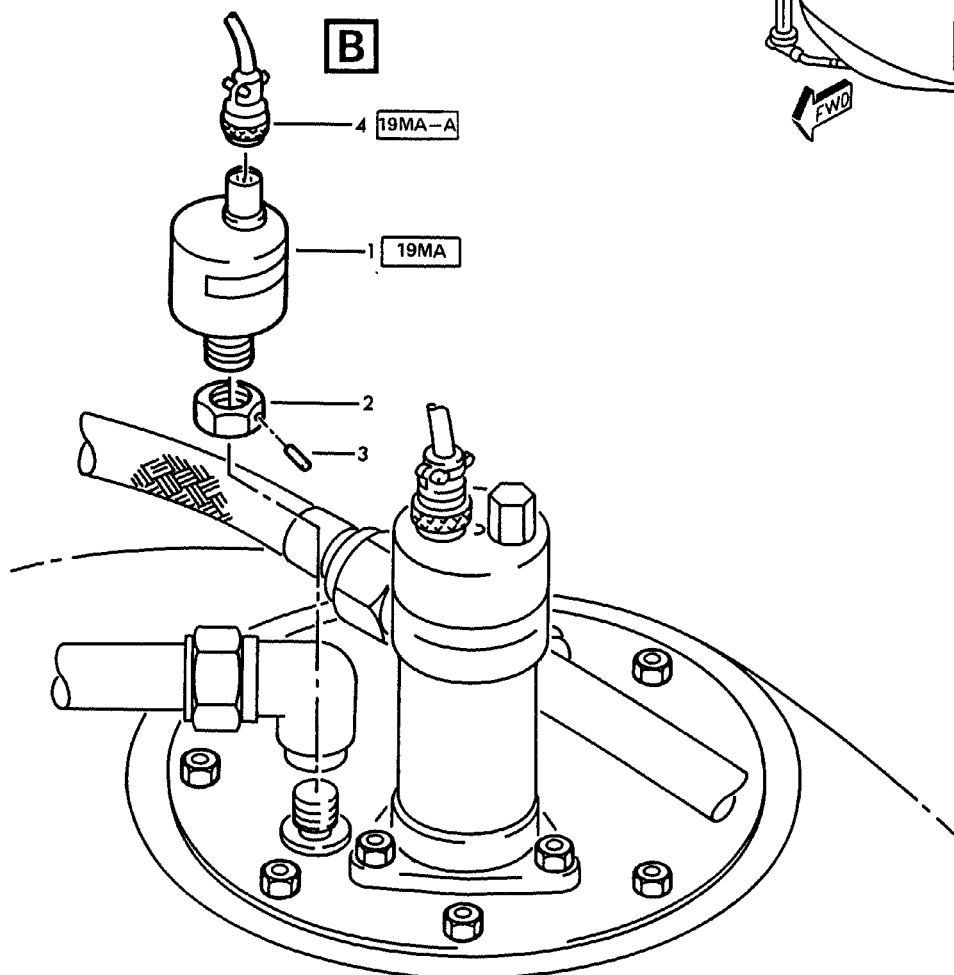
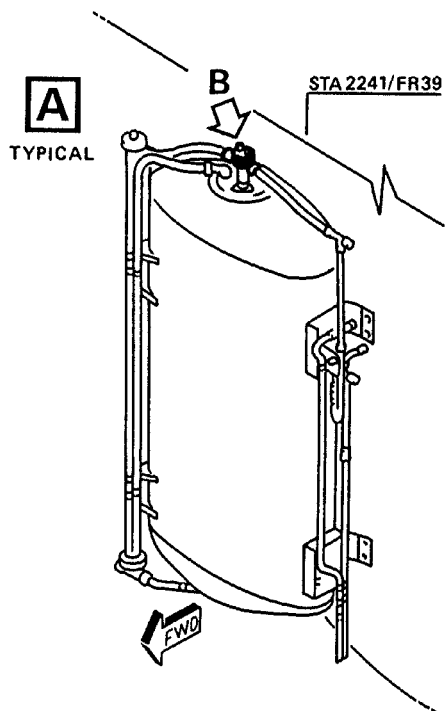
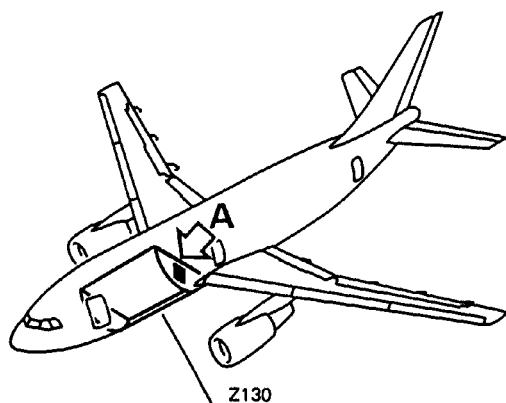
(1) Remove safety clips and tags and close circuit breakers 1MA and 19MD.

(2) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

EFFECTIVITY: ALL

KSSU

38-41-17Page 402
Jun 01/13



Pressure Switch - 19MA
Figure 401

BM6 38 41 17 4 BAMO 00

R

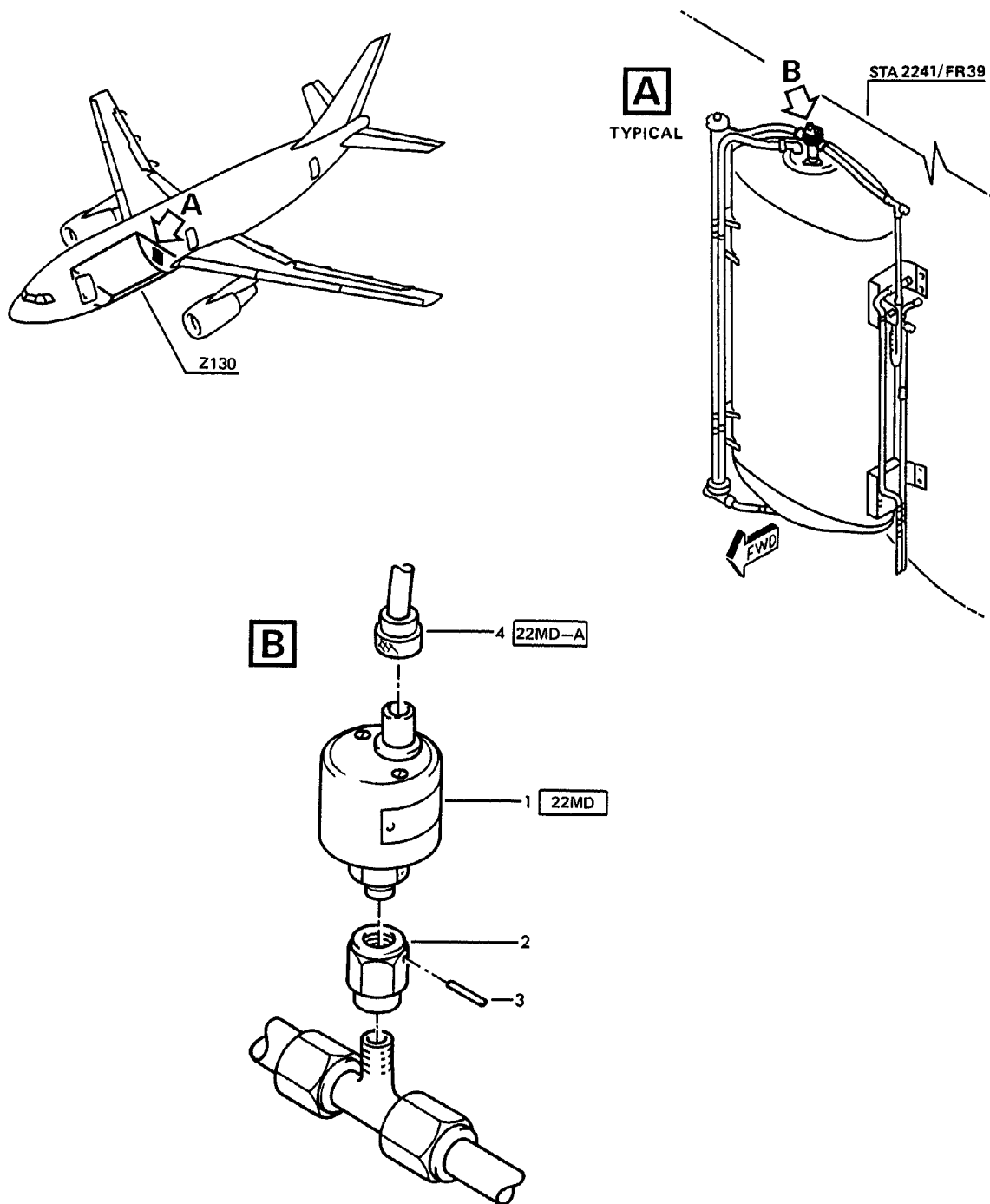
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38-41-17

Page 403
Jun 01/90

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Pressure Switch - 22MD
Figure 402

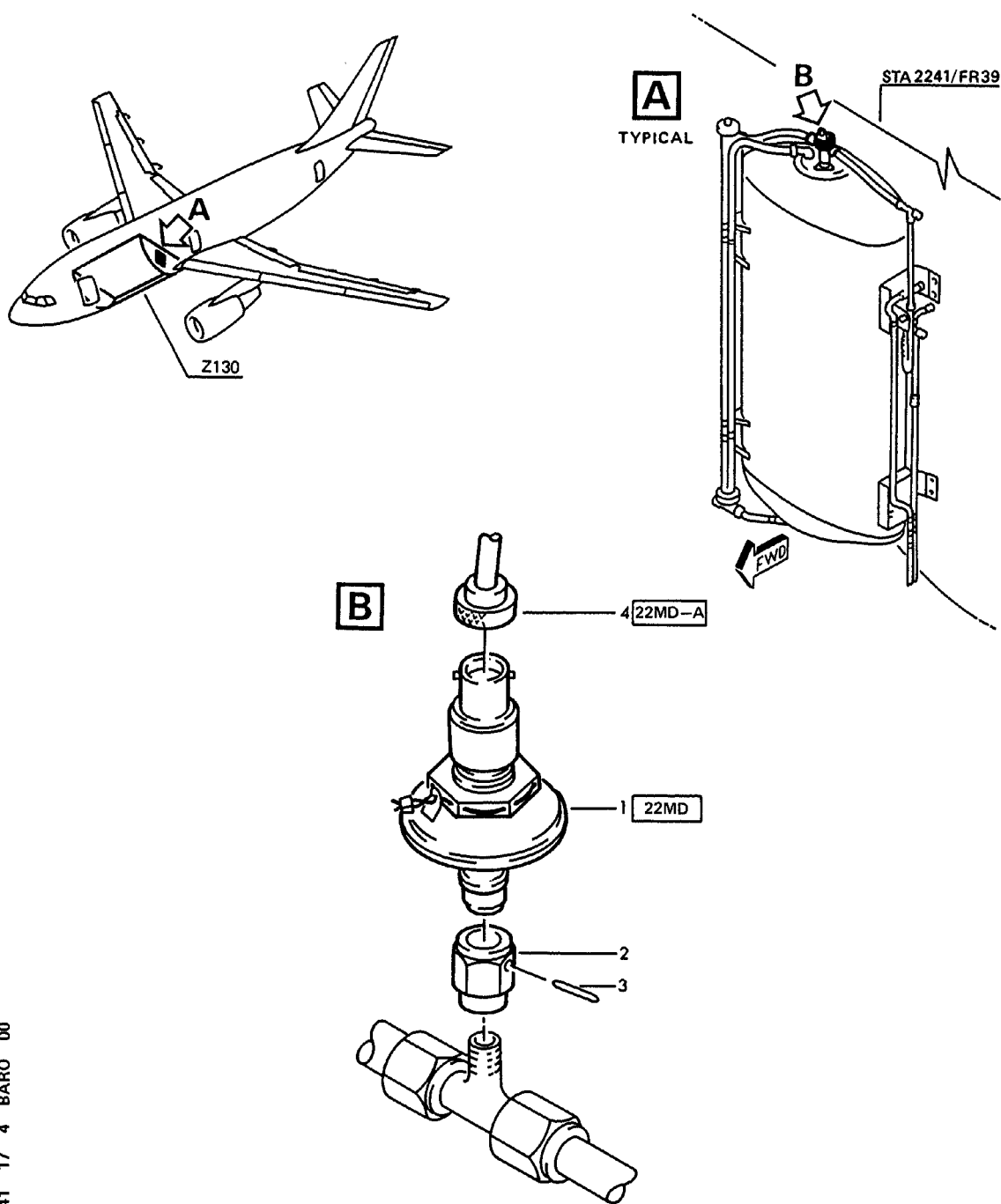
BM6 38 41 17 4 BAPO 00

R EFFECTIVITY: 226-226, 229-249,

KSSU

38-41-17

Page 404
Jun 01/07



Pressure Switch - 22MD
Figure 403

BM6 38 41 17 4 BARO 00

R EFFECTIVITY: 401-401, 404-500,

KSSU

38-41-17

Page 405
Jun 01/13



AIRCRAFT MAINTENANCE MANUAL

- (3) Install cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (4) Remove safety lock and close FWD cargo compartment door (Z811) (Ref. 52-30-00, P. Block 301) and remove access platform.

R

EFFECTIVITY: ALL

KSSU

38-41-17

Page 406
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

AIR PRESSURE TRANSMITTER - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform
B.	O-Ring
C.	Blanking Caps
D.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

- 38-40-00, P. Block 301	Air Supply
- 38-40-00, P. Block 501	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

R

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R

(2)Position access platform under FWD cargo compartment door (Z811).

(3)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(4)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).

(5)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

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KSSU

38-42-11

Page 401
Dec 01/95

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B. Removal

(Ref. Fig. 401)

- (1) Disconnect electrical connector (1).
- (2) Remove nuts (3) and washers (4).
- (3) Remove transmitter 20MA (2) and discard O-ring (5).
- (4) Blank off transmitter connection on tank.

C. Installation

- (1) Remove blank from transmitter connection on tank.
- (2) Position new O-ring (5).
- (3) Install transmitter 20MA (2) and secure using washers (4) and nuts (3).
- (4) Connect electrical connector (1).

D. Test

- (1) Remove safety clips and tags and close circuit breaker 1MA.
- (2) Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).
- (3) Inspect transmitter connection and unions for leakage.
NOTE: Leakage is not permissible.

E. Close-Up

- (1) Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (2) Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
- (3) Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
- (4) Remove access platform.

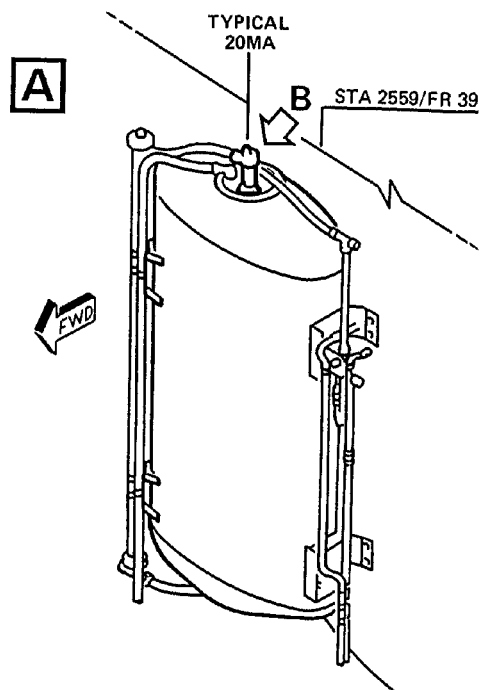
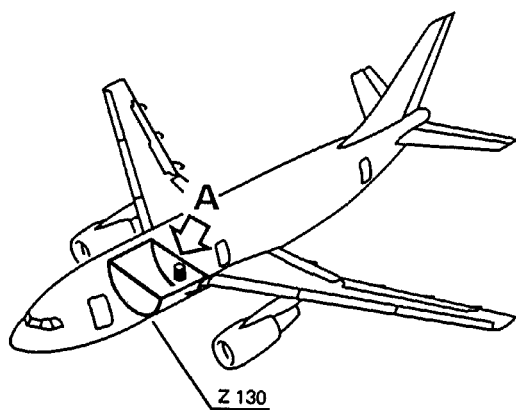
EFFECTIVITY: ALL

R

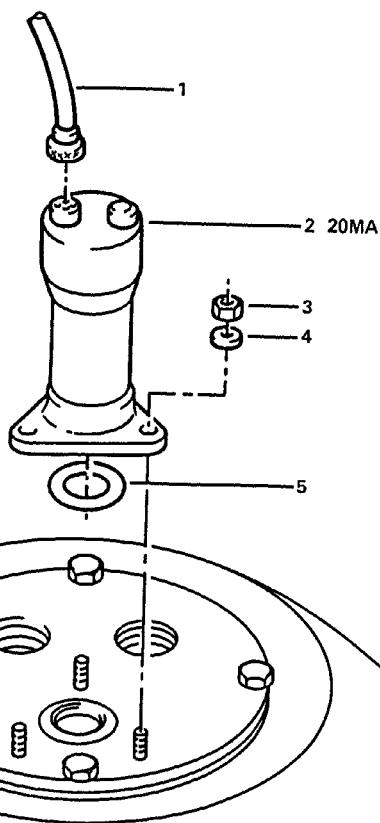
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38-42-11

Page 402
Jun 01/01



B



Air Pressure Transmitter - 20MA
Figure 401

EFFECTIVITY: ALL

R

KSSU

38-42-11

Page 403
Jun 01/01



AIRCRAFT MAINTENANCE MANUAL

AIR PRESSURE INDICATOR - REMOVAL/INSTALLATION

R

NOTE : The air pressure is indicated on combigage 22MA at the purser's panel 863VU and on pressure gage 21MA at the potable water service panel 910VU.
For removal/installation procedure of combigage 22MA refer to 38-13-12, P. Block 401.

R

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clip and Tag
Referenced Procedure - 38-40-00, P. Block 501	Air Supply

2. Procedure

A. Job Set-Up

R

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R

(2)Gain access to indicator 21MA.

R

- (a)Open service panel 136BR.
- (b)Remove access door 136AR.

B. Removal

R

(1)Air Pressure Indicator 21MA.

EFFECTIVITY: ALL

KSSU

38-42-12

Page 401
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

R

(Ref. Fig. 401)

R

- (a) Disconnect electrical connector (1).
- (b) Remove nuts (9), washers (8) and screws (7).
- (c) Remove flange (6) and seal (5).
- (d) Remove screws (3) and indicator (4) with clamp (2).

R

C. Installation

R

(1) Air Pressure Indicator 21MA.

R

- (a) Position indicator (4) with clamp (2) and install screws (3).
- (b) Position seal (5) with flange (6) and secure with screws (7), washers (8) and nuts (9).
- (c) Connect electrical connector (1).

R

D. Test

- (1) Remove safety clip and tag and close circuit breaker 1MA.
- (2) Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).

R

E. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Close service panel 136BR and install access door 136AR.

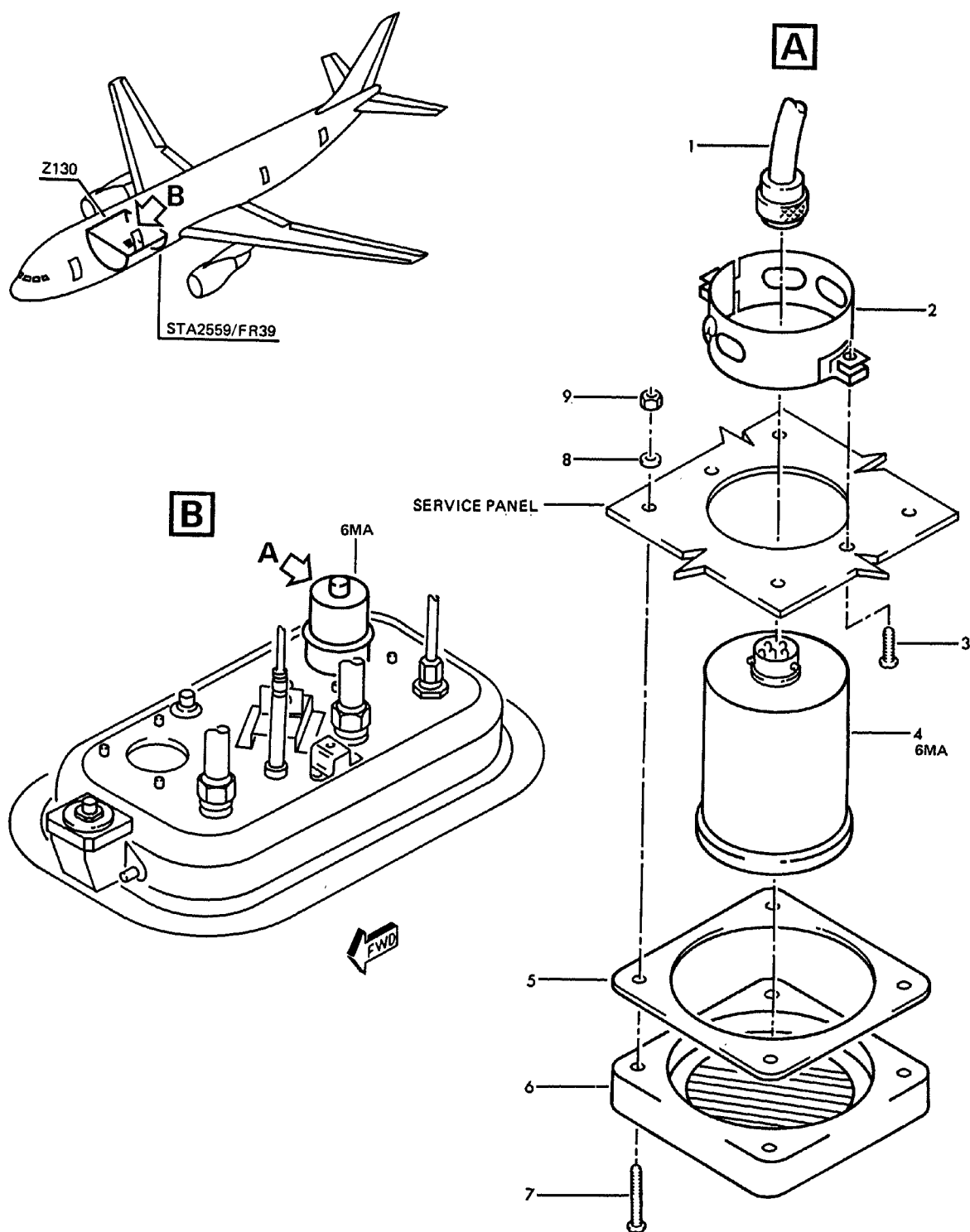
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38-42-12

Page 402
Dec 01/95

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Air Pressure Indicator 6MA
Figure 401

BM6 38 42 12 4 DAMO 00

R EFFECTIVITY: ALL

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38-42-12

Page 403
Dec 01/95



AIRCRAFT MAINTENANCE MANUAL

MICROSWITCH - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM

DESIGNATION

- | | |
|----|--------------------------------------------------------------|
| A. | Continuity Tester |
| B. | Electrical Ground Power Unit - 3-Phase,
115/200 V, 400 Hz |
| C. | Circuit Breaker Safety Clips and Tags |

Referenced Procedure

- 24-41-00, P. Block 301 AC External Power Control

2. Procedure

A. Job Set-Up

R

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R

- (2)Open service panel 136BR.
(3)Remove access door 136AR.

B. Removal

- (1)Microswitch 10MA
(Ref. Fig. 401)
(a)Disconnect electrical connector (1).
(b)Remove lockwire, nut (5), lockwasher (4) and locating washer (6).
(c)Remove microswitch (2) and discard O-ring (3).
(2)Microswitch 4MP
(Ref. Fig. 402)
(a)Disconnect electrical connector (6).
(b)Remove lockwire, nut (1), lockwasher (3) and locating washer (2).
(c)Remove microswitch (5) and discard O-ring (4).

C. Installation

- (1)Microswitch 10MA
(Ref. Fig. 401)
(a)Install microswitch (2) and new O-ring (3) in service panel.

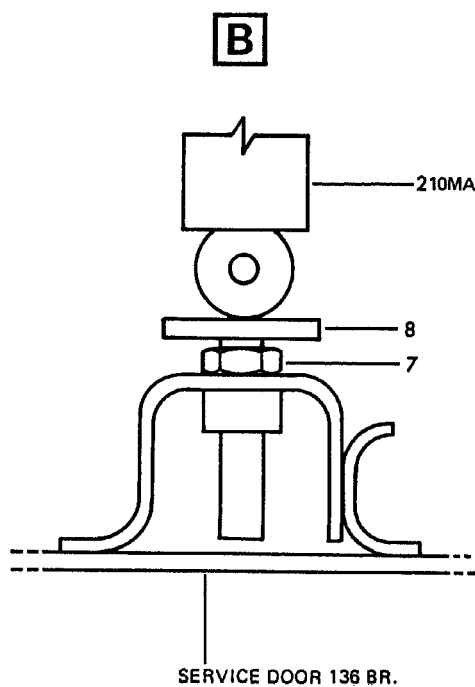
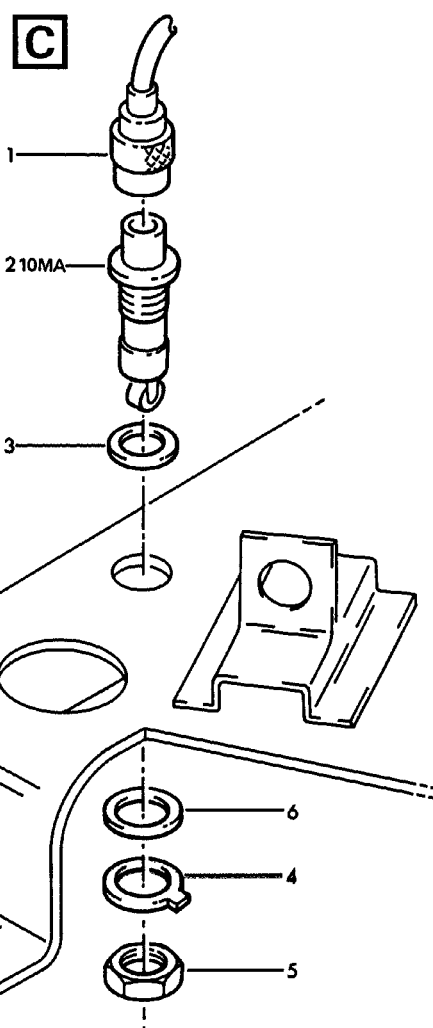
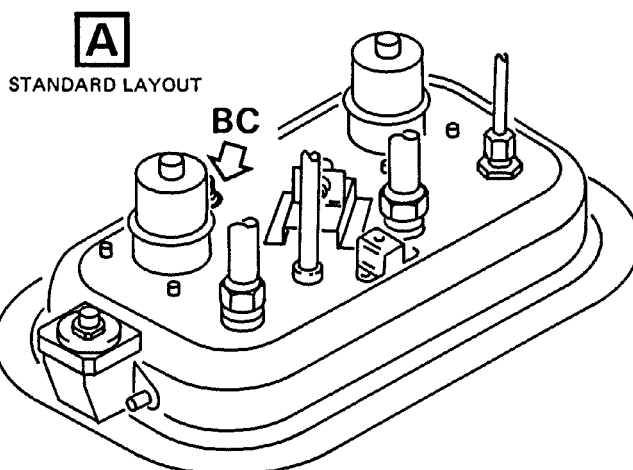
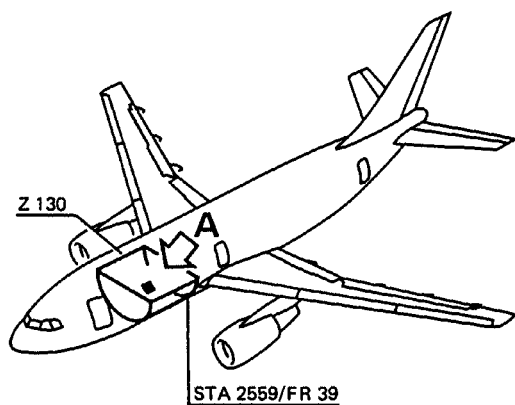
EFFECTIVITY: ALL

KSSU

38-42-13

Page 401
Dec 01/95

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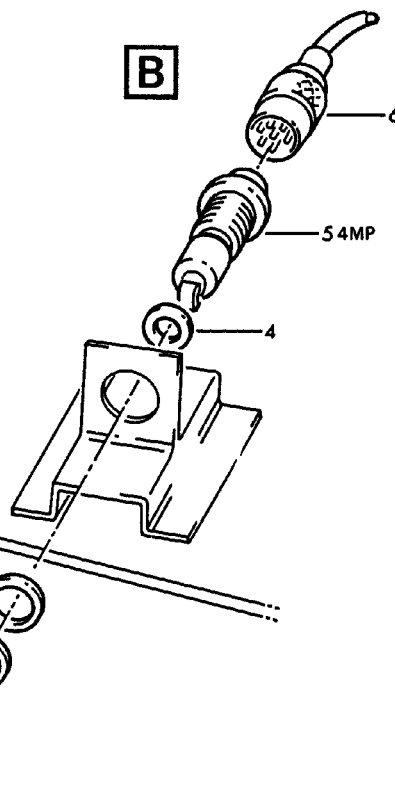
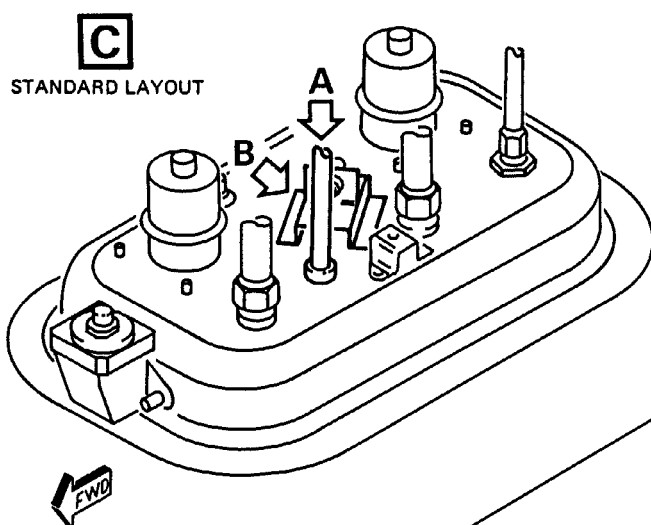
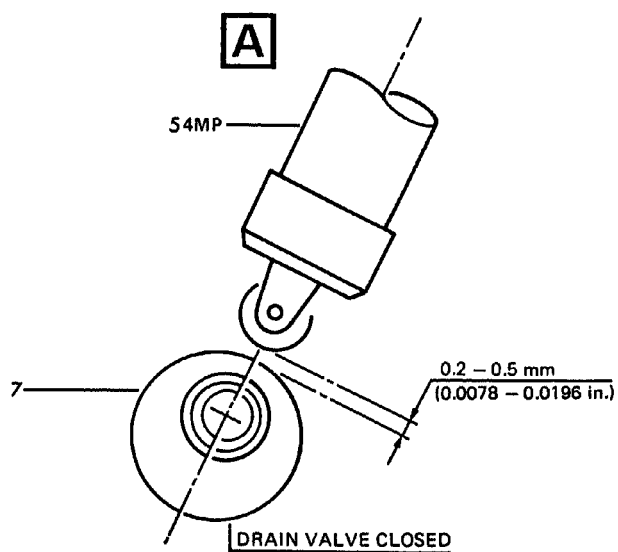
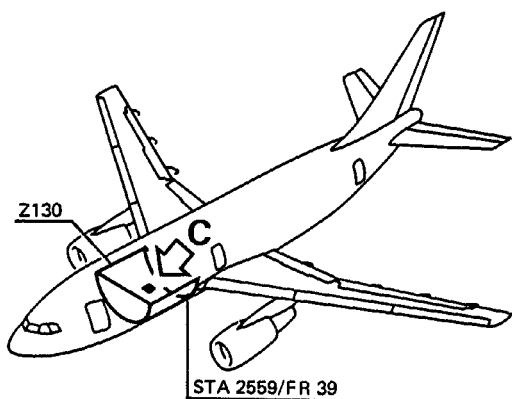
Microswitch - 10MA
Figure 401

EFFECTIVITY: ALL

KSSU

38-42-13

Page 402
Dec 01/89



Microswitch - 4MP
Figure 402

EFFECTIVITY: ALL

R

KSSU

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38-42-13

Page 403
Dec 01/95

BM6 38 42 13 4 BCMO 00

- (b) Install locating washer (6), lockwasher (4) and nut (5).
 - (c) Tighten nut (5) and secure using lockwire.
 - (d) Connect continuity tester to pins A and C of switch. Tester indicates continuity.
 - (e) Loosen locknut (7) on switch operating bolt (8) of service panel 136BR and adjust until switch just operates. Tester indicates open circuit (door closed).
 - (f) Screw out operating bolt (8) 1 + 0.5 mm (0.04 + 0.019 in.) and safety with locknut (7).
 - (g) Disconnect tester from pins A and C and remove tester.
 - (h) Connect electrical connector (1).
- (2) Microswitch 4MP
(Ref. Fig. 402)
- (a) Install microswitch (5) and new O-ring (4) in bracket.
 - (b) Install locating washer (3), lockwasher (2) and nut (1).
 - (c) Tighten nut (1) and secure using lockwire.
 - (d) Check, with drain valve closed, clearance between roller of microswitch (5) and switch cam (7) is 0.5 mm (0.019 in.).
 - (e) Adjust switch cam (7), if required (Ref. 38-11-13, P. Block 401).
 - (f) Connect continuity tester to pins A and C of switch. Tester indicates continuity.
 - (g) Check operation and function of microswitch by selecting drain valve open and close.
 - (h) Disconnect tester from pins A and C and remove tester.
 - (j) Connect electrical connector (6).

D. Test**R**

- (1) Remove safety clips and tags and close circuit breaker 1MA.

R

- (2) Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
- (3) Operate service panel 136BR and drain valves and ensure microswitches operate correctly.

E. Close-Up

- (1) Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
- (2) Close service panel 136BR.
- (3) Install access door 136AR.

EFFECTIVITY: ALL**KSSU****38-42-13**Page 404
Dec 01/95