CHAPTER

38

WATER/WASTE



CHAPTER 38 WATER/WASTE

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O 217	Oct 15/2024		O 208	Oct 15/2024		O 244	Oct 15/2024	
O 218	Oct 15/2024		O 209	Oct 15/2024		R 245	Oct 15/2024	
O 219	Oct 15/2024		O 210	Oct 15/2024		O 246	Oct 15/2024	
O 220	Oct 15/2024		O 211	Oct 15/2024		R 247	Oct 15/2024	

 $\mbox{A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change} \label{eq:control_control_control}$

38-EFFECTIVE PAGES



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O 252	Oct 15/2024							
O 253	Oct 15/2024							
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O 255	Oct 15/2024							
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O 258	Oct 15/2024							
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314	BLANK							

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

38-EFFECTIVE PAGES



YOU FIND A FAULT WITH AN AIRPLANE SYSTEM

These are the possible types of faults:

- 1. Observed Fault
- 2. Cabin Fault

USE BITE TO GET MORE INFORMATION

If you did a BITE test already, then you can go directly to the fault isolation procedure for the maintenance message.

For details, see Figure 2 ---

GO TO THE FAULT ISOLATION TASK IN THE FIM

Use the fault code or description to find the task in the FIM. There is a numerical list of fault codes in each chapter. There are lists of fault descriptions at the front of the FIM.

For details, see Figure 3 ──►

FOLLOW THE STEPS OF THE FAULT ISOLATION TASK

The fault isolation task explains how to find the cause of the fault. When the task says "You corrected the fault" you know that the fault is gone.

For details, see Figure 4 ──►

G04902 S0000148576_V1

Basic Fault Isolation Process Figure 1

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Some airplane systems have built-in test equipment (BITE). If the system finds a fault when you do a BITE test, it will give you a maintenance message.

A maintenance message can be any of these:

- a code
- a text message
- a light
- an indication.

To find the fault isolation task for a maintenance message, go to the Maintenance Message Index in the chapter for the applicable system.

If you do not know which chapter is the correct one, look at the list at the front of any Maintenance Message Index. For each system or component (LRU) that has BITE, this list gives the chapter number where you can find the Index that you need.

Find the maintenance message for the applicable LRU or system in the Index. Then find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps of the task (see Figure 4).

G04950 S0000148578_V1

Getting Fault Information from BITE Figure 2

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IF YOU HAVE:

THEN DO THIS TO FIND THE TASK IN THE FIM:

FAULT CODE

- 1. The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code. If the fault code starts with a letter, then go to the Cabin Fault Code Index at the front of the FIM.
- 2. Find the task number on the same line as the fault code. Go to the task in the FIM and do the steps in the task (see Figure 4).

OBSERVED FAULT
DESCRIPTION

- 1. Go to the Observed Fault List at the front of the FIM and find the best description for the fault.
- 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).

CABIN FAULT DESCRIPTION

- 1. Go to the Cabin Fault List at the front of the FIM and find the best description for the fault.
- 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).

MAINTENANCE MESSAGE (FROM BITE)

- Go to the Maintenance Message Index in the chapter for the LRU (the front of each Index gives you the chapter number for all LRUs). Find the maintenance message in the Index.
- 2. Find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps in the task (see Figure 4).

G04979 S0000148579_V2

Finding the Fault Isolation Task in the FIM Figure 3

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ASSUMED CONDITIONS AT START OF TASK

- External electrical power is ON
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- No equipment in the system is deactivated

POSSIBLE CAUSES

- The list of possible causes has the most likely cause first and the least likely cause last.
- You can use the maintenance records of your airline to determine if the fault occurred before. Compare the list of possible causes to the past maintenance actions. This will help prevent repetition of the same maintenance actions.

INITIAL EVALUATION PARAGRAPH

- The primary purpose of the Initial Evaluation paragraph at the start of the task is to help you find out if you can detect the fault right now:
 - If you cannot detect the fault right now, then the task cannot isolate the fault and the Initial Evaluation paragraph will say that there was an <u>intermittent fault</u>.
 - If you have an intermittent fault, you must use your judgement (and follow your airline's policy) to decide which maintenance action to take. Then monitor the airplane to see if the fault happens again on subsequent flights.
- The Initial Evaluation paragraph can also help you find out which Fault Isolation Procedure to use to isolate and correct the fault.

FAULT ISOLATION STEPS

- The FIM task steps are presented in a specified order. The "If... then" statements will guide you along a logical path. But if you do not plan to follow the FIM task exactly, make sure that you read it before you start to isolate the fault. Some FIM procedures start with important steps that have an effect on the other steps in the procedure.
- When you are at the endpoint of the path, the step says "...you corrected the fault." Complete the step and exit the procedure.

G05009 S0000148580_V3

Doing the Fault Isolation Task Figure 4

— EFFECTIVITY -

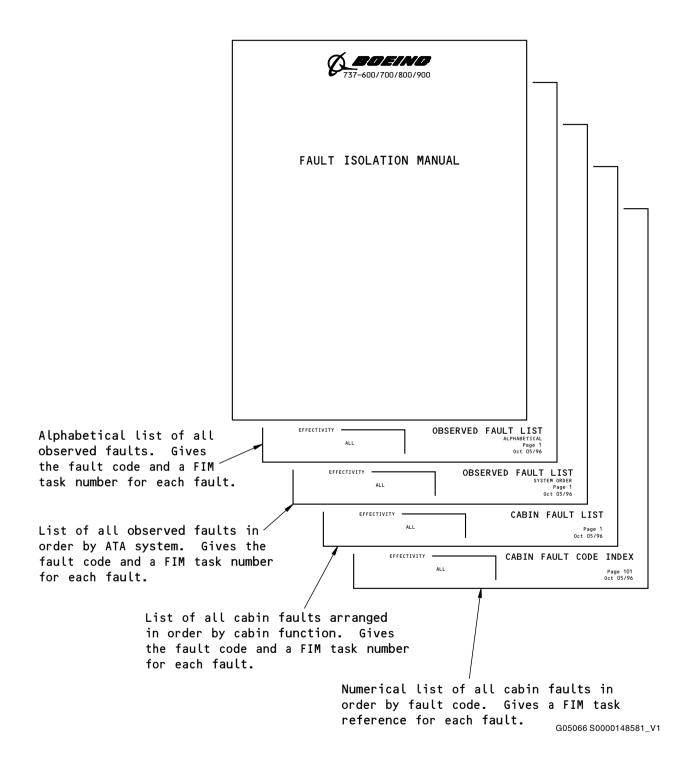
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FAULT ISOLATION MANUAL

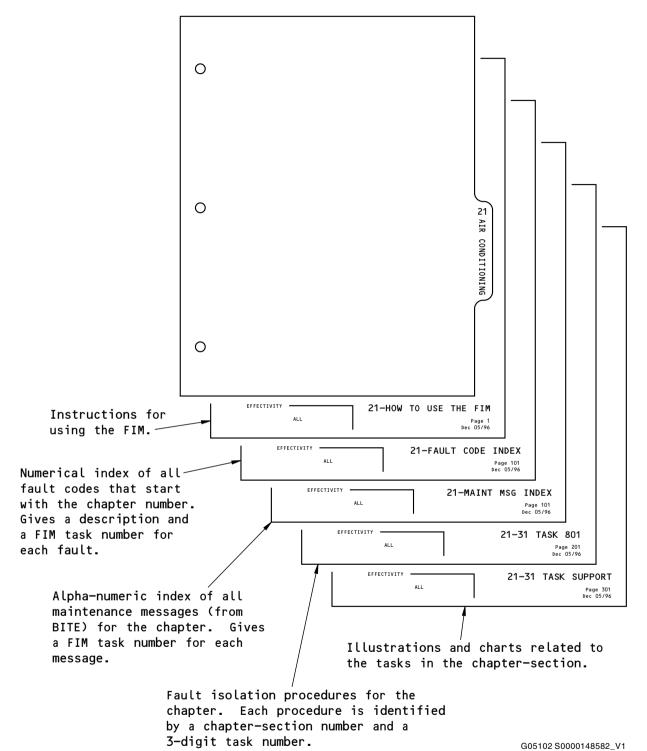


Subjects at Front of FIM Figure 5

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Subjects in Each FIM Chapter

Figure 6

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
381 010 00	Potable water: indicator on service panel shows level of zero.	38-10 TASK 813
381 011 00	Potable water: level not accurate at attendant's panel.	38-10 TASK 812
381 020 00	Potable water: System does not pressurize.	38-10 TASK 803
381 021 00	Faucet water flow not sufficient.	38-10 TASK 806
381 022 00	Faucet water pressure too high.	38-10 TASK 809
381 023 00	Lavatory faucet leak.	38-10 TASK 807
381 024 00	Faucet water too hot.	38-10 TASK 808
381 025 00	No hot water at faucet.	38-10 TASK 811
381 026 00	Potable Water: contaminated.	38-10 TASK 810
381 030 00	Potable water: tank does not fill.	38-10 TASK 801
381 040 00	Potable water: tank leaks.	38-10 TASK 802
381 041 00	Potable water: main tank (60-gallon) leaks.	25-99 TASK 801
381 042 00	Potable water: auxiliary tank (40-gallon) leaks.	25-99 TASK 801
381 045 00	Galley faucet leaks or faucet damaged.	38-10 TASK 805
381 050 44	Water leakage - forward cargo compartment ceiling.	38-10 TASK 804
381 050 45	Water leakage - aft cargo compartment ceiling.	38-10 TASK 804
381 051 00	Lavatory: Lavatory Water (specify location) is cold. The Heater Power Switch is ON, and the Heater Pilot Light is not ON.	38-10 TASK 828
383 010 00	Waste quantity indicator: Shows tank is full when tank is not full - service panel.	38-30 TASK 822
383 015 00	Waste quantity indicator: Shows tank is empty when tank is full - service panel.	38-30 TASK 822
383 020 00	Waste tank: does not precharge.	38-30 TASK 812
383 021 00	Waste tank: sensor J1/J2.	38-30 TASK 803
383 022 00	Waste tank: sensor J3.	38-30 TASK 808
383 023 00	Waste tank: full indication.	38-30 TASK 809
383 024 00	Toilet: overflows.	38-30 TASK 814
383 025 00	Toilet: plugged.	38-30 TASK 815
383 026 00	Toilet flush system: does not turn off.	38-30 TASK 816
383 027 00	Toilet flush system: plugged/blocked.	38-30 TASK 817
383 028 00	Single toilet inoperative.	38-30 TASK 820
383 029 00	Toilet flush valve assembly: blocked.	38-30 TASK 830
383 030 00	Waste tank drain valve handle: Does not drain tank when pulled.	38-30 TASK 813
383 031 00	Lavatory sink drain stopper inoperative.	38-30 TASK 818
383 032 00	Sink drain plugged.	38-30 TASK 819
383 033 00	Vacuum blower inoperative.	38-30 TASK 821

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
383 040 00	Waste quantity indicator: Shows tank is full when tank is not full - attendant's panel.	38-30 TASK 810
383 050 00	Waste quantity indicator: Shows tank is empty when tank is full - attendant's panel.	38-30 TASK 810
383 060 00	Waste service panel: SENSOR FOULED light on.	38-30 TASK 823
383 121 48	Toilet flush system: does not flush - all toilets.	38-30 TASK 811

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38-FAULT CODE INDEX

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	LRU/SYSTEM	SHORT NAME	CHAPTER
	Air Data Inertial Reference System	ADIRS	34
	Air Traffic Controller Transponder - 1 (Left)	ATC XPDR - 1 (L)	34
	Air Traffic Controller Transponder - 2 (Right)	ATC XPDR - 2 (R)	34
	Airborne Vibration Monitor System Signal Conditioner	AVM SIG COND	77
	Antiskid Control Unit	ANTISKID	32
	Attendant Control Panel	ACP	23
	Automatic Direction Finder Receiver - 1	ADF RECVR - 1	34
	Automatic Direction Finder Receiver - 2	ADF RECVR - 2	34
	Autothrottle Computer	A/T COMPUTER	22
	Auxiliary Power Unit	APU	49
	Auxiliary Power Unit Generator Control Unit	APU GCU	24
	Bus Power Control Unit	BPCU	24
	Cabin Pressure Controller	CAB PRESS CON	21
	Cabin Temperature Controller	CAB TEMP CONT	21
	Cargo Electronic Unit - Lower Aft	CEU - LWR AFT	26
	Cargo Electronic Unit - Lower Forward	CEU - LWR FWD	26
ı	Cargo Electronic Unit - Main Aft	CEU - MAIN AFT	26
	Cargo Fire Control Panel	CFCP	26
	Common Display System	CDS	31
	Compartment Overheat Detection Control Module	WING/BODY OHT	26
	Digital Flight Control System	DFCS	22
	Distance Measurement Equipment Interrogator	DME INTRROGTR	34
	Electrical Meters, Battery, and Galley Power Module	P5-13	24
	Electronic Engine Controller - 1	ENGINE - 1	73
	Electronic Engine Controller - 2	ENGINE - 2	73
	Emergency Locator Transmitter	ELT	23
	Engine Accessory Unit	EAU	78
	Engine Accessory Unit/TR DEPLOY ENG 1	EAU/TR DPLOY-ENG 1	78
	Engine Accessory Unit/TR DEPLOY ENG 2	EAU/TR DPLOY-ENG 2	78
	Engine Accessory Unit/TR STOW ENG 1	EAU/TR STOW-ENG 1	78
	Engine Accessory Unit/TR STOW ENG 2	EAU/TR STOW-ENG 2	78
	Engine and Auxiliary Power Unit Fire Detection Control Module	ENG/APU FIRE	26
	Enhanced Digital Flight Control Computer-A	EDFCC-A	22
	Enhanced Digital Flight Control System	EDFCS	22
	Flap/Slat Electronics Unit	FSEU	27

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LRU/SYSTEM	SHORT NAME	CHAPTER
Flight Data Acquisition Unit	FDAU	31
Flight Management Computer System	FMCS	34
Fuel Quantity Indicating System	FQIS	28
Generator Control Unit - 1	GCU - 1	24
Generator Control Unit - 2	GCU - 2	24
Ground Proximity Computer	GROUND PROX	34
High Frequency Transceiver	HF XCVR	23
Low Limit (35 Degree F) Controller - Left	35 DEG CONT L	21
Low Limit (35 Degree F) Controller - Right	35 DEG CONT R	21
Multi-Mode Receiver	MMR	34
Nitrogen Generation System BITE Display Unit	NGS	47
Pack Flow Temperature Controller	PFTC	21
Pack/Zone Temperature Controller - Left	PACK/ZN CON - L	21
Pack/Zone Temperature Controller - Right	PACK/ZN CON - R	21
Proximity Switch Electronics Unit	PSEU	32
Radio Altimeter Receiver/Transmitter	RADIO ALTIMTR	34
Stall Management Yaw Damper Computer - 1	SMYD - 1	27
Stall Management Yaw Damper Computer - 2	SMYD - 2	27
Traffic Alert and Collision Avoidance System Computer	TCAS COMPUTER	34
VHF Omnidirectional Ranging Marker Beacon Receiver	VOR/MKR RCVR	34
Very High Frequency Transceiver	VHF XCVR	23
Waste Tank Logic Control Module	WASTE TANK	38
Weather Radar Receiver/Transmitter	WEATHER RADAR	34
Window Heat Control Unit - Left Forward	WHCU - L FWD	30
Window Heat Control Unit - Left Side	WHCU - L SIDE	30
Window Heat Control Unit - Right Forward	WHCU - R FWD	30
Window Heat Control Unit - Right Side	WHCU - R SIDE	30
Window Heat Control Unit 1 - Left Forward and Right Side	WHCU1 - L FWD/R SIDE	30
Window Heat Control Unit 2 - Right Forward and Left Side	WHCU2 - R FWD/L SIDE	30

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
WASTE TANK	SENSOR J1	38-30 TASK 803
WASTE TANK	SENSOR J2	38-30 TASK 803
WASTE TANK	SENSOR J3	38-30 TASK 808
WASTE TANK	TANK FULL	38-30 TASK 809

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801. Potable Water Tank Does Not Fill - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-10-00)

B. Possible Causes

- (1) Broken fill/overflow valve control cable
- (2) Inoperative fill/overflow valve
- (3) Frozen lines

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Е	5	C00233	HEATERS DRAIN

Power Distribution Panel Number 1, P91

 Row
 Col
 Number
 Name

 SHZ 002, 009-699, 706, 721-799, 860-863, 865, 866, 871-874, 901-999
 A
 18
 C00873
 POT WATER COMPRESSOR

SHZ 801-825, 827-847, 850-852, 855-859, 876-899

D 11 C00873 POT WATER COMPRESSOR

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D. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)
- (3) (SSM 38-41-13)
- (4) (SSM 30-71-11)

E. Initial Evaluation

- (1) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - (a) If you can fill the water tank, then there was an intermittent fault.

 NOTE: It is possible that the water lines were frozen.
 - (b) If you cannot fill the water tank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the fill/overflow valve at the potable water tank:
 - (a) Do this task: Aft Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-19-000-801.
 - (b) Pull the handle for the fill/overflow valve at the service panel.
 - (c) Look at the fill/overflow valve to see if it is open.
 - (d) If the fill/overflow valve is not open, then do these steps:
 - 1) Look at the control cable for the fill/overflow valve to see if it is connected.
 - 2) If the control cable is not connected, then do these steps:

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- a) Replace the control cable for the fill/overflow valve. These are the tasks:
 - Fill/Overflow Valve Control Cable Removal, AMM TASK 38-11-03-000-802
 - Fill/Overflow Valve Control Cable Installation, AMM TASK 38-11-03-400-802
- b) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
- c) If the water tank fills, then you corrected the fault.
- d) To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner
 Installation, AMM TASK 25-52-19-400-801.
- 3) If the control cable is connected, then do these steps:
 - a) Replace the fill/overflow valve. These are the tasks:
 - Fill/Overflow Valve Removal, AMM TASK 38-11-03-000-801
 - Fill/Overflow Valve Installation, AMM TASK 38-11-03-400-801
 - b) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - c) If the water tank fills, then you corrected the fault.
 - d) To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.
- (e) If the fill/overflow valve is open, then continue.
- (2) Do this check for a blockage of the water lines:
 - (a) Feel the fill and overflow water lines at the potable water tanks.
 - (b) If the lines are frozen, then do these steps:
 - Do this task: Water and Drain Heater Tests, AMM TASK 30-71-00-720-802.
 - 2) Replace the water line heater that is not serviceable. These are the tasks:
 - Potable Water Fill Fitting Heater Removal, AMM TASK 30-71-01-000-801
 - Potable Water Fill Fitting Heater Installation, AMM TASK 30-71-01-400-801
 - 3) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - 4) If you can fill the water tank, then you corrected the fault.
 - a) To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner
 Installation. AMM TASK 25-52-19-400-801.
 - (c) If the lines are not frozen, then do these steps:
 - 1) Replace the water hose that is not serviceable.
 - 2) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - 3) If you can fill the water tank, then you corrected the fault.
 - To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner
 Installation, AMM TASK 25-52-19-400-801.

FND	OF 1	TASK	

802. Potable Water Tank Leak - Fault Isolation

A. Description

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(1) (SDS SUBJECT 38-10-00)

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B. Possible Causes

- Broken water tank
- (2) Broken line/fitting on the potable water tank

C. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

D. Fault Isolation Procedure

- Examine the potable water tank for leaks.
 - NOTE: It is necessary to remove the insulation blanket to fully examine the potable water tank. Carefully loosen the insulation blanket to find the leakage point.
- (2) If you find a leak at the end cap of the water tank, then do these steps:
 - (a) To depressurize the potable water system, do this task: Potable Water System -Deactivation, AMM TASK 38-42-00-800-801.
 - (b) Remove the end cap.
 - (c) Examine the end cap and seal area for damage.
 - (d) If the end cap is damaged, then do these steps:
 - 1) Install a new end cap (use a new O-ring).
 - 2) To pressurize the potable water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
 - 3) If the potable water tank does not leak, then you corrected the fault.
 - (e) If the seal area of the potable water tank is damaged, then do these steps:
 - 1) Replace the potable water tank. These are the tasks:
 - Water Tank Removal, AMM TASK 38-11-01-000-801
 - Water Tank Installation, AMM TASK 38-11-01-400-801
 - 2) To pressurize the potable water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
 - 3) If the potable water tank does not leak, then you corrected the fault.
 - (f) If a potable water tank does not leak at the end cap, then continue.
- (3) If the leak is at one of the connections to the water tank, then do these steps:
 - (a) To depressurize the potable water system, do this task: Potable Water System -Deactivation, AMM TASK 38-42-00-800-801.
 - (b) Remove the fitting that has a leak.
 - (c) Examine the component and seal area for damage.
 - (d) If the fitting is damaged, then do these steps:
 - 1) Install a new fitting (use a new O-ring if one is installed).
 - 2) To pressurize the potable water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
 - 3) If the potable water tank does not leak, you corrected the fault.
 - (e) If the seal area is damaged, then do these steps:
 - 1) Replace the potable water tank. These are the tasks:

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- Water Tank Removal, AMM TASK 38-11-01-000-801
- Water Tank Installation, AMM TASK 38-11-01-400-801
- To pressurize the potable water system, do this task: Potable Water System -Activation, AMM TASK 38-42-00-800-802.
- If the potable water tank does not leak, then you corrected the fault.

— END OF TASK —

803. Potable Water System Does not Pressurize - Fault Isolation

A. Description

(1) SDS SUBJECT 38-10-00.

B. Possible Causes

- (1) Low water Level
- (2) Low pressure in the potable water system
- (3) Frozen lines

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

(4) Cut-out switch on the water service panel

SHZ ALL

- (5) Fill/overflow valve
- (6) Pressure relief valve
- (7) Pressure limit switch
- (8) Inlet filter of the air compressor
- (9) Bleed air check valve
- (10)Air compressor
- The CABIN/UTIL switch is in the OFF position (11)
- Wiring problem. (12)

C. Circuit Breakers

These are the primary circuit breakers related to the fault:

Power Distribution Panel Number 1, P91

Row Col Number Name

SHZ 002, 009-699, 706, 721-799, 860-863, 865, 866, 871-874, 901-999

POT WATER COMPRESSOR Α C00873

SHZ ALL

C00138 С 9 WATER QTY IND

SHZ 801-825, 827-847, 850-852, 855-859, 876-899

D C00873 POT WATER COMPRESSOR

SHZ ALL

I

38-10 TASKS 802-803

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- EFFECTIVITY

SHZ ALL



D. Related Data

- Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)
- (3) SSM 38-41-11
- (4) SSM 38-41-13.

E. Initial Evaluation

- (1) Open a faucet for 10 seconds.
 - (a) If the flow is satisfactory, then there was an intermittent fault.
 - (b) If the flow is not satisfactory, then do the Fault Isolation Procedure below:

F. Fault Isolation Procedure

- (1) Make sure that the CABIN/UTIL switch is in the ON position.
- (2) Do a check of the level of the water in the water tanks.
 - (a) If the level of the water is low, then do these steps:
 - 1) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - 2) Open the faucet for 10 seconds.
 - 3) If the water flow is satisfactory, then you corrected the fault.
 - (b) If the level of the water is not low, then continue.
- (3) Do this check for a blockage of the water lines:
 - (a) Open this access door:

Number Name/Location
822 Aft Cargo Door

- (b) To remove the endwall panel of the bulk cargo compartment, do this task: Aft Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-19-000-801.
- (c) Feel the inlet and outlet water lines at the potable water tanks.
- (d) If the lines are frozen, then do these steps:
 - 1) Replace the water line heater that is not serviceable. These are the tasks:
 - Heated Potable Water Hose Removal, AMM TASK 30-71-06-000-801
 - Heated Potable Water Hose Installation, AMM TASK 30-71-06-400-801
 - 2) Open the faucet for 10 seconds.
 - 3) If the water flow is satisfactory, then you corrected the fault.
 - Do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.
- (e) If the lines are not frozen, then continue.
- (4) Do these checks for the pressure of the potable water system:

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

(a) Do this check of the cut-out switch at the water service door:

SHZ ALL 38-10 TASK 803



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999 (Continued)

1) Open this access door:

Number Name/Location

146AR Water Service Door

- 2) Put a magnet on the cut-out switch on the door of the water service door.
- 3) Open the faucet for 10 seconds.
 - a) If the water flow is satisfactory, remove the magnet and then replace the cut-out switch. These are the tasks:
 - Compressor Cut-Out Switch Removal, AMM TASK 38-42-03-000-801
 - Compressor Cut-Out Switch Installation, AMM TASK 38-42-03-400-801
 - b) Open the faucet for 10 seconds.
 - c) If water flow is satisfactory, then you corrected the fault.
- 4) If the water flow is not satisfactory, remove the magnet, close this access door:

Number Name/Location

146AR Water Service Door

then continue.

SHZ ALL

- (b) Make sure that the fill/overflow valve is fully closed, then do these steps to make sure that the air compressor is serviceable:
 - 1) Open the fill/overflow valve for approximately 20 seconds.
 - 2) Close the fill/overflow valve after 20 seconds.
 - 3) Close this access door:

Number Name/Location

146AR Water Service Door

- a) Open the faucet for 10 seconds.
- b) If the water flow is satisfactory, then the fill/overflow valve was not fully closed and you corrected the fault.
- c) If there is no water flow, then continue.
- (c) Make sure that the fill/overflow valve is fully closed, then do these steps to check for a leak:
 - 1) Put a 0.5 inch masking tape on the drain/overflow port.
 - 2) Pressurize the potable water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
 - 3) Examine the masking tape to determine air leakage from the fill/overflow valve.
 - 4) If there is air leakage, replace the fill/overflow valve. These are the tasks:
 - Fill/Overflow Valve Removal, AMM TASK 38-11-03-000-801
 - Fill/Overflow Valve Installation, AMM TASK 38-11-03-400-801
 - 5) Open the faucet for 10 seconds.

38-10 TASK 803

SHZ ALL

EFFECTIVITY

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- If the water flow is satisfactory, then you corrected the fault.
- 7) If there is no air leakage, then continue.
- (5) Listen for the air compressor (go to the aft cargo compartment to hear it).
 - (a) If the air compressor operates, then do these steps:
 - 1) Feel for air flow at the pressure relief valve.
 - 2) If there is air flow, then do these steps:
 - a) Replace the pressure relief valve. These are the tasks:
 - Pressure Relief Valve Removal, AMM TASK 38-42-06-000-801
 - Pressure Relief Valve Installation, AMM TASK 38-42-06-400-801
 - b) Open the faucet for ten seconds.
 - c) If the water flow is satisfactory, then you corrected the fault.
 - 3) If there is not air flow, then continue.
 - 4) Do this task: Air Filter Element Removal, AMM TASK 38-42-02-000-801.
 - 5) If the air compressor pressurizes the system, then do these steps:
 - a) Install a new inlet filter for the air compressor. To install it, do this task: Air Filter Element Installation, AMM TASK 38-42-02-400-801.
 - b) Open the faucet for ten seconds.
 - c) If the water flow is satisfactory, then you corrected the fault.
 - 6) If the air compressor does not pressurize the system, then do these steps:
 - a) Re-install the inlet filter for the air compressor, do this task: Air Filter Element Installation, AMM TASK 38-42-02-400-801.
 - b) Replace the bleed air check valve. These are the tasks:
 - Compressor Check Valve Removal, AMM TASK 38-42-09-020-801
 - Compressor Check Valve Installation, AMM TASK 38-42-09-400-802
 - c) Open the faucet for ten seconds.
 - d) If the water flow is satisfactory, then you corrected the fault.
 - (b) If the air compressor does not operate, then continue.
- (6) Do this check for 115 VAC at the air compressor:

SHZ ALL

- (a) To access the air compressor, do this task: Waste Tank Enclosure Panel Removal, AMM TASK 25-52-20-000-801.
- (b) Disconnect the electrical connector D1986 at the air compressor, M753 (WDM 38-41-13):
- (c) Do a check for 3-phase 115 VAC between pin 5, pins 1, 2, and 3 of connector D1986.
 - If there is 115 VAC at the pins 1, 2, and 3 of the connector D1986, then do these steps:
 - a) Replace the air compressor. These are the tasks:
 - Air Compressor Removal, AMM TASK 38-42-01-000-801
 - Air Compressor Installation, AMM TASK 38-42-01-400-801
 - b) Open the faucet for ten seconds.
 - c) If the water flow is satisfactory, then you corrected the fault.

38-10 TASK 803



- d) Do this task: Waste Tank Enclosure Panel Installation, AMM TASK 25-52-20-400-801.
- (d) If there is not 115 VAC at the pins 1, 2, and 3 of connector D1986, then continue:
- (7) Do this check of the pressure limit switch:
 - (a) Re-connect connector D1986.
 - (b) Do this task: Aft Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-19-000-801.
 - (c) Disconnect connector D1990 at the pressure limit switch for the water system, S692 (WDM 38-41-13).
 - (d) Connect a jumper between pin 2 and pin 3 of D1990 for 5 seconds.
 - (e) If the air compressor operates when you connect the jumper, then replace the pressure limit switch. These are the tasks:
 - Water Pressure Cut-Out Switch Removal, AMM TASK 38-42-07-000-801
 - Water Pressure Cut-Out Switch Installation, AMM TASK 38-42-07-400-801
 - 1) Do a check to make sure that the air compressor operates after you replace the pressure limit switch, then do these steps:
 - a) Open the faucet for ten seconds.
 - b) If the water flow is satisfactory, then you corrected the fault.
 - To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner
 Installation, AMM TASK 25-52-19-400-801.
 - (f) If the air compressor does not operate after you install the jumper for pin 2 and pin 3 at the pressure limit switch, then do these steps:
 - 1) Re-connect connector D1990.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- 2) Put a magnet on the cut-out switch on the door of the water service panel, then do these steps:
 - a) Open the faucet for 10 seconds.
 - If the water flow is satisfactory, remove the magnet and then replace the cut-out switch. These are the tasks:
 - Compressor Cut-Out Switch Removal, AMM TASK 38-42-03-000-801
 - Compressor Cut-Out Switch Installation, AMM TASK 38-42-03-400-801
 - c) Open the faucet for 10 seconds.
 - d) If the water flow is satisfactory, you corrected the fault.
 - e) Do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.

SHZ ALL

EFFECTIVITY

- 3) If the compressor does not operate, then continue.
- (8) Do this check of the wiring.
 - (a) If the compressor does not operate, do a wiring check between the pins of connector D1990 at the pressure limit switch and the P91 panel, (WDM 38-41-13).

38-10 TASK 803

SHZ ALL



D1990	D11432
pin 2	 pin 19

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-connect connector D1990 and connector D11432.
 - c) Open the faucet for ten seconds.
 - d) If the water flow is satisfactory, you corrected the fault.
 - e) To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.
- (b) If there is no problems in the wiring between connector D1990 and the P91 panel, then do these steps:
 - 1) Replace the relay for the compressor control, R184 (WDM 38-41-13).
 - 2) Re-connect connector D1990.
 - 3) If the air compressor operates after you replace the relay, then do these steps:
 - a) Open the faucet for ten seconds.
 - b) If the water flow is satisfactory, you corrected the fault.
 - c) To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.
 - 4) If the air compressor does not operate after you replace the relay, then continue.
 - 5) Do a wiring check between the pins of connector D11432 and circuit breaker C873 in the P91 panel (WDM 38-41-13).

D11432	CB 873
pin 19	pin C1

- 6) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-connect connector D11432.
 - c) Open the faucet for ten seconds.
 - d) If the water flow is satisfactory, then you corrected the fault.
 - e) Do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.

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

804. Ceiling Panel Wet - Fault Isolation

A. Description

EFFECTIVITY

SHZ ALL

- (1) (SDS SUBJECT 38-10-00)
- B. Possible Causes
 - (1) Broken line/fitting
 - (2) Condensation

38-10 TASKS 803-804



C. Related Data

- Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

D. Initial Evaluation

- (1) Identify the area that the leakage is in from these areas:
 - (a) The passenger cabin
 - (b) Aft of the aft cargo compartment
 - (c) The forward cargo compartment
 - (d) The aft cargo compartment
- (2) If you isolate the leakage area to an area above, then do the Fault Isolation Procedure below:

E. Fault Isolation Procedure

- (1) If the wet ceiling panel is in a lavatory or galley, then do these steps:
 - (a) Close the water shutoff valve for the applicable lavatory or galley.
 - (b) If the leak stops, then examine the plumbing downstream of the valve for signs of a leak.
 - 1) Repair or replace the component that has a leak.
 - 2) Open the water shutoff valve that you closed.
 - 3) If there is no leakage, then you corrected the fault.
- (2) If the leakage is in the passenger compartment (not in a lavatory or galley), then do these steps:
 - (a) To get access to the overhead supply line at the aft sidewall, do this task: Sidewall Panel Removal, AMM TASK 25-21-46-000-801.
 - (b) To get access to the overhead supply line above the ceiling panels, do this task: Ceiling Panel Removal, AMM TASK 25-21-45-000-801 or Main Ceiling Panel Removal, AMM TASK 25-21-45-000-803-001.
 - (c) Examine the water line and fittings for signs of a leak.
 - 1) Repair or replace the component that has a leak.
 - To pressurize the water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
 - 3) If there is no leakage, then you corrected the fault.
 - 4) If you removed the sidewall panels, do this task: Sidewall Panel Installation, AMM TASK 25-21-46-400-801
 - 5) If you removed the ceiling panels, do this task: Ceiling Panel Installation, AMM TASK 25-21-45-400-801 or Main Ceiling Panel Installation, AMM TASK 25-21-45-400-803-001.
 - (d) If there is no sign of water system leakage, then it is possible that condensation in the cabin caused the wet ceiling panel.
- (3) If the wet panel is in the forward cargo compartment, then do these steps:

SHZ ALL 38-10 TASK 804



SHZ 901-999

(a) To remove the ceiling panels in the forward cargo compartment, do this task: Cargo Compartment Ceiling Liner - Removal, AMM TASK 25-52-09-000-801.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

(b) To remove the sidewall panels in the forward cargo compartment, do this task: Cargo Compartment Sidewall Lining - Removal, AMM TASK 25-52-06-000-801.

SHZ ALL

- (c) Examine the gray water drain lines for a sign of a leak.
 - 1) Repair or replace the component that has a leak.
 - 2) To fill the gray water system, do this task: Gray Water/Drain System Maintenance Practice, AMM TASK 38-31-00-910-801.
 - 3) If there is no leakage, then you corrected the fault.
 - 4) To complete this task, do these steps:

SHZ 901-999

a) Do this task: Cargo Compartment Ceiling Liner - Installation, AMM TASK 25-52-09-400-801.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

 Do this task: Cargo Compartment Sidewall Lining - Installation, AMM TASK 25-52-06-400-801.

SHZ ALL

- (d) If there is no sign of gray water system leakage, then it is possible that condensation in the cabin caused the wet panel.
- (4) If the wet panel is aft cargo compartment, then do these steps:
 - (a) To remove the sidewall panels in the aft cargo compartment, do this task: Cargo Compartment Sidewall Lining Removal, AMM TASK 25-52-06-000-801.
 - (b) Examine the gray water drain and water supply lines for signs of a leak.
 - 1) Repair or replace the component that has a leak.
 - 2) To pressurize the water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
 - 3) To fill the gray water system, do this task: Gray Water/Drain System Maintenance Practice, AMM TASK 38-31-00-910-801.
 - 4) If there is no leakage, then you corrected the fault.
 - 5) To complete this task, do this task: Cargo Compartment Sidewall Lining Installation, AMM TASK 25-52-06-400-801.
 - (c) If there is no sign of gray water drain or water system leakage, then it is possible that condensation in the cabin caused the wet panel.
- (5) If the leak is aft the aft cargo lining, then do these steps:
 - (a) To remove the aft cargo bulkhead, do this task: Aft Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-19-000-801.
 - (b) To depressurize the potable water system, do this task: Potable Water System Deactivation, AMM TASK 38-42-00-800-801.
 - (c) Examine the plumbing aft of the aft cargo bulkhead for signs of a leak.

SHZ ALL 38-10 TASK 804



- 1) Repair or replace the component that has a leak.
- 2) To pressurize the potable water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
- 3) To fill the gray water system, do this task: Gray Water/Drain System Maintenance Practice. AMM TASK 38-31-00-910-801.
- 4) To complete this task: do this task: Aft Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-19-400-801.
- (d) To pressurize the potable water system, do this task: Potable Water System Activation, AMM TASK 38-42-00-800-802.
- (e) If there is no sign of gray water drain or water system leakage, then it is possible that condensation in the cabin caused the wet panel.



805. Galley Faucet Leak - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-10-00)
- B. Possible Causes
 - (1) Broken galley faucet
- C. Related Data
 - (1) Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
 - (2) Component Location (38-10 TASK SUPPORT Figure 301)
- D. Initial Evaluation
 - (1) Open the faucet for 10 seconds and then close the faucet.
 - (a) If there is no leakage, then there was an intermittent fault.
 - (b) If the faucet leaks, then do the Fault Isolation Procedure below:
- E. Fault Isolation Procedure
 - Close the water shutoff valve for the galley.
 - (2) Replace or adjust the applicable galley faucet(s).
 - NOTE: Refer to the component maintenance manual from the vendor of the applicable galley to replace or adjust the faucet.
 - (3) Open the water shutoff valve for the galley.
 - (a) If the leak stops, then you corrected the fault.

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

806. Faucet Water Flow not Sufficient - Fault Isolation

A. Description

- EFFECTIVITY ·

- (1) (SDS SUBJECT 38-10-00)
- B. Possible Causes
 - (1) Low water level
 - (2) Isolation valve closed

38-10 TASKS 804-806

SHZ ALL

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- (3) Frozen water line
- (4) Faucet does not open
- (5) Water filter clogged

C. Related Data

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(1) Simplified Schematic (38-10 TASK SUPPORT Figure 302)

SHZ ALL

(2) Component Location (38-10 TASK SUPPORT Figure 301)

D. Initial Evaluation

- Open the faucet for 10 seconds.
 - (a) If the flow is satisfactory, then there was an intermittent fault.
 - (b) If the flow is not satisfactory, then do these steps:

NOTE: Make sure that all applicable water shutoff valves are open before you start.

- 1) Go to one of the other lavatories and then open the faucet for 10 seconds.
- 2) If the water flow from the second faucet is not satisfactory, then, do this task: Potable Water System Does not Pressurize Fault Isolation, 38-10 TASK 803.
- If the water flow is satisfactory, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- Do a check of the level of the water in the water tanks.
 - (a) If the level of the water is low, then do these steps:
 - 1) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - 2) Open the faucet for 10 seconds.
 - 3) If the water flow is satisfactory, then you corrected the fault.
 - (b) If the level of the water is not low, then continue.
- Do a check of the shutoff valve for the water supply.
 - (a) If the shutoff valve is closed, then open the valve.
 - (b) If the shutoff valve is open without water flow, then replace the shutoff valve. These are the tasks:
 - Shutoff Valve Removal, AMM TASK 38-11-07-000-801 or Shutoff Valve Removal, AMM TASK 38-11-07-000-802
 - Shutoff Valve Installation, AMM TASK 38-11-07-400-801 or Shutoff Valve Installation, AMM TASK 38-11-07-400-802
 - 1) Open the faucet for 10 seconds.
 - 2) If the water flow is satisfactory, then you corrected the fault.
 - (c) If the shutoff valve is open, then continue.
- (3) Do this check for a blockage of the water lines:
 - (a) Feel the water lines at the potable water tanks.
 - (b) If the lines are frozen, then do these steps:
 - 1) Replace the water line heater that is not serviceable. These are the tasks:
 - Heated Potable Water Hose Removal, AMM TASK 30-71-06-000-801

SHZ ALL 38-10 TASK 806



- Heated Potable Water Hose Installation, AMM TASK 30-71-06-400-801
- 2) Open the faucet for 10 seconds.
- 3) If the water flow is satisfactory, then you corrected the fault.
- (c) If the lines are not frozen, then continue:
- (4) Do a check of the faucet for the correct operation.
 - (a) If the faucet does not operate correctly, then replace the water faucet. These are the tasks:
 - Faucet Assembly Removal, AMM TASK 38-11-05-000-801 or Faucet Assembly Removal, AMM TASK 38-11-05-000-805 or Faucet Assembly Removal, AMM TASK 38-11-05-000-808
 - Faucet Assembly Installation, AMM TASK 38-11-05-400-801 or Faucet Assembly Installation, AMM TASK 38-11-05-400-805 or Faucet Assembly Installation, AMM TASK 38-11-05-400-808
 - 1) Open the faucet for 10 seconds.
 - 2) If the water flow is satisfactory, then you corrected the fault.

SHZ 860-863

- (b) If the faucet operates correctly, but water flow is not satisfactory, then continue.
- (5) Do this check of the filter:
 - (a) To remove the filter element from the water filter, do this task: Water Filter Replacement, AMM TASK 38-11-04-960-801.
 - (b) Install the filter cover without the filter element.
 - (c) Open the faucet for 10 seconds.
 - (d) If the water flow is satisfactory, then do these steps:
 - 1) Do this task: Water Filter Replacement, AMM TASK 38-11-04-960-801.
 - 2) Open the faucet for 10 seconds.
 - 3) If the water flow is satisfactory, then you corrected the fault.



SHZ ALL

807. Lavatory Faucet Leak - Fault Isolation

- A. Description
 - (1) SDS SUBJECT 38-10-00
- B. Possible Causes
 - (1) Broken Water Faucet
 - (2) Water Faucet Adjustment
- C. Circuit Breakers
 - (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row Col Number Name

F 13 C00104 LAVATORY WATER HEATER A

EFFECTIVITY SHZ ALL

38-10 TASKS 806-807



(Continued)

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C01073	LAVATORY WATER HEATER D
F	15	C01096	LAVATORY WATER HEATER E

D. Related Data

- Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

E. Initial Evaluation

- (1) Open the faucet for 10 seconds and then close the faucet.
 - (a) If there is no leakage, then there was an intermittent problem.
 - (b) If there is leakage, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- (1) Do a check of the water from the faucet as follows:
 - (a) Feel the water that comes from the faucet.
 - 1) If the water is hot, then adjust or replace the Hot Water Cartridge as necessary. These are the applicable tasks:
 - Water Faucet Adjustment, AMM TASK 38-11-05-820-801 or Water Faucet Adjustment, AMM TASK 38-11-05-820-805
 - Cartridge Valve Assembly Replacement, AMM TASK 38-11-05-960-801 or Cartridge Valve Assembly - Replacement, AMM TASK 38-11-05-960-803
 - a) Do the Repair Confirmation at the end of this task.
 - 2) If the water is cold, then adjust or replace the Cold Water Cartridge. These are the applicable tasks:
 - Water Faucet Adjustment, AMM TASK 38-11-05-820-801 or Water Faucet Adjustment, AMM TASK 38-11-05-820-805
 - Cartridge Valve Assembly Replacement, AMM TASK 38-11-05-960-801 or Cartridge Valve Assembly - Replacement, AMM TASK 38-11-05-960-803
 - a) Do the Repair Confirmation at the end of this task.
 - 3) If the water is warm, then adjust or replace the Hot and Cold Water Faucet Cartridges. These are the applicable tasks:
 - Water Faucet Adjustment, AMM TASK 38-11-05-820-801 or Water Faucet Adjustment, AMM TASK 38-11-05-820-805
 - Cartridge Valve Assembly Replacement, AMM TASK 38-11-05-960-801 or Cartridge Valve Assembly - Replacement, AMM TASK 38-11-05-960-803
 - a) Do the Repair Confirmation at the end of this task.

38-10 TASK 807

SHZ ALL

EFFECTIVITY



SHZ 888-899

- (2) Do a check of the water from the faucet.
 - (a) Flush the faucet.
 - 1) Remove the aerator from the faucet.
 - Rotate the faucet knob to center position for warm water.
 - 3) Push the faucet knob down and hold it for ten seconds.
 - 4) Continue to hold the faucet knob down and with the water flowing, rotate the faucet knob between the HOT and COLD positions at least three times.
 - 5) Release the faucet knob.
 - 6) Flush the faucet three more times.
 - 7) Re-install the aerator on the faucet.
 - 8) Do the Repair Confirmation at the end of this task.
 - (b) Replace the Water Cartridge. This is the task:
 - 1) Cartridge Assembly Replacement, AMM TASK 38-11-05-960-804.
 - 2) Do the Repair Confirmation at the end of this task.

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- (3) Replace the faucet. These are the tasks:
 - Faucet Assembly Removal, AMM TASK 38-11-05-000-801 or Faucet Assembly Removal, AMM TASK 38-11-05-000-805 or Faucet Assembly Removal, AMM TASK 38-11-05-000-808
 - Faucet Assembly Installation, AMM TASK 38-11-05-400-801 or Faucet Assembly Installation, AMM TASK 38-11-05-400-805 or Faucet Assembly Installation, AMM TASK 38-11-05-400-808
 - (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Open the faucet for 10 seconds and then close the faucet.
 - (a) If the leak stops, then you corrected the problem.
 - (b) If the leak does not stop, then continue the Fault Isolation Procedure at the subsequent step.

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

808. Faucet Water Too Hot - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-10-00)
- B. Possible Causes
 - (1) Temperature switch set too high
 - (2) Hot water heater
- C. Circuit Breakers
 - (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

RowColNumberNameF13C00104LAVATORY WATER HEATER A

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(Continued)

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C01073	LAVATORY WATER HEATER D
F	15	C01096	LAVATORY WATER HEATER E

D. Related Data

- Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

E. Initial Evaluation

- (1) Open the hot faucet for 10 seconds and then do a check of the water temperature.
 - (a) If the water temperature is not too hot, then there was an intermittent fault.
 - (b) If the water temperature is too hot, then do the Fault Isolation Procedure below:

F. Fault Isolation Procedure

- Look at the temperature control switch on the bottom of the hot water heater.
 - NOTE: The temperature control switch has 3 positions. LOW is for 105°F water, MEDIUM is for 115°F water, and HIGH is for 125°F water.
 - <u>NOTE</u>: If the problem is at a galley faucet, then refer to the component maintenance manual from the vendor of the applicable galley for detail of the water heater (if installed).
 - (a) If the temperature switch is not set to the correct position, then do these steps.
 - 1) Set the switch is to the correct position.
 - 2) Open the hot water faucet for 10 seconds.
 - 3) If the water temperature is satisfactory, then you corrected the fault.
 - (b) If the temperature switch is set to the correct position, then continue.
- (2) Replace the hot water heater. These are the tasks:
 - Water Heater Removal, AMM TASK 38-13-01-000-801
 - Water Heater Installation, AMM TASK 38-13-01-400-801
 - (a) Open the hot water faucet for 10 seconds.
 - (b) If the water temperature is satisfactory, then you corrected the fault.



809. Faucet Water Pressure Too High - Fault Isolation

A. Description

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SHZ ALL

(1) (SDS SUBJECT 38-10-00)

B. Possible Causes

- (1) Pressure limit switch, S692
- (2) Pressure relief valve

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C. Related Data

- Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

D. Initial Evaluation

- (1) Do a check of the level of the water in the water tanks.
 - (a) If the level of the water is low, then do these steps:
 - 1) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - 2) Open the water faucet for 10 seconds.
 - 3) If the water pressure is satisfactory, then you corrected the fault.
 - 4) If the water pressure is not satisfactory, then continue.
 - (b) If the level of the water is not low, then continue.

E. Fault Isolation Procedure

- (1) To do a check of the pressure limit switch, S692, do this task: Water Pressure Cut-Out Switch Operational Test, AMM TASK 38-42-07-700-801.
 - (a) If the compressor start pressure is too high, then replace the water pressure limit switch, S692. These are the tasks:
 - Water Pressure Cut-Out Switch Removal, AMM TASK 38-42-07-000-801
 - Water Pressure Cut-Out Switch Installation, AMM TASK 38-42-07-400-801
 - (b) Open the water faucet for 10 seconds.
 - (c) If the water pressure is satisfactory, then you corrected the fault.
 - (d) If the water pressure is not satisfactory, then continue.
- (2) Replace the water pressure relief valve for the air compressor. These are the tasks:
 - Pressure Relief Valve Removal, AMM TASK 38-42-06-000-801
 - Pressure Relief Valve Installation, AMM TASK 38-42-06-400-801
 - (a) Open the water faucet for 10 seconds.
 - (b) If the water pressure is satisfactory, then you corrected the fault.



810. Potable Water is Contaminated - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-10-00)

B. Possible Causes

(1) Contamination of the water system

C. Related Data

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- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

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D. Initial Evaluation

- (1) Open the faucet for 10 seconds and then do a check of the water quality.
 - (a) If there is no bad smell or poor water quality, then there was an intermittent fault.
 - (b) If there is bad smell or poor water quality, then do the Fault Isolation Procedure below:

E. Fault Isolation Procedure

- (1) Do this task: Potable Water System Drain, AMM TASK 12-14-01-600-801.
- (2) Do this task: Potable Water System Disinfectant, AMM TASK 38-10-00-600-801.
- (3) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
- (4) Open the faucet for 10 seconds and then do a check of the water quality.
 - (a) If there is no bad smell or poor water quality, then you corrected the fault.
 - (b) If there is bad smell or poor water quality, then do this task again.



811. No Hot Water at Faucet - Fault Isolation

A. Description

(1) SDS SUBJECT 38-10-00

B. Possible Causes

- (1) The CABIN/UTIL Switch is in the OFF position.
- (2) Heater Switch set to OFF
- (3) Temperature Switch set too LOW
- (4) Overtemperature Switch needs reset
- (5) Hot Water Heater
- (6) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	Number	<u>Name</u>
F	13	C00104	LAVATORY WATER HEATER A
F	14	C01073	LAVATORY WATER HEATER D
F	15	C01096	I AVATORY WATER HEATER F

D. Related Data

- (1) Simplified Schematic 38-10 TASK SUPPORT Figure 304 or 38-10 TASK SUPPORT Figure 305
- (2) Component Location 38-10 TASK SUPPORT Figure 301

E. Initial Evaluation

(1) Open the Hot Faucet for 10 seconds and then do a check of the water temperature.

NOTE: Initial heat-up time for Water Heater can take up to four (4) minutes.

- (a) If the water temperature is hot, then there was an intermittent problem.
- (b) If the water temperature is not hot, then do the Fault Isolation Procedure below.

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F. Fault Isolation Procedure

- (1) Make sure that the CABIN/UTIL Switch is in the ON position.
- (2) Look at the Power Control Switch for the Hot Water Heater:
 - (a) If the Heater Control Switch is OFF, then put it to ON.

NOTE: If the problem is at a Galley Faucet, then refer to the Component Maintenance Manual for the applicable galley for Water Heater details (if installed).

- 1) Do the Repair confirmation at the end of this task.
- (b) If the Power Control Switch is ON, then continue.
- (3) Look at the Temperature Control Switch at the bottom of the Hot Water Heater.

NOTE: The Temperature Control Switch has 3 positions. LOW is for 105°F water, MEDIUM is for 115°F water, and HIGH is for 125°F water.

NOTE: If the problem is at a Galley Faucet, then refer to the Component Maintenance Manual for the applicable galley for Water Heater details (if installed).

- (a) If the switch is not set to the correct position, then do these steps.
 - 1) Put the switch to the correct position.
 - 2) Do the Repair Confirmation at the end of this task.
- (b) If the switch is set to the correct position, then continue.
- (4) Push the Overheat Switch at the top cover of the Hot Water Heater.
 - (a) Do the Repair confirmation at the end of this task
- (5) Replace the Hot Water Heater. These are the tasks:
 - Water Heater Removal, AMM TASK 38-13-01-000-801
 - Water Heater Installation, AMM TASK 38-13-01-400-801
 - (a) Do the Repair Confirmation at the end of this task..
- (6) Examine the wiring between the applicable LAVATORY WATER HEATER circuit breaker and the applicable LAV Water Heater, H1 (WDM 38-21-11).
 - (a) If you find a problem, repair the wiring as necessary.
 - (b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Open the Hot Water Faucet for 10 seconds.
 - (a) If the water is hot, then you corrected the problem.
 - (b) If the water is not hot, then continue the Fault Isolation Procedure at the applicable step.

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

812. Potable Water Level Not Accurate at Attendants Panel - Fault Isolation

A. Description

(1) SDS SUBJECT 38-10-00

B. Possible Causes

- (1) Low Water Level
- (2) Water Quantity Transmitter Adjustment
- (3) Tank Sensor

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- (4) Water Quantity Indicator
- (5) Wiring

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	9	C00138	WATER QTY IND

D. Related Data

(1) Component Location (38-10 TASK SUPPORT Figure 301)

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(2) Simplified Schematic 38-10 TASK SUPPORT Figure 302

SHZ ALL

(3) SSM 38-41-11

E. Initial Evaluation

- (1) Drain the Potable Water Tank.
- (2) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
- (3) Read the water quantity at the Attendant's Panel.
 - (a) If the Attendant Panel shows a full Potable Water Tank, you corrected the problem.
 - (b) If the Attendant Panel does not show a Potable Water Tank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

SHZ 865, 866, 901-999

- (1) Compare the quantity shown on the Attendant Panel Water Quantity Indicator and the one shown on the Potable Water Service Panel Gage.
 - (a) If the Attendant Panel Water Quantity Indicator does not show that the tank is full, and the Service Panel Gage shows that the tank is full, do the steps that follow:

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 871-874, 876-899

(2) If the Water Quantity Indicator does not read full, do the steps that follow:

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- (3) Disconnect the applicable airplane connector from the Receptacle J16 at the Attendant's Panel (WDM 38-41-11).
- (4) Do a check for -10V DC between pins 1 and 2 of the applicable airplane connector.
 - (a) If you find -10V DC, replace the Attendant Panel Water Quantity Indicator. These are the Tasks:

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

- Attendant's Panel Water Quantity Indicator Removal, AMM TASK 38-14-02-000-801
- Attendant's Panel Water Quantity Indicator Installation, AMM TASK 38-14-02-400-801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899

- Attendant's Panel with LCD Touch Panel Removal, AMM TASK 25-25-11-000-802
- Attendant's Panel with LCD Screen Installation, AMM TASK 25-25-11-400-802

SHZ ALL

- 1) Do the Repair Confirmation at the end of this task.
- (5) Adjust the Water Quantity Indicator. This is the task: Water Quantity Transmitter Adjustment, AMM TASK 38-14-01-800-801.

SHZ 865, 866, 901-999

NOTE: If the Tank Quantity Transmitter is bad, the Attendant Panel and the Water Service Panel Indicators will show the incorrect quantity.

SHZ ALL

- (a) Do the Repair Confirmation at the end of this task.
 - NOTE: It is possible for one stud connection to produce correct Capacitance values and the other stud connection to produce incorrect Capacitance values.
 - Only one correctly functioning stud is required to get satisfactory water quantity readings.
- (6) If the Water Quantity Indicator does not read full when the tank is full, or empty when the tank is empty, then do the Capacitance Test that follows:

SHZ 865, 866, 901-999

NOTE: If the Tank Quantity Sensor Capacitance is bad, the Attendant Panel and the Water Service Panel Indicators will show the incorrect quantity.

SHZ ALL

- (a) Remove the Coaxial Wire that runs from the Sensor Output to the input of the Water Quantity Transmitter.
- (b) Use a LCR meter (Inductance, Capacitance, Resistance), COM-1741, or equivalent, to do a check of the Water Tank Quantity Sensor Capacitance.
 - NOTE: The LCR meter (Inductance, Capacitance, Resistance), COM-1741 should be set to a test frequency of 1kHz or 10kHz to get the best measurement.
 - 1) Use either of the two Transmitter connection studs for one of the meter connection points.
 - Use either of the metal portion of the drain fitting below the tank as the other meter connection point.
- (c) Compare the Capacitance levels to those in the tables below.

NOTE: The Potable Water Tank material can be identified by the color. A graphite Potable Water Tank has a black or dark gray color. A fiberglass Potable Water Tank has a yellow or light green color.

Table 201 GRAPHITE POTABLE WATER TANK WITH PETG LINER

Standpipe/Tank Configuration	Capacitance Levels-Empty	Capacitance Levels-Full	Mating Adapter Cable			
SHZ 860-863						
40 / 60 GAL	2500 ± 300 pf	5300 ± 500 pf	-12			

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SHZ 860-863 (Continued)

Table 201 GRAPHITE POTABLE WATER TANK WITH PETG LINER (Continued)

	Standpipe/Tank Configuration	Capacitance Levels-Empty	Capacitance Levels-Full	Mating Adapter Cable		
	SHZ 721-799					
	50 / 60 GAL	2500 ± 300 pf	6000 ± 550 pf	-14		
ī	SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999					
	FULL (40 / 40 GAL OR 60 / 60 GAL)	2500 ± 300 pf	6700 ± 600 pf	-15		

SHZ ALL

Table 202 FIBERGLASS POTABLE WATER TANK WITH ABS LINER

	Standpipe/Tank Configuration	Capacitance Levels-Empty	Capacitance Levels-Full	Mating Adapter Cable			
	SHZ 860-863						
	40 / 60 GAL	0	3158 ± 632 pf	-12			
	SHZ 721-799						
	50 / 60 GAL	0	3947 ± 789 pf	-14			
ı	SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999						
	FULL (40 / 40 GAL OR 60 / 60 GAL)	0	4500 ± 900 pf	-15			

SHZ ALL

- (d) If the Capacitance Output of the Water Level Sensor does not agree with the tables above, then replace the Potable Water Tank. These are the tasks:
 - Water Tank Removal, AMM TASK 38-11-01-000-801
 - Water Tank Installation, AMM TASK 38-11-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.
- (e) Replace the Water Quantity Transmitter. These are the tasks:
 - Water Quantity Transmitter Removal, AMM TASK 38-14-01-000-801
 - Water Quantity Transmitter Installation, AMM TASK 38-14-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Read the water quantity at the Attendant Panel Water Quantity Indicator.
 - (a) If the indicator shows the correct water quantity, you corrected the problem.
 - (b) If the indicator does not show the correct water quantity, then continue the Fault Isolation Procedure at the subsequent step.

FND	OF T	ASK -	

SHZ ALL

38-10 TASK 812

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SHZ 865, 866, 901-999

813. Potable Water Level Not Accurate at Service Panel - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-10-00)

B. Possible Causes

- (1) These are the possible causes:
 - · Low water level
 - · Water quantity transmitter adjustment
 - · Tank Sensor
 - · Water quantity indicator
 - Wiring problem

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

Power Distribution Panel Number 1, P91

Row	Col	<u>Number</u>	<u>Name</u>
С	9	C00138	WATER QTY IND

D. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 302)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)
- (3) (SSM 38-41-11)

E. Initial Evaluation

- Do a check of the level of the water in the water tanks.
 - (a) If the water tank(s) is not full, then do these steps:
 - 1) Do this task: Potable Water Tank Fill, AMM TASK 12-14-01-600-802.
 - 2) Read the water quantity at the water service panel.
 - 3) If the water quantity is satisfactory, you corrected the fault.
 - 4) If the water service panel gage does not show the correct water quantity, continue the procedure.

F. Fault Isolation Procedure

- (1) Compare the quantity shown on the attendant panel water quantity indicator and the potable water service panel gage.
 - (a) If the two water quantity indicators at the water service panel and the attendant panel do not show the correct quantity, do this procedure:
 - Potable Water Level Not Accurate at Attendants Panel Fault Isolation, 38-10 TASK 812
 - (b) If the service panel gage does not show a full tank(s), and the attendant panel indicator shows a full tank(s), do these steps:
 - 1) Do a wire check for ground at the pin 3 of the airplane connector for the service panel quantity gage.
 - a) If the ground is bad, repair the wire.

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SHZ 865, 866, 901-999 (Continued)

- 2) Do a check for -10 VDC between the pins 1 and 2 of the airplane connector for the service panel quantity gauge. If the voltage is -10 VDC, replace the water quantity gage. These are the Tasks:
 - AMM TASK 38-14-03-000-801
 - AMM TASK 38-14-03-400-801
- 3) Read the water quantity at the water service panel gage.
- If the water service panel gage shows the correct water quantity, you corrected the fault
- 5) If the water service panel gage does not show the correct quantity, continue the procedure.
- (2) If the water service panel gage does not show full, do these steps:(WDM 38-41-11):
 - (a) Disconnect the water quantity gage connector at the water service panel.
 - (b) Disconnect the D192 connector at the water quantity transmitter.
 - (c) Do a check of the wires between the D192 connector pin 1 and the water quantity gage connector pin 1. If the check is bad, repair the wire.
 - (d) Do a check of the wires between D192 connector pin 2 and the water quantity gage connector pin 2. If the check is bad, repair the wire.
 - (e) Connect the D192 connector to the water quantity transmitter.
 - (f) Connect the water quantity gauge connector to the water service panel gage.
 - (g) Read the water quantity at the service panel.
 - (h) If the water quantity is satisfactory, you corrected the fault.



SHZ ALL

828. Water Heater Power Indicator Light Does Not Operate Correctly - Fault Isolation

A. Description

(1) If the Power Switch is ON and the Power Indicator Light is OFF, the Water Heater could be too hot and caused the Overheat Switch to open.

B. Possible Causes

- (1) Overheat Switch
- (2) Water Heater, H1

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	13	C00104	LAVATORY WATER HEATER A
F	14	C01073	LAVATORY WATER HEATER D
F	15	C01096	LAVATORY WATER HEATER E

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D. Related Data

- (1) WDM 38-21-11
- (2) SSM 38-21-11

E. Initial Evaluation

(1) Open and close the applicable circuit breaker:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	13	C00104	LAVATORY WATER HEATER A
F	14	C01073	LAVATORY WATER HEATER D
F	15	C01096	LAVATORY WATER HEATER E

- (2) Put the Water Heater Power Switch to ON.
 - (a) The Power Indicator Light is ON, then there was an intermittent problem.
 - (b) The Power Indicator Light is OFF, then do Fault Isolation Procedure below.

F. Fault Isolation Procedure

- Reset the Overheat Switch.
 - (a) Do the Repair Confirmation at the end of the task.
- (2) Replace the Water Heater. These are the tasks.
 - Water Heater Removal, AMM TASK 38-13-01-000-801
 - Water Heater Installation, AMM TASK 38-13-01-400-801
 - (a) Do the Repair Confirmation at the end of the task.
- (3) Examine the wiring between the applicable LAVATORY WATER HEATER circuit breaker and the applicable LAV Water Heater, H1 (WDM 38-21-11):
 - (a) If you find a problem, repair the wiring as necessary.
 - (b) Do the Repair Confirmation at the end of the task.

G. Repair Confirmation

(1) Close the applicable circuit breakers:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	13	C00104	LAVATORY WATER HEATER A
F	14	C01073	LAVATORY WATER HEATER D
F	15	C01096	LAVATORY WATER HEATER E

- (2) Put the Water Heater Power Switch to ON.
- (3) After 5 minutes, open the hot water faucet to make sure that the water is hot.
 - (a) If the water temperature is satisfactory and the Power Indicator Light is ON, then you corrected the problem.
 - (b) If the water temperature is not satisfactory and/or the Power Indicator Light is OFF, then continue the Fault Isolation Procedure at the subsequent step.
 - 1) Put the Water Heater Power Switch back to the OFF position.

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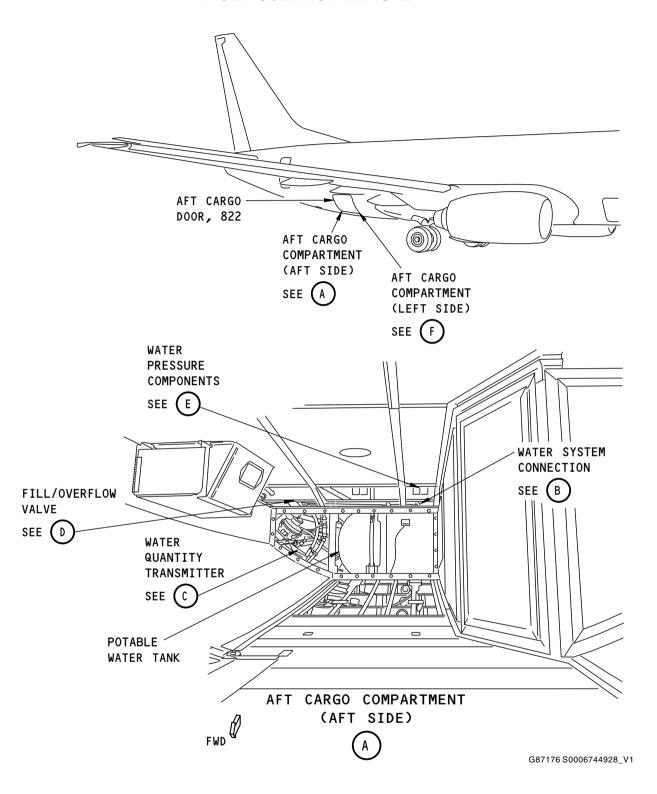
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Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 1 of 9)

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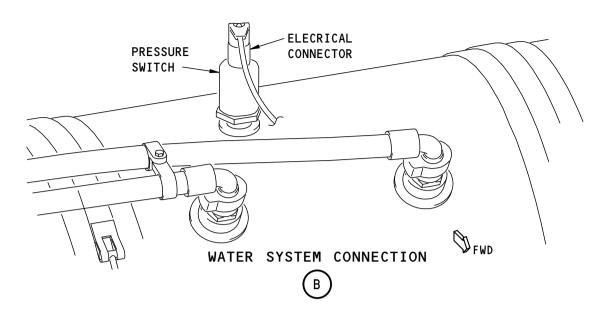
38-10 TASK SUPPORT

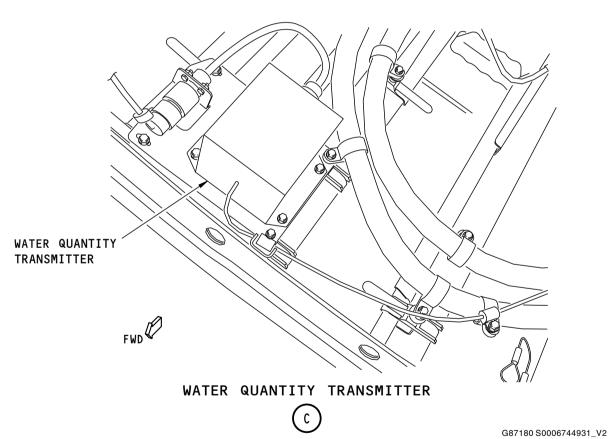
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ECCN 9E991 BOEING PROPRIETARY - See title page for details







Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 2 of 9)

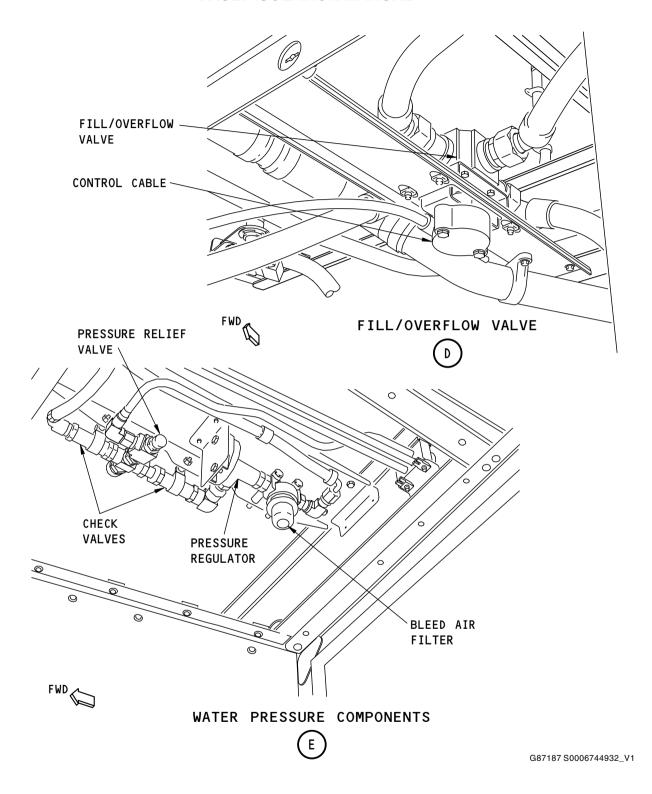
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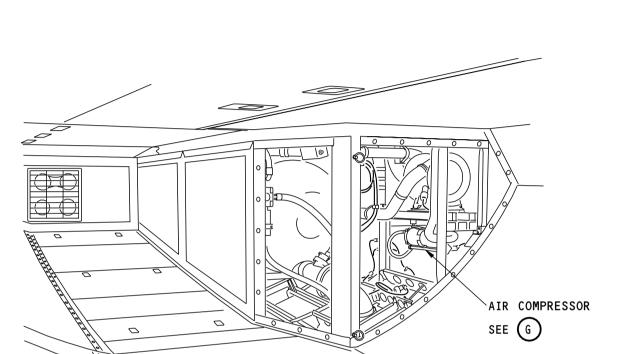
Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 3 of 9)

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AFT CARGO COMPARTMENT (LEFT SIDE)

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Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 4 of 9)

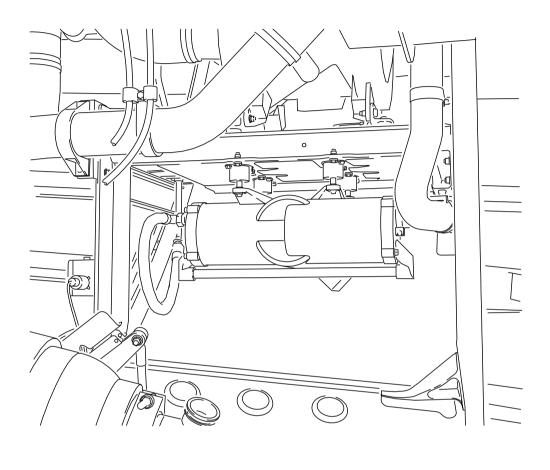
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AIR COMPRESSOR



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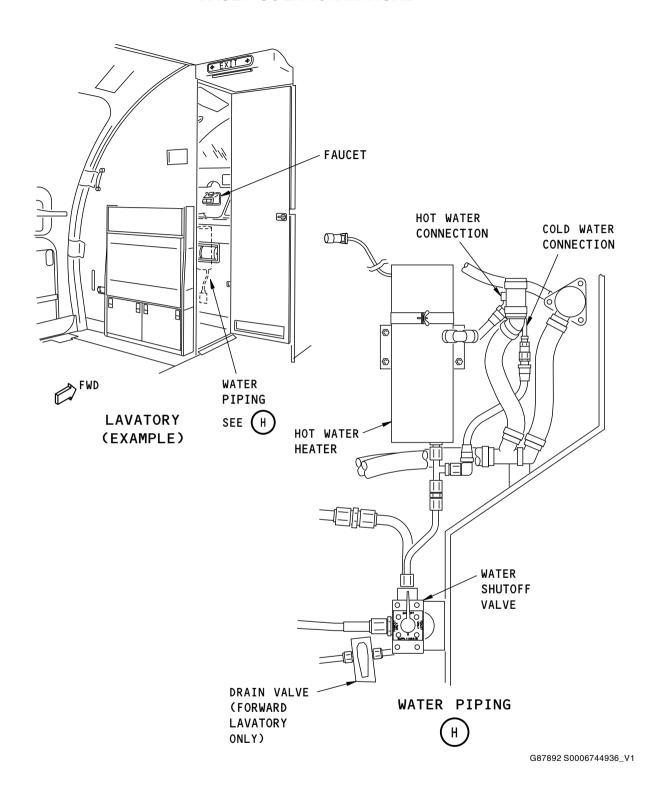
Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 5 of 9)

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Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 6 of 9)

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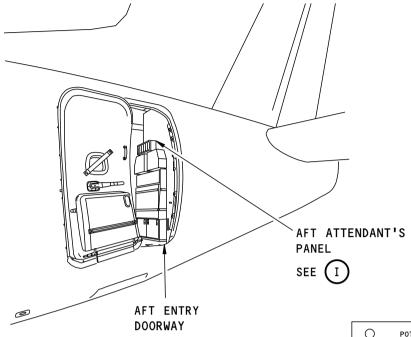
38-10 TASK SUPPORT

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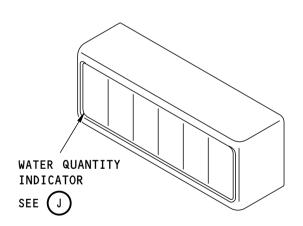
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ECCN 9E991 BOEING PROPRIETARY - See title page for details



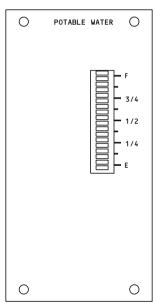






AFT ATTENDANT'S PANEL





WATER QUANTITY INDICATOR



G87837 S0006744938_V2

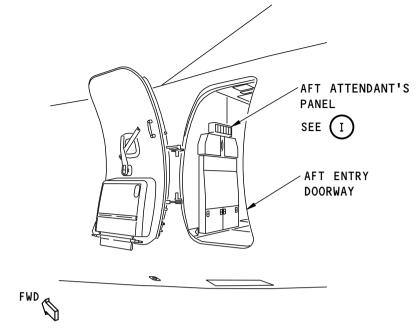
Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 7 of 9)

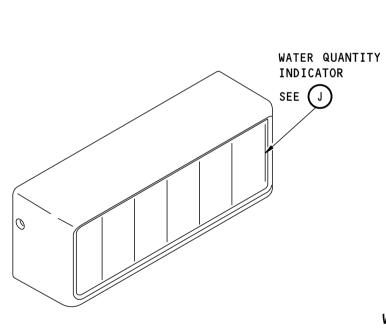
SHZ 002, 009-699, 706, 721-799, 860-863, 865, 866

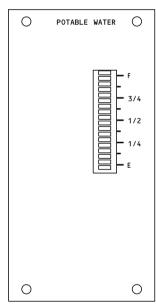
38-10 TASK SUPPORT

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AFT ATTENDANT'S PANEL

WATER QUANTITY INDICATOR



G87195 S0006744939_V2

Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 8 of 9)

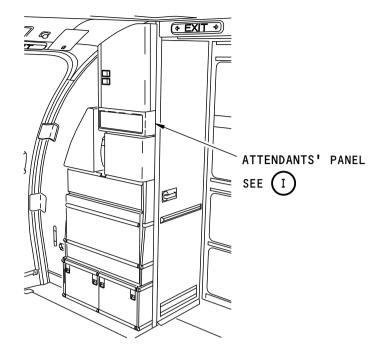
SHZ 801-820, 871-874, 876-880, 901-999

I

38-10 TASK SUPPORT

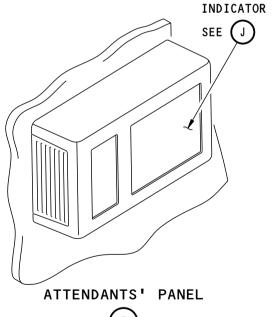
Page 308 Oct 15/2024

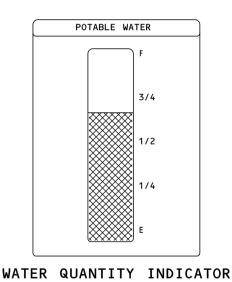




ENTRY DOOR (EXAMPLE)

WATER QUANTITY





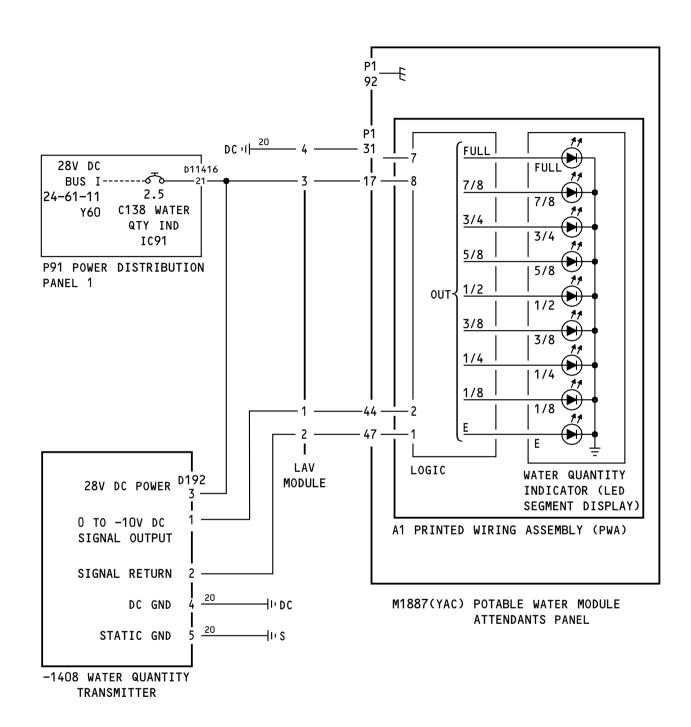
L91570 S0006744941_V3

Potable Water Component Location Figure 301/38-10-00-990-801 (Sheet 9 of 9)

 38-10 TASK SUPPORT

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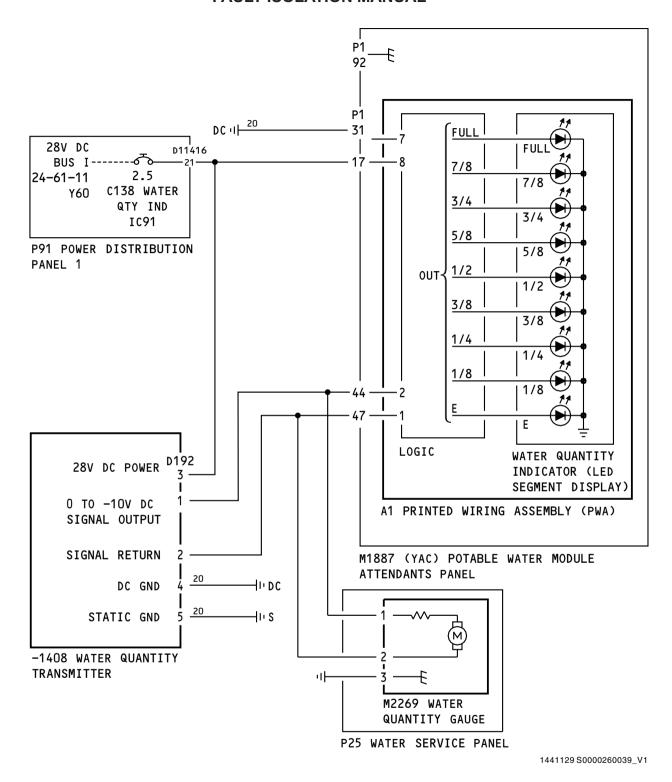
G88177 S0006744946_V1

Water Indication System Simplified Schematic Figure 302/38-10-00-990-802 (Sheet 1 of 2)

38-10 TASK SUPPORT

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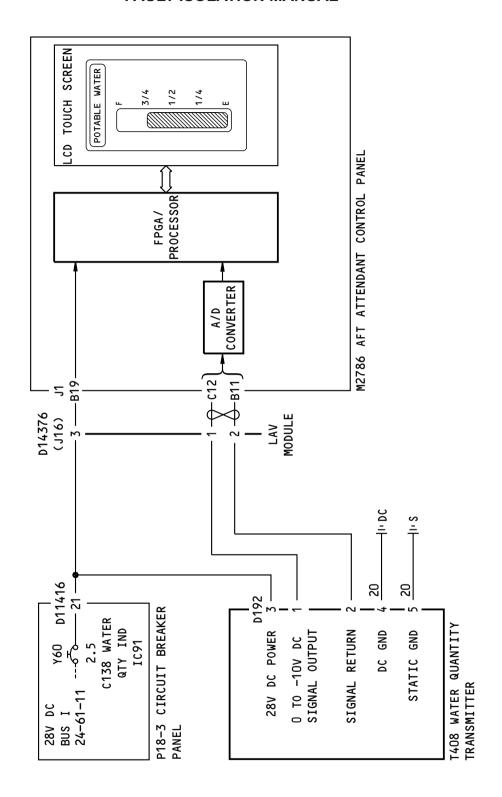




Water Indication System Simplified Schematic Figure 302/38-10-00-990-802 (Sheet 2 of 2)



2107352 S0000450240_V1



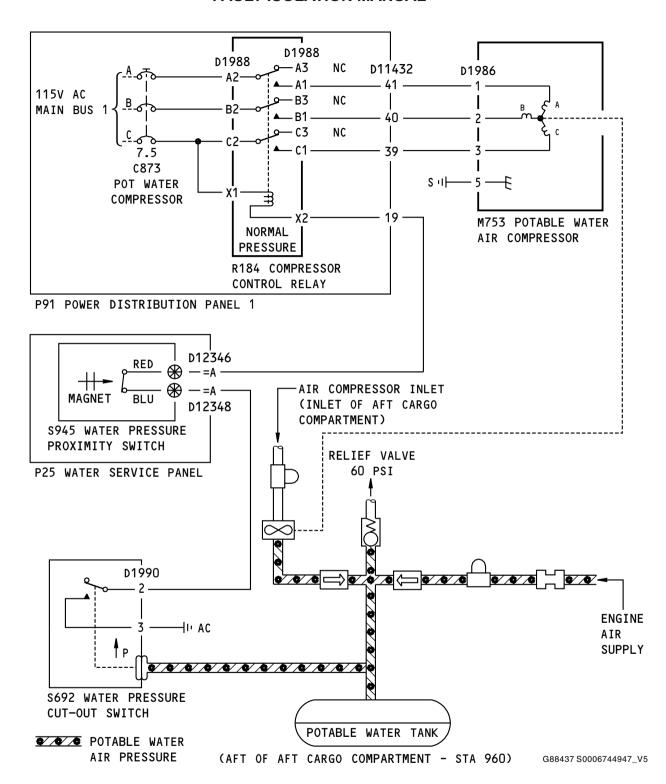
Water Indication System Simplified Schematic Figure 303/38-10-00-990-804

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

38-10 TASK SUPPORT

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Water Pressurization System Simplified Schematic Figure 304/38-10-00-990-803

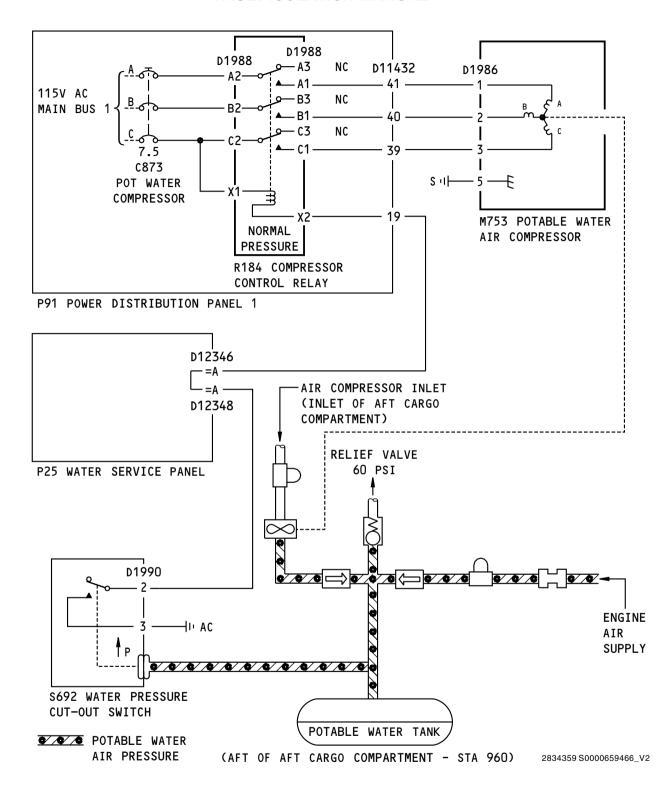
EFFECTIVITY

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

38-10 TASK SUPPORT

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Water Pressurization System Simplified Schematic Figure 305/38-10-00-990-805

SHZ 888-899

38-10 TASK SUPPORT

Page 314

D633A103-SHZ

ECCN 9E991 BOEING PROPRIETARY - See title page for details



801. LCM BITE Procedure

(Figure 201)

A. General

- (1) This task is for a full test of the LCM for the waste indication system at the LCM.
- (2) There is a task for a test of the waste indication system from the attendant's panel. The attendant's panel test is equivalent but it is not necessary to remove the panel for the waste enclosure.

B. Prepare for the Test

(1) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-3

Row	Col	Number	<u>Name</u>
D	19	C01423	VACUUM WASTE

(2) Open this access panel:

<u>Number</u>	Name/Location
822	Aft Cargo Door

(3) To get access to the waste tanks, do this task: Waste Tank Enclosure Panel - Removal, AMM TASK 25-52-20-000-801.

C. LCM BITE Test

- (1) Make sure the POWER ON (green) light for the LCM is on.
 - (a) Make sure the J1, J2, J3, and TANK FULL (red) lights are off.
- (2) Move and then hold the switch to the TEST LAMPS position.
- (3) Make sure the POWER ON (green) light and the J1, J2, J3, and TANK FULL (red) lights for the LCM are on.
- (4) Move and then release the switch to the TEST SENSOR position.
- (5) Make sure the POWER ON (green), J1, J2, J3, and TANK FULL (red) lights are on for approximately 3 seconds.

NOTE: The lights on the LCM can flash irregularly. If you find a system error, the TANK FULL light will flash at 8 Hz, then go off. You will see this cycle again after 1.6 seconds until you correct the problem.

- (6) Make sure the J1, J2, J3, and TANK FULL (red) lights are off.
- (7) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message for the fault indicated by the fault light on the LCM.

D. Put the Airplane Back to Its Usual Condition



SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE SMOKE CAN GET INTO THE PASSENGER COMPARTMENT DURING A FIRE.

(1) Do this task: Waste Tank Enclosure Panel - Installation, AMM TASK 25-52-20-400-801.

EFFECTIVITY SHZ ALL

38-30 TASK 801

Page 201 Oct 15/2021



(2) Close this access panel:

Number Name/Location 822 Aft Cargo Door

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
WASTE TANK	SENSOR J1	38-30 TASK 803
WASTE TANK	SENSOR J2	38-30 TASK 803
WASTE TANK	SENSOR J3	38-30 TASK 808
WASTE TANK	TANK FULL	38-30 TASK 809

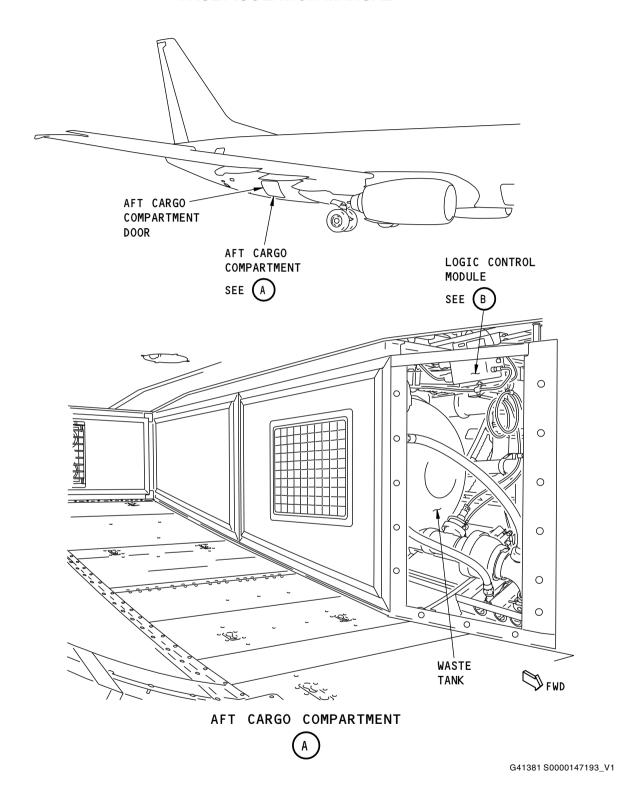
– END OF TASK —

SHZ ALL

38-30 TASK 801

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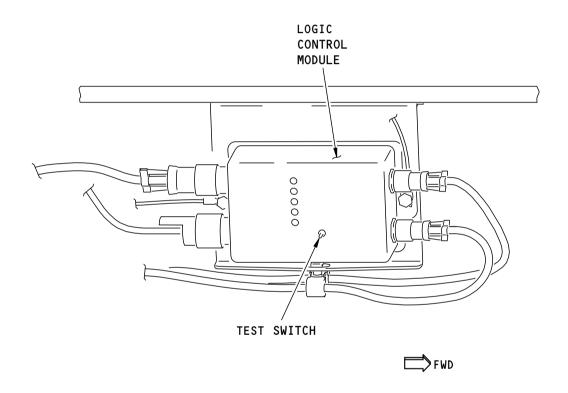
Logic Control Module BITE Test Figure 201/38-30-00-990-807 (Sheet 1 of 2)

SHZ ALL

38-30 TASK 801

Page 203 Feb 15/2013





LOGIC CONTROL MODULE



G41383 S0000147194_V1

Logic Control Module BITE Test Figure 201/38-30-00-990-807 (Sheet 2 of 2)

EFFECTIVITY
SHZ ALL

D633A103-SHZ

ECCN 9E991 BOEING PROPRIETARY - See title page for details

38-30 TASK 801

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802. LAVS INOP BITE Test at the Attendant's Panel

A. General

- (1) This task is for a test of the waste indication system from the attendant's panel.
- (2) There is a task for a test of the waste indication system from the Logic Control Module (LCM). The LCM BITE test is equivalent but it is necessary to remove the panel for the waste enclosure. The LCM BITE test also gives the necessary data to find the component that is not serviceable.

B. Prepare for the test

(1) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-3

Row Col Number Name

D 19 C01423 VACUUM WASTE

C. LAVS INOP BITE Test

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

- (1) Select the Maintenance display from the attendant's panel touch screen.
- (2) Push and then release the VACUUM WASTE button.
- (3) Push and then release the LAVS INOP TEST button.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(4) Push and then release the LAVS INOP TEST switch.

SHZ ALL

I

(5) Make sure the LAVS INOP light is on for approximately 3 seconds and then is off.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(6) Make sure the waste indicator moves toward a full indication during the 3 second increment.

SH7 ALL

- (7) Make sure the CLEAN/CHECK SENSOR light is off.
 - (a) If the CLEAN/CHECK SENSOR light is on, do this task: LCM BITE Test, AMM TASK 38-33-00-740-802

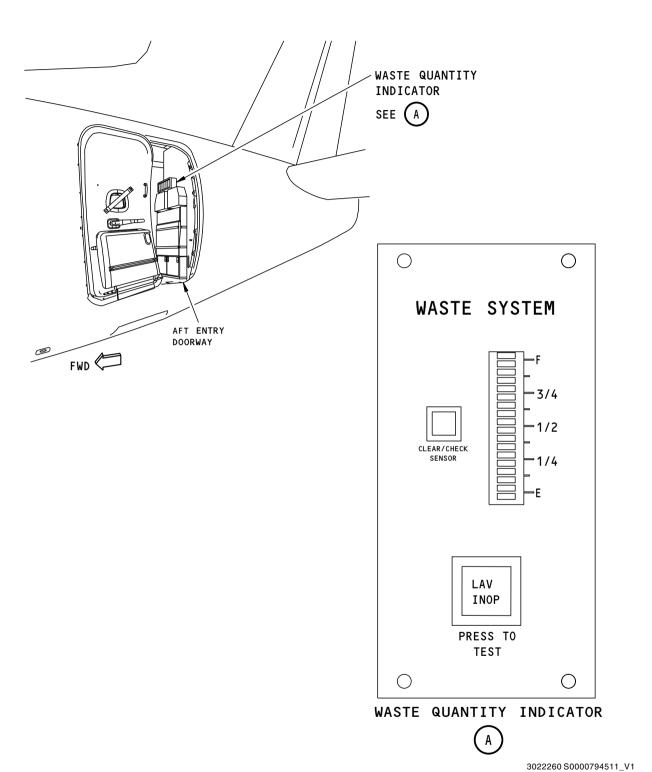
----- END OF TASK -----

38-30 TASK 802

SHZ ALL

EFFECTIVITY





Attendant's Panel Waste Quantity Indicator Operational Test Figure 202/38-30-00-990-808 (Sheet 1 of 2)

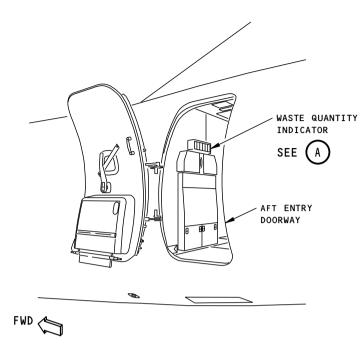
EFFECTIVITY SHZ 002, 009-699, 706, 721-799, 860-863, 865, 866

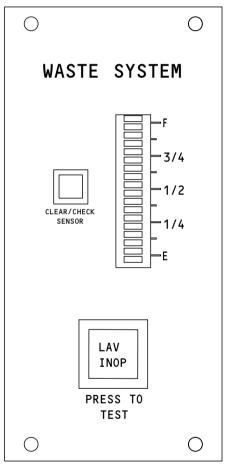
I

38-30 TASK 802

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WASTE QUANTITY INDICATOR



3022262 S0000794550_V1

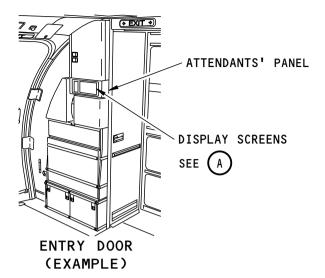
Attendant's Panel Waste Quantity Indicator Operational Test Figure 202/38-30-00-990-808 (Sheet 2 of 2)

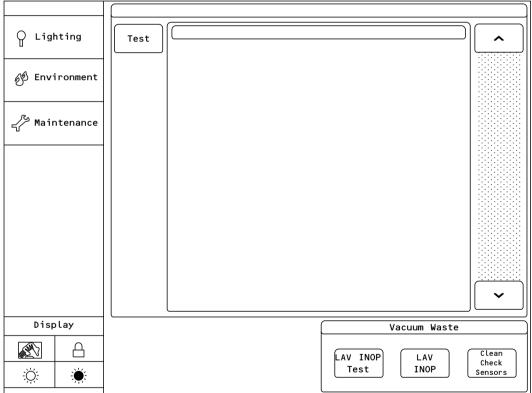
SHZ 801-820, 871-874, 876-880, 901-999

38-30 TASK 802

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MAINTENANCE DISPLAY, AFT ACP (V4 SOFTWARE VERSION)



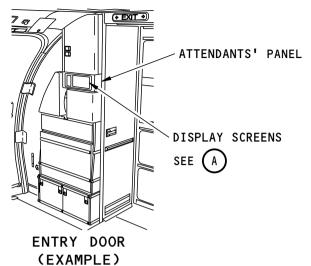
3022267 S0000794556 V1

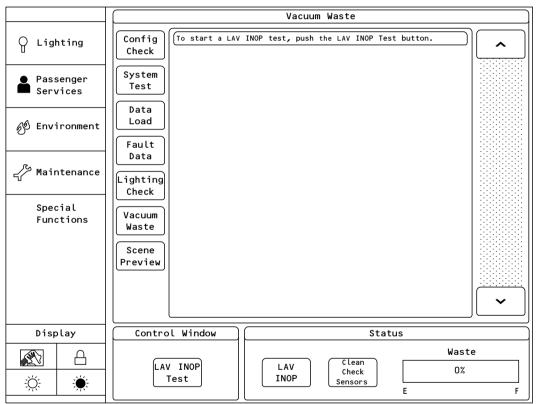
Attendant's Panel Waste Quantity Indicator Operational Test Figure 203/38-30-00-990-809 (Sheet 1 of 4)

 38-30 TASK 802

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MAINTENANCE DISPLAY, FORWARD ACP
(V5 SOFTWARE VERSION)



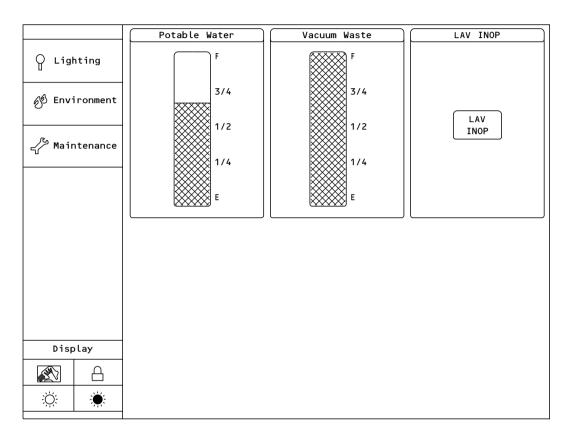
3022268 S0000794557 V1

Attendant's Panel Waste Quantity Indicator Operational Test Figure 203/38-30-00-990-809 (Sheet 2 of 4)

 38-30 TASK 802

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ENVIRONMENT DISPLAY, AFT ACP (V4 SOFTWARE VERSION)



3022269 S0000794558_V1

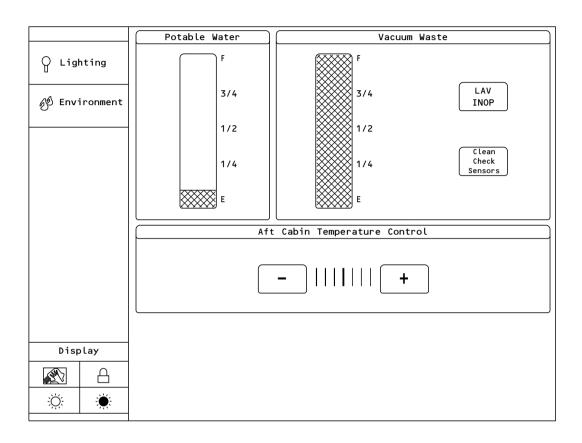
Attendant's Panel Waste Quantity Indicator Operational Test Figure 203/38-30-00-990-809 (Sheet 3 of 4)

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

38-30 TASK 802

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ENVIRONMENT DISPLAY, AFT ACP (V5 SOFTWARE VERSION)



3022270 S0000794559_V1

Attendant's Panel Waste Quantity Indicator Operational Test Figure 203/38-30-00-990-809 (Sheet 4 of 4)

 38-30 TASK 802

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803. Waste Tank - Sensor J1/J2 - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) SENSOR J1
 - (b) SENSOR J2
- (2) (SDS SUBJECT 38-32-00)
- (3) (SDS SUBJECT 38-33-00)

B. Possible Causes

- (1) Fouled point level sensor
- (2) Failed point level sensor
- (3) Failed LCM
- (4) Faulty wiring between LCM and point level sensor

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (Figure 201)
- (3) (SSM 38-32-13)

E. Initial Evaluation

- (1) Do a check of the waste indicator at the attendant's panel.
 - (a) If the waste indicator reads full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (b) Do a check of the waste system at the attendant's panel, (LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802).
 - 1) If the CLEAN/CHECK SENSOR light is off, then you corrected the fault.
 - (c) If the CLEAN/CHECK SENSOR light is on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) If the CLEAN/CHECK SENSOR light is on, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - (a) If the Sensor J1 (J2) lights flash after you do the LCM BITE Test, do these tasks:
 - Waste Tank Cleaning, AMM TASK 38-32-07-100-801 or Waste Tank Point Level Sensor Cleaning, AMM TASK 38-33-01-100-801

EFFECTIVITY SHZ ALL

38-30 TASK 803

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Waste Tank Rinse Nozzle Cleaning, AMM TASK 38-32-10-100-801

NOTE: The procedure to clean the waste tank can be done from the waste service panel. This procedure is not as effective as cleaning the point level sensor but it is not necessary to open the waste tank. To clean the point level sensor it is necessary to remove the point level sensor. The point level sensors can become fouled if the rinse nozzles are blocked or not working correctly.

- 1) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
- 2) If the Sensor J1 (J2) lights do not flash after the LCM BITE Test, then you corrected the fault.
- (b) If the Sensor J1 (J2) lights are on and do not flash, then continue.
- (2) If the Sensor J1 (J2) and the TANK FULL lights are on and do not flash after you do the LCM BITE Test, replace the LCM. These are the tasks:
 - Logic Control Module Removal, AMM TASK 38-33-03-000-801
 - Logic Control Module Installation, AMM TASK 38-33-03-400-801
 - (a) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - 1) If the Sensor J1 (J2) lights do not show a fault indication after the LCM BITE Test, then you corrected the fault.
 - (b) If the Sensor J1 (J2) lights are on and do not flash, then continue.
- (3) If the Sensor J1 (J2) lights are on and do not flash after you do the LCM BITE Test, disconnect both point level sensors and then connect to the opposite point level sensor.
 - (a) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - If the Sensor J1 (J2) lights show the opposite fault indication after the LCM BITE Test, then replace the point level sensor(s). These are the tasks:
 - Waste Tank Point Level Sensor Removal, AMM TASK 38-33-01-000-801
 - Waste Tank Point Level Sensor Installation, AMM TASK 38-33-01-400-801
 - 2) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - a) If the Sensor J1 (J2) lights do not show a fault indication after the LCM BITE Test, then you corrected the fault.
 - (b) If the Sensor J1 (J2) lights are on and do not flash, then continue.
- (4) Do these steps to check the electrical harness wiring.
 - (a) Disconnect the J1 connector from the T504 point level sensor
 - (b) Disconnect the J2 connector from the T505 point level sensor.
 - (c) Disconnect the D13428 and D13430 connectors from the M1722 logic control unit.
 - (d) Do a check of the electrical harness wires between the T504 connector J1 and the D13428 connector. Do a check of the electrical harness between the T505 connector J2 and the D13430 connector (WDM 38-32-12).

38-30 TASK 803



D40400

	D13428																			
D1	D13428																J1			
D1	D13428															J1				
Α																				Α
С																				С
D																				D
Ε																				Ε
F																				F

						D13430																
D1	D13430															J2						
D1	3	4	3(0																		J2
Α																						Α
С																						С
D																						D
Ε																						Ε
F																						F

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (f) Connect the J1 connector to the T504 point level sensor
- (g) Connect the J2 connector to the T505 point level sensor
- (h) Connect the D13428 and D13430 connectors to the M1772 logic control unit.
- (i) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
- (j) If the Sensor J1 (J2) lights do not show a fault indication after the LCM BITE Test, then you corrected the fault.

——— END OF TASK ———

808. Waste Tank - Sensor J3 - Fault Isolation

A. Description

- EFFECTIVITY -

SHZ ALL

- (1) This task is for this maintenance message:
 - (a) SENSOR J3

B. Possible Causes

- (1) Dirty T506 continuous level sensor
- (2) Failed T506 continuous level sensor
- (3) Failed M1722 LCM
- (4) Faulty wiring between LCM and continuous level sensor.

38-30 TASKS 803-808

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ECCN 9E991 BOEING PROPRIETARY - See title page for details



C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (Figure 201)
- (3) SSM 38-32-13
- (4) SDS SUBJECT 38-32-00
- (5) SDS SUBJECT 38-33-00

E. Initial Evaluation

- (1) Do a check of the waste indicator at the attendant's panel.
 - (a) If the waste indicator reads full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (b) Do a check of the waste system at the attendant's panel.
 - If the waste indicator reads empty, and the CLEAN/CHECK SENSOR and LAV INOP lights are off, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this task: LCM BITE Procedure, 38-30 TASK 801.
- (2) Do these steps if the sensor J3 light flashes after you do the LCM BITE test:
 - (a) Do this task: Auto Zero Test, AMM TASK 38-33-00-710-801.
 - 1) Do the repair confirmation at the end of this task.
 - (b) Do this task: Waste Tank Continuous Level Sensor Cleaning, AMM TASK 38-33-02-100-801.
 - 1) Do the Repair Confirmation at the end of this task.
 - (c) Replace the Water Tank Continuous Level Sensor, do these tasks:
 - Waste Tank Continuous Level Sensor Removal, AMM TASK 38-33-02-000-801
 - Waste Tank Continuous Level Sensor Installation, AMM TASK 38-33-02-400-801
 - Do the Repair Confirmation at the end of this task.
 - (d) Replace the LCM, do these tasks:
 - Logic Control Module Removal, AMM TASK 38-33-03-000-801
 - Logic Control Module Installation, AMM TASK 38-33-03-400-801
 - 1) Do the Repair Confirmation at the end of this task.
- (3) Do these steps if the Sensor J3 and TANK FULL lights are on and do not flash after you do the LCM BITE test:

38-30 TASK 808

SHZ ALL

EFFECTIVITY



- (a) Replace the LCM, do these tasks:
 - Logic Control Module Removal, AMM TASK 38-33-03-000-801
 - Logic Control Module Installation, AMM TASK 38-33-03-400-801
 - 1) Do the Repair Confirmation at the end of this task.
- (4) Do these steps if the sensor J3 light is on and does not flash after you do the LCM BITE test:
 - (a) Do this task: Auto Zero Test, AMM TASK 38-33-00-710-801.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) Replace the Water Tank Continuous Level Sensor, do these tasks:
 - Waste Tank Continuous Level Sensor Removal, AMM TASK 38-33-02-000-801
 - Waste Tank Continuous Level Sensor Installation, AMM TASK 38-33-02-400-801
 - 1) Do the Repair Confirmation at the end of this task...
 - (c) Replace the LCM, do these tasks:
 - Logic Control Module Removal, AMM TASK 38-33-03-000-801
 - Logic Control Module Installation, AMM TASK 38-33-03-400-801
 - 1) Do the Repair Confirmation at the end of this task.
- (5) Do these steps to check the electrical harness:
 - (a) Disconnect the J3 connector from the T506 continuous level sensor.
 - (b) Disconnect the D13432/J3 connector from the M1722 logic control unit.
 - (c) Do a check of the electrical wire harness, between the T506 continuous level sensor connector J3 and the logic control unit connector D13432/J3. (WDM 38-32-12).

D1	D13432															J3				
В																				В
С																				С
D																				D
Ε																				Е
F																				F
G																				G
L																				L
M																				M
Р																				Р
R																				R
S																				S
U																				U
V																				V
Χ																				Χ
Ζ																				Z
Α-																				A -
В-	-																			В-
C -	-																			C -

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Connect the J3 connector to the T506 sensor.

SHZ ALL

38-30 TASK 808



- 3) Connect the D13432/J3 connector to the logic control unit.
- 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - (a) If the sensor J3 light does not show a fault indication after the LCM BITE Test, then you corrected the fault.
 - (b) If the sensor J3 light does show a fault indication after the LCM BITE Test, then continue the Fault Isolation at the subsequent step.

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

809. Waste Tank - Tank Full Indication - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) TANK FULL
- (2) (SDS SUBJECT 38-32-00)
- (3) (SDS SUBJECT 38-33-00)

B. Possible Causes

- (1) Blocked Tank Drain Outlet
- (2) Failed Continuous Level Sensor
- (3) Failed LCM

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (Figure 201)
- (3) (SSM 38-32-13)

E. Initial Evaluation

- (1) Do a check of the waste indicator at the attendant's panel.
 - (a) If the waste indicator reads full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (b) Do a check of the waste system at the attendant's panel.
 - If the waste indicator reads empty, and the CLEAN/CHECK SENSOR and LAV INOP lights are off, then you corrected the fault.

SHZ ALL

38-30 TASKS 808-809



(c) If the CLEAN/CHECK SENSOR or LAV INOP light is on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) If the CLEAN/CHECK SENSOR or LAV INOP light is on, do this task: LCM BITE Procedure, 38-30 TASK 801.
 - (a) If the TANK FULL light flashes after you do the LCM BITE Test, replace the continuous level sensor. These are the tasks:
 - Waste Tank Continuous Level Sensor Removal, AMM TASK 38-33-02-000-801
 - Waste Tank Continuous Level Sensor Installation, AMM TASK 38-33-02-400-801
 - 1) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - If the TANK FULL light does not flash after the LCM BITE Test, then you corrected the fault.
 - (b) If the TANK FULL light is on and does not flash, then continue.
- (2) If the TANK FULL light is on and does not flash after you do the LCM BITE Test, do a check to make sure the waste tank is empty.
 - (a) Do this task: Waste Tank Drain Line Blockage Removal, AMM TASK 38-32-00-160-803 or Waste Tank Drain Line Blockage Removal, AMM TASK 38-32-00-160-805.
 - (b) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801.
 - If the TANK FULL does not show a fault indication after the LCM BITE Test, then you corrected the fault.
- (3) If the TANK FULL light is on and does not flash after you do the LCM BITE Test, replace the LCM. These are the tasks:
 - Logic Control Module Removal, AMM TASK 38-33-03-000-801
 - Logic Control Module Installation, AMM TASK 38-33-03-400-801
 - (a) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - If the TANK FULL does not show a fault indication after the LCM BITE Test, then you corrected the fault.

——— FND OF TASK ———				
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810. Waste System Display - Shows Fault Indication - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-33-00)

B. Possible Causes

- (1) The waste system full
- (2) Point level sensors on the waste tank are dirty
- (3) A point level sensor is not serviceable
- (4) A continuous level sensor is not serviceable
- (5) A flush valve does not close completely

38-30 TASKS 809-810

SHZ ALL

· EFFECTIVITY ·



C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	<u>Name</u>
D	19	C01423	VACUUM WASTE

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (Figure 201)
- (3) (SSM 38-32-13)

E. Initial Evaluation

- (1) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
- (2) If the waste quantity indicator is continuously erratic, do these checks:

NOTE: A flush valve that does not close correctly will effect the waste system air pressure.

The waste system air pressure is sensed by the continuous level sensor J3. The continuous level sensor provides input to the waste quantity indicator. You can identify leaky flush valve by an air noise in the toilet.

- (a) Do this quick check to find a leaking flush valve:
 - 1) Pour approximately one gallon (4 liters) of water in each toilet bowl.
 - 2) If the water drains out of the toilet bowl before you flush the toilet, you have a flush valve that is leaking.
 - a) Replace the flush valve. These are the tasks:
 - Flush Valve Removal, AMM TASK 38-32-01-000-808-001 or Flush Valve Removal, AMM TASK 38-32-01-000-840-002 or Flush Valve Removal, AMM TASK 38-32-01-000-845-003
 - Flush Valve Installation, AMM TASK 38-32-01-400-840-002 or Flush Valve Installation, AMM TASK 38-32-01-400-808-001 or Flush Valve Installation, AMM TASK 38-32-01-400-845-003
- (b) If the flush valve is not leaking, then continue.
- (3) Do this task:

Waste Tank - Sensor J3 - Fault Isolation, 38-30 TASK 808 or

LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.

- (a) If the waste quantity indicator is operating correctly, the fault was intermittent or you have corrected the fault.
- (b) If the waste quantity indicator is not operating correctly, then do the Fault Isolation Procedure below.
- (c) If the CLEAN/CHECK SENSOR or LAV INOP lights are not on, then you corrected the fault.
- (d) If the CLEAN/CHECK SENSOR or LAV INOP lights are on, then do the Fault Isolation Procedure below.

38-30 TASK 810

SHZ ALL



F. Fault Isolation Procedure

- (1) Do this task: LCM BITE Procedure, 38-30 TASK 801.
 - (a) If the LCM BITE Test shows a Sensor J1 (J2) fault, do this task: Waste Tank Sensor J1/J2 Fault Isolation, 38-30 TASK 803.
 - 1) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - a) If the CLEAN/CHECK SENSOR and LAV INOP lights are off, then you corrected the fault.
 - (b) If the CLEAN/CHECK SENSOR or LAV INOP lights are on, then continue.
- (2) If the LCM BITE Test show a Sensor J3 fault, do this task: Waste Tank Sensor J3 Fault Isolation, 38-30 TASK 808.
 - (a) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - If the CLEAN/CHECK SENSOR and LAV INOP lights are off, then you corrected the fault.
 - (b) If the CLEAN/CHECK SENSOR or LAV INOP lights are on, then continue.
- (3) If the LCM BITE Test show a TANK FULL fault, do this task: Waste Tank Tank Full Indication Fault Isolation, 38-30 TASK 809.
 - (a) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - If the CLEAN/CHECK SENSOR and LAV INOP lights are off, then you corrected the fault.
 - (b) If the CLEAN/CHECK SENSOR or LAV INOP lights are on, then continue.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

- (4) If the LAV INOP light is on, replace the waste quantity indicator. these are the tasks:
 - Attendant's Panel Waste Quantity Indicator Removal, AMM TASK 38-33-04-000-801
 - Attendant's Panel Waste Quantity Indicator Installation, AMM TASK 38-33-04-400-801
 - (a) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - 1) If the LAV INOP light is off, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

- (5) If the LAV INOP light is on, replace the attendant's panel (Attendant's Panel with LCD Touch Panel Removal, AMM TASK 25-25-11-000-802, Attendant's Panel with LCD Screen Installation, AMM TASK 25-25-11-400-802).
 - (a) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - 1) If the LAV INOP light is off, then you corrected the fault.

SHZ ALL

SHZ ALL

- (6) If the CLEAN/CHECK SENSOR is on, do this task: Waste Tank Point Level Sensor Cleaning, AMM TASK 38-33-01-100-801.
 - (a) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.



- 1) If the CLEAN/CHECK SENSOR light is off, then you corrected the fault.
- (7) If the waste tank indicator continues to show FULL, do this task: Waste Tank Continuous Level Sensor Cleaning, AMM TASK 38-33-02-100-801

and then, do this task: Waste Tank Cleaning, AMM TASK 38-32-07-100-801.

- (a) Do a check of the attendant's panel again, do this task: LAVS INOP BITE Test at the Attendant's Panel. 38-30 TASK 802.
 - 1) If the waste tank indicator shows empty, then you corrected the fault.

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

811. Toilet Flush System - All Toilets Do Not Flush - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-32-00)
- B. Possible Causes
 - (1) Waste tank full
 - (2) Clogged vacuum lines between toilet and the waste tank
 - (3) Inoperative vacuum blower relay
 - (4) Inoperative vacuum blower
 - (5) Failed LCM
- C. Circuit Breakers



BE CAREFUL WHEN YOU ACCESS THE (ROW F) CIRCUIT BREAKERS ON THE INSIDE OF THE P91 AND P92 PANELS. IF POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER BEFORE YOU ACCESS THE INSIDE OF THE P91 AND P92 PANELS. THE P91 AND P92 PANELS CONTAIN HIGH VOLTAGES AND CURRENTS THAT MAY CAUSE INJURIES TO PERSONS.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Initial Evaluation

- (1) Do a check of the waste indicator at the attendant's panel.
 - (a) If the waste indicator reads full, do this task:

38-30 TASKS 810-811

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Waste Tank Servicing, AMM TASK 12-17-01-610-801.

- (b) Push the flush switch for each toilet that has a fault.
- (c) If the toilet operation is satisfactory, you corrected the fault.
- (d) If the toilet operation is not satisfactory, then continue.
- (2) Push the flush switch for each toilet on the airplane.
 - (a) If all the toilets operate satisfactorily, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Push the flush switch for each toilet on the airplane. If a different toilet operates satisfactorily, there is defect at the individual toilet(s).
 - (a) Do this task for the toilet(s) with a defect: Single Toilet Inoperative Fault Isolation, 38-30 TASK 820.
 - (b) If all the toilets do not operate satisfactorily, then continue.
- (2) Do this task: LCM BITE Procedure, 38-30 TASK 801. or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - (a) If the LCM BITE test does not show a fault, then continue.
- (3) Push the flush switch for each toilet on the airplane, and make sure the vacuum blower operates.
 - (a) If the vacuum pressure at the toilets is not satisfactory, do a check of the waste tank water separators (38-30 TASK SUPPORT Figure 301). If necessary, clean the water separators. These are the tasks:

AMM TASK 38-32-02-000-801

AMM TASK 38-32-02-100-801

AMM TASK 38-32-02-400-801

- 1) Push the flush switch on all the toilets.
- 2) If the operation of the toilets is satisfactory, then you corrected the fault.
- 3) It the operation of the toilets is not satisfactory, continue the procedure.
- (b) If the vacuum blower at the toilets is not satisfactory, do a check of the vacuum blower relay R581.
 - 1) Make sure the vacuum blower relay R581 operates properly.
 - 2) If the vacuum blower relay R581 is inoperative, replace the relay.
 - 3) Push the flush switch on all the toilets.
 - 4) If the operation of the toilets is satisfactory, then you corrected the fault.
 - 5) It the operation of the toilets is not satisfactory, continue the procedure.
- (c) If the vacuum blower does not operate at all the toilets, do this task:

Vacuum Blower Inoperative - Fault Isolation, 38-30 TASK 821.

- (d) If the vacuum blower does not operate at the individual toilet(s), and does operate at a different toilet or toilets, do this task:
 - Single Toilet Inoperative Fault Isolation, 38-30 TASK 820.
- (4) Make sure the waste system does not have a blockage.
 - (a) Do this task: Toilet Operational Test, AMM TASK 38-32-00-700-802.

38-30 TASK 811

EFFECTIVITY

SHZ ALL



- If you find a waste system blockage, do this task: Waste Drain Line Blockage Removal, AMM TASK 38-32-00-160-804.
 - a) Push the flush switch on the toilet.
 - b) If the operation of the toilet is satisfactory, then you corrected the fault.

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

812. Waste Tank does not Precharge - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-32-00)

B. Possible Causes

- (1) Frozen lines
- (2) Clogged rinse line filter

SHZ 002, 009-699, 706, 721-799, 801-825, 860-863, 865, 866, 871-874, 876-880, 901-999

(3) Blockage removal valve in the blockage removal position

SHZ ALL

(4) Clogged rinse nozzle

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	18	C01463	WASTE/WTR LINE HEATERS
D	19	C01423	VACUUM WASTE

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Initial Evaluation

- (1) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (a) Read the waste quantity on the attendant's panel.
 - 1) If the waste quantity is between empty and the second bar, there was an intermittent fault.

<u>NOTE</u>: The line could have been frozen and become warm. A check of the heater for the rinse line is recommended to prevent continued problems.

(b) If the waste quantity is empty, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the rinse line for the waste tank to make sure it is not frozen:
 - (a) Open this access panel:

<u>Number</u>	Name/Location
822	Aft Cargo Door

EFFECTIVITY SHZ ALL

38-30 TASKS 811-812



- (b) To get access to the rinse fitting heater, do this task: Waste Tank Enclosure Panel -Removal, AMM TASK 25-52-20-000-801.
- (c) Feel the rinse fitting heater.
- (d) If the rinse line for the waste tank is frozen, replace the rinse fitting heater. These are the
 - Waste Tank Rinse Fitting Heater Removal, AMM TASK 30-71-04-000-801
 - Waste Tank Rinse Fitting Heater Installation, AMM TASK 30-71-04-400-801
 - 1) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - a) Make sure the water flows freely to the waste tank.
 - 2) If the water flows freely, do these steps to complete the task:
 - Do this task: Waste Tank Enclosure Panel Installation, AMM TASK 25-52-20-400-801.
 - b) Close this access panel:

Number Name/Location
822 Aft Cargo Door

- (e) If the rinse line is not frozen, then continue.
- (2) Make sure the rinse filter for the waste tank is not clogged.
 - (a) If the rinse filter is clogged, do one of these steps:
 - To clean the rinse filter, do this task: Waste Tank Rinse Filter Element Cleaning, AMM TASK 38-32-11-100-801.
 - 2) Replace the rinse filter. These are the tasks:
 - Waste Tank Rinse Filter Removal, AMM TASK 38-32-11-000-801
 - Waste Tank Rinse Filter Installation, AMM TASK 38-32-11-400-801
 - To complete this task, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - a) Make sure the water flows freely to the waste tank.
 - b) If the water flows freely to the waste tank, then you corrected the fault.
 - (b) If the rinse filter is not clogged, then continue.
- (3) Make sure the rinse nozzles for the waste tank is not clogged.
 - (a) Do this task: Waste Tank Rinse Nozzle Removal, AMM TASK 38-32-10-000-801.
 - (b) Examine the rinse nozzles to see if it is clogged.
 - (c) If the rinse nozzle is clogged, do this task: Waste Tank Rinse Nozzle Cleaning, AMM TASK 38-32-10-100-801.
 - To complete this task, do this task: Waste Tank Rinse Nozzle Installation, AMM TASK 38-32-10-400-801.
 - Do this task: Waste Tank Enclosure Panel Installation, AMM TASK 25-52-20-400-801.
 - b) Make sure the water flows freely to the waste tank.
 - c) If the water flows freely to the waste tank, then you corrected the fault.
 - (d) If the water does not flow freely to the waste tank, then continue.
 - 1) Replace the clogged rinse line.

38-30 TASK 812

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- To complete this task, do this task: Waste Tank Enclosure Panel Installation, AMM TASK 25-52-20-400-801.
- b) Make sure the water flows freely to the waste tank.
- c) If the water flows freely to the waste tank, then you corrected the fault.

——— END OF TASK ———

813. Waste Tank - Does Not Drain - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-32-00)

B. Possible Causes

- (1) Frozen lines
- (2) Clogged drain port at the waste tank
- (3) Broken waste drain ball valve control rod
- (4) Inoperative waste drain ball valve
- (5) Inoperative waste drain valve assembly at the service panel

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE
Ε	5	C00233	HEATERS DRAIN

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Initial Evaluation

- (1) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (a) Read the waste quantity on the attendant's panel.
 - 1) If the waste quantity is empty, there was an intermittent fault.

NOTE: The line could have been frozen and become warm. A check of the heater blanket for the ball valve is recommended to prevent continued problems.

(b) If the waste quantity is not empty, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the waste drain line for the waste tank to make sure it is not frozen:
 - (a) Open this access panel:

<u>Number</u>	Name/Location
822	Aft Cargo Door

- (b) To access the waste drain, do this task: Waste Tank Enclosure Panel Removal, AMM TASK 25-52-20-000-801.
- (c) Feel the waste drain line heater on the ball valve.

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38-30 TASKS 812-813



- (d) If the waste drain line is frozen, replace the waste drain line heater. These are the tasks:
 - Waste Drain Line Heater Removal, AMM TASK 30-71-03-000-801
 - Waste Drain Line Heater Installation, AMM TASK 30-71-03-400-801
 - 1) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - 2) If the waste tank drains, then you corrected the fault.
- (e) If the waste drain line is not frozen, then continue.
- (2) Examine the waste drain ball valve to make sure it is open.
 - (a) If the waste drain ball valve is not open, make sure the control rod is connected to the ball valve.
 - 1) If the control rod for the waste drain ball valve is not connected, then replace the control rod. These are the tasks:
 - Linkage Assembly for the Waste Drain Ball Valve Removal, AMM TASK 38-32-03-000-802
 - Linkage Assembly for the Waste Drain Ball Valve Installation, AMM TASK 38-32-03-400-802
 - a) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - b) If the waste tank drains, then you corrected the fault.
 - 2) If the control rod for the waste drain ball valve is connected and the ball valve is not open, the replace the ball valve. These are the tasks:
 - Waste Drain Ball Valve Removal, AMM TASK 38-32-03-000-801
 - Waste Drain Ball Valve Installation, AMM TASK 38-32-03-400-801
 - a) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - b) If the waste tank drains, then you corrected the fault.
 - (b) If the waste drain ball valve is open, then continue.
- (3) Do this task: Waste Tank Drain Line Blockage Removal, AMM TASK 38-32-00-160-803 or Waste Tank Drain Line Blockage Removal, AMM TASK 38-32-00-160-805.
 - (a) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (b) If the waste tank drains, then you corrected the fault.
 - (c) If the waste tank does not drain, manually remove the contents of the waste tank.

——— END OF TASK ———

814. Toilet Bowl - Overflows - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-32-00)
- B. Possible Causes
 - (1) These are the probable causes:
 - (a) Toilet bowl outlet is blocked.
 - (b) Inoperative rinse valve

38-30 TASKS 813-814

SHZ ALL



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

(c) Inoperative flush control assembly

SHZ 888-899

(d) Inoperative Integrated System Controller (ISC).

SHZ ALL

- (e) Inoperative flush valve
- (f) Waste tank water separator is blocked or saturated
- (g) Clogged vacuum lines between toilet and the waste tank

C. Circuit Breakers



BE CAREFUL WHEN YOU ACCESS THE (ROW F) CIRCUIT BREAKERS ON THE INSIDE OF THE P91 AND P92 PANELS. IF POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER BEFORE YOU ACCESS THE INSIDE OF THE P91 AND P92 PANELS. THE P91 AND P92 PANELS CONTAIN HIGH VOLTAGES AND CURRENTS THAT MAY CAUSE INJURIES TO PERSONS.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Initial Evaluation

- (1) Push the flush switch for the toilet that has a problem.
 - (a) If the toilet operation is not satisfactory, then push the flush switch of another toilet.
 - (b) If the other toilet operation is satisfactory; open, then after approximately 5 seconds, close the applicable circuit breaker (WDM 38-32-12):
 - 1) This is the circuit breaker:

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

- (c) If the other toilet operation is not satisfactory, then make sure the waste tank is not full.
 - If the waste tank is full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.

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38-30 TASK 814

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- 2) If the waste tank is not full, then make sure the waste system does not have a blockage.
 - a) Do this task: Vacuum Line Blockage Inspection, AMM TASK 38-32-00-280-801.
 - b) If you find a waste system blockage, do this task: Vacuum Waste Line Blockage Removal, AMM TASK 38-32-00-160-802.
 - c) Push the flush switch on the first toilet.
 - d) If the operation of the first toilet is satisfactory, then you corrected the fault.
- (d) Push the flush switch on the first toilet.
- (e) If the toilet does not overflow, then there was an intermittent fault.
- (f) If the system operation is satisfactory but does not include the first toilet, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Push the flush switch for each toilet on the airplane, and make sure the vacuum pressure is satisfactory.
 - (a) If the vacuum pressure at the toilets is not satisfactory, do a check of the waste tank water separators (38-30 TASK SUPPORT Figure 301). If necessary, clean the water separators. These are the tasks:

AMM TASK 38-32-02-000-801

AMM TASK 38-32-02-100-801

AMM TASK 38-32-02-400-801

- 1) Push the flush switch on all the toilets.
- 2) If the operation of the toilets is satisfactory, then you corrected the fault.
- 3) It the operation of the toilets is not satisfactory, continue the procedure.
- (2) Do this check for a blockage of the toilet:
 - (a) To remove the toilet shroud, do this task: Toilet Shroud Removal, AMM TASK 38-32-01-000-834-002 or Toilet Shroud Removal, AMM TASK 38-32-01-000-801-001 or Toilet Shroud Removal, AMM TASK 38-32-01-000-843-003.
 - (b) Push the flush switch for the toilet.
 - (c) Make sure the flush valve opens for approximately 4 seconds and then closes.

SHZ 706, 721-799, 865, 866, 871-874

1) To open the flush valve and try to remove a blockage, do this task: Toilet Flush Valve - Open for Maintenance, AMM TASK 38-32-00-980-801.

SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 876-887, 901-999

2) Manually open the flush valve and try to remove a blockage.

SHZ 888-899

3) To open the flush valve and try to remove a blockage, do this task: Toilet Flush Valve Assembly - Blocked - Fault Isolation, 38-30 TASK 830.

SHZ ALL

 If the toilet has a blockage, do this task: Toilet Blockage Removal, AMM TASK 38-32-00-160-801.

SHZ ALL



- 5) Push the flush switch for the toilet.
- 6) If the operation of the toilet is satisfactory, then you corrected the fault.
- If the toilet bowl continues to overflow, then continue.
- (3) Do this check for a flow of rinse water.
 - (a) If there is a continuous flow of rinse water, open and then after approximately 5 seconds close the applicable circuit breaker for the lavatory:

This is the circuit breaker:

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

- 1) If the flow of rinse water stops, then do these steps:
 - a) Push the flush switch for the toilet.
 - b) Make sure the flow of rinse water stops after approximately 1.7 seconds.
 - If the flow of rinse water fully stops after approximately 1.7 seconds, then there
 was an intermittent fault.
- If the flow of rinse water does not stop, then continue.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- (4) Do a check of the flush control assembly.
 - (a) Disconnect the rinse valve connector from the flush control assembly.
 - (b) Do a check for 28 volts dc between pin B and pin C of the flush control assembly.
 - 1) If there is 28 volts dc between pin B and pin C of the flush control assembly, replace the flush control assembly. These are the tasks:
 - Flush Control Assembly Removal, AMM TASK 38-32-01-000-806-001 or Flush Control Assembly Removal, AMM TASK 38-32-01-000-839-002
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001 or Flush Control Assembly Installation, AMM TASK 38-32-01-400-839-002
 - a) Push the flush switch for the toilet.
 - b) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.
 - (c) If the there is not 28 volts dc between pin B and pin C of the flush control assembly, then continue.
- (5) Do a check of the rinse valve.
 - (a) Disconnect the rinse valve connector from the flush control assembly.
 - 1) If there is flow of water, replace the rinse valve. These are the tasks:
 - Rinse Valve Removal, AMM TASK 38-32-01-000-812-001 or Rinse Valve Removal, AMM TASK 38-32-01-000-842-002
 - Rinse Valve Installation, AMM TASK 38-32-01-400-842-002 or Rinse Valve Installation, AMM TASK 38-32-01-400-812-001
 - 2) Push the flush switch for the toilet.
 - If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.

SHZ ALL



SHZ 888-899

(6) Do a check of the Integrated System Controller (ISC).

NOTE: The ISC controls the flush cycle of the vacuum toilet assembly.

- (a) Make sure that the ISC cables and connectors are correctly connected. The ISC is connected to the potentiometer, the flush valve assembly, the rinse valve assembly and to the lavatory vacuum water/waste system.
- (b) Make sure that the ISC cables and connectors are not loose and no sign of corrosion.
 - If one or more ISC cables and connectors are loose, tighten the cables and connectors.
 - If one or more ISC connectors has a sign of corrosion, repair or replace the connectors.
- (c) Push the flush switch for the toilet.
- (d) If the toilet flush cycle operates satisfactorily, you corrected the fault.
- (e) If the toilet bowl still overflows, then continue.
- (7) Do a check of the rinse valve assembly.
 - (a) Make sure that the ISC connector is connected to the rinse valve assembly.
 - (b) Push the flush switch for the toilet.
 - (c) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.
 - (d) If the rinse water continues to flow to the toilet bowl, replace the vacuum toilet assembly. Do these tasks:
 - Vacuum Toilet Assembly Removal, AMM TASK 38-32-01-000-844-003
 - Vacuum Toilet Assembly Installation, AMM TASK 38-32-01-400-844-003
 - (e) Push the flush switch for the toilet again.
 - (f) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.

SHZ	AL	L
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----- END OF TASK -----

815. Toilet Bowl - Plugged - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-32-00)
- B. Possible Causes
 - (1) These are the probable causes:
 - (a) Plugged toilet bowl outlet
 - (b) Inoperative flush valve
 - (c) Blocked or saturated waste tank water separator
 - (d) Clogged vacuum lines between toilet and the waste tank

38-30 TASKS 814-815

SHZ ALL

EFFECTIVITY

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C. Circuit Breakers



BE CAREFUL WHEN YOU ACCESS THE (ROW F) CIRCUIT BREAKERS ON THE INSIDE OF THE P91 AND P92 PANELS. IF POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER BEFORE YOU ACCESS THE INSIDE OF THE P91 AND P92 PANELS. THE P91 AND P92 PANELS CONTAIN HIGH VOLTAGES AND CURRENTS THAT MAY CAUSE INJURIES TO PERSONS.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Initial Evaluation

SHZ ALL

- (1) Push the flush switch for the toilet that has a problem.
 - (a) If the toilet operation is not satisfactory, push the flush switch on a toilet that attaches to the same waste tank.
 - (b) If the other toilet operation is satisfactory, open then after approximately 5 seconds close the applicable circuit breaker for the first toilet (WDM 38-32-12):
 - 1) This is the circuit breaker:

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

- (c) If the other toilet operation is not satisfactory, make sure the waste tank is not full.
 - If the waste tank is full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - If the waste tank is not full, make sure the waste system does not have a blockage.
 - Do this task: Vacuum Line Blockage Inspection, AMM TASK 38-32-00-280-801.
 - b) If you find a waste system blockage, do this task: Vacuum Waste Line Blockage Removal, AMM TASK 38-32-00-160-802.
 - c) Push the flush switch on the first toilet.
 - d) If the operation of the first toilet is satisfactory, then you corrected the fault.
- (d) Push the flush switch on the first toilet.
- (e) If the toilet operation is satisfactory, then there was an intermittent fault.



(f) If the system operation is satisfactory but does not include the first toilet, then continue.

F. Fault Isolation Procedure

- (1) Push the flush switch for each toilet on the airplane, and make sure the vacuum pressure is satisfactory.
 - (a) If the vacuum pressure at the toilets is not satisfactory, do a check of the waste tank water separators (38-30 TASK SUPPORT Figure 301). If necessary, clean the water separators. These are the tasks:

AMM TASK 38-32-02-000-801

AMM TASK 38-32-02-100-801

AMM TASK 38-32-02-400-801

- 1) Push the flush switch on all the toilets.
- 2) If the operation of the toilets is satisfactory, then you corrected the fault.
- 3) It the operation of the toilets is not satisfactory, continue the procedure.
- (2) Do this check for a blockage of the toilet.
 - (a) To remove the toilet shroud, do this task: Toilet Shroud Removal, AMM TASK 38-32-01-000-834-002 or Toilet Shroud Removal, AMM TASK 38-32-01-000-801-001 or Toilet Shroud Removal, AMM TASK 38-32-01-000-843-003.
 - (b) Push the flush switch for the toilet.
 - (c) Make sure the flush valve opens for approximately 4 seconds and then closes.

SHZ 706, 721-799, 865, 866, 871-874

1) To open the flush valve and try to remove a blockage, do this task: Toilet Flush Valve - Open for Maintenance, AMM TASK 38-32-00-980-801.

SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 876-887, 901-999

2) Manually open the flush valve and try to remove a blockage.

SHZ 888-899

3) To open the flush valve and try to remove a blockage, do this task:Toilet Flush Valve Assembly - Blocked - Fault Isolation, 38-30 TASK 830.

SHZ ALL

- 4) If the toilet has a blockage, do this task: Toilet Blockage Removal, AMM TASK 38-32-00-160-801.
- 5) Push the flush switch for the toilet.
- 6) If the operation of the toilet is satisfactory, then you corrected the fault.
- (d) If the flush valve does not open, then continue.
- (3) Go to the Observed Faults List at the front of the FIM.
 - (a) Find the fault description for the problems with the toilet flush system that does not flush.
 - (b) Do the specified task for the fault description.

	END	OF TA	ASK	
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38-30 TASK 815

EFFECTIVITY SHZ ALL

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816. Toilet Flush System - Does Not Turn Off - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-32-00)
- B. Possible Causes
 - (1) Inoperative flush valve

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

(2) Inoperative flush control assembly

SHZ 888-899

(3) Inoperative Integrated System Controller (ISC)

SHZ ALL

C. Circuit Breakers



BE CAREFUL WHEN YOU ACCESS THE (ROW F) CIRCUIT BREAKERS ON THE INSIDE OF THE P91 AND P92 PANELS. IF POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER BEFORE YOU ACCESS THE INSIDE OF THE P91 AND P92 PANELS. THE P91 AND P92 PANELS CONTAIN HIGH VOLTAGES AND CURRENTS THAT MAY CAUSE INJURIES TO PERSONS.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Fault Isolation Procedure

- (1) Do this check for a flow of rinse water.
 - (a) If there is a continuous flow of rinse water, open and then after approximately 5 seconds close these circuit breakers for the applicable lavatory:
 - 1) This is the circuit breaker:

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01388	VACUUM WASTE CONT

(b) If the flow of rinse water stops, then do these steps:

SHZ ALL



- 1) Push the flush switch for the toilet.
- 2) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
- 3) If the flow of rinse water stops after approximately 1.7 seconds, then there was an intermittent fault.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- (c) If the flow of rinse water does not stop, then do these steps:
 - 1) Replace the rinse valve. These are the tasks:
 - Rinse Valve Removal, AMM TASK 38-32-01-000-812-001 or Rinse Valve Removal, AMM TASK 38-32-01-000-842-002
 - Rinse Valve Installation, AMM TASK 38-32-01-400-842-002 or Rinse Valve Installation, AMM TASK 38-32-01-400-812-001
 - 2) Push the flush switch for the toilet.
 - 3) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.
- (d) If the flow of rinse water does not stop, then do these steps:
 - 1) Replace the flush control assembly. These are the tasks:
 - Flush Control Assembly Removal, AMM TASK 38-32-01-000-806-001 or Flush Control Assembly Removal, AMM TASK 38-32-01-000-839-002
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001 or Flush Control Assembly Installation, AMM TASK 38-32-01-400-839-002
 - 2) Push the flush switch for the toilet.
 - 3) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.

SHZ 888-899

- (e) If the flow of rinse water does not stop, do these steps:
 - Do a check of the Integrated System Controller (ISC):
 - a) Make sure that the ISC cables and connectors are correctly connected. The ISC is connected to the potentiometer, the flush valve, the rinse valve and to the lavatory vacuum water/waste system.
 - Make sure that the ISC cables and connectors are not loose or no sign of corrosion.
 - <1> If one or more ISC cables and connectors are loose, tighten the cables and connectors.
 - <2> If one or more ISC connectors has a sign of corrosion, repair or replace the connectors.
 - c) Push the flush switch for the toilet.
 - d) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - e) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.

SHZ ALL



SHZ 888-899 (Continued)

- (f) If the flow of rinse water does not stop, do these steps:
 - Do a check of the rinse valve assembly.
 - a) Make sure that the ISC connector is connected to the rinse valve assembly.
 - b) Push the flush switch for the toilet.
 - c) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - d) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.
 - e) If the flow of rinse water continues after 1.7 seconds, replace the vacuum toilet assembly. Do these tasks:
 - Vacuum Toilet Assembly Removal, AMM TASK 38-32-01-000-844-003
 - Vacuum Toilet Assembly Installation, AMM TASK 38-32-01-400-844-003
 - f) Push the flush switch for the toilet.
 - g) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - h) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.

SHZ ALL

- (2) Do this check for an unusual air noise at the toilet.
 - (a) If there is an unusual air noise at the toilet, then do these steps:
 - 1) Do a check for a blockage in the flush valve.

SHZ 706, 721-799, 865, 866, 871-874

a) To open the flush valve and try to remove a blockage, do this task: Toilet Flush Valve - Open for Maintenance, AMM TASK 38-32-00-980-801.

SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 876-887, 901-999

To open the flush valve and try to remove a blockage, manually open the flush valve.

SHZ 888-899

c) To open the flush valve and try to remove a blockage, do this task: Toilet Flush Valve Assembly - Blocked - Fault Isolation, 38-30 TASK 830.

SHZ ALL

EFFECTIVITY

SHZ ALL

- d) If there is a blockage in the toilet, do this task: Toilet Blockage Removal, AMM TASK 38-32-00-160-801.
- e) Push the flush switch for the toilet.
- f) Make sure that the air noise starts after approximately 2 seconds and then stops after approximately 4 more seconds.
- g) If there is no unusual air noise after approximately 6 seconds, then you corrected the fault.
- 2) If there is no blockage in the flush valve, then continue.



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- (b) Do a check to see if the flush valve is open.
 - 1) If the flush valve is open, replace the flush valve. These are the tasks:
 - Flush Valve Removal, AMM TASK 38-32-01-000-808-001 or Flush Valve Removal, AMM TASK 38-32-01-000-840-002
 - Flush Valve Installation, AMM TASK 38-32-01-400-840-002 or Flush Valve Installation, AMM TASK 38-32-01-400-808-001
 - a) Push the flush switch for the toilet.
 - b) Make sure that the air noise starts after approximately 2 seconds and stops after approximately 4 more seconds.
 - If there is no unusual air noise after approximately 6 seconds, then you corrected the fault.
 - 2) If the unusual air noise continues after approximately 6 seconds, then do these steps:
 - a) Replace the flush control assembly. These are the tasks:
 - Flush Control Assembly Removal, AMM TASK 38-32-01-000-806-001 or Flush Control Assembly Removal, AMM TASK 38-32-01-000-839-002
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001 or Flush Control Assembly Installation, AMM TASK 38-32-01-400-839-002
 - b) Push the flush switch for the toilet.
 - c) Make sure that the air noise starts after approximately 2 seconds and stops after approximately 4 more seconds.
 - d) If there is no unusual air noise after approximately 6 seconds, then you corrected the fault.

SHZ 888-899

(c) Do a check of the Integrated System Controller (ISC).

NOTE: The ISC controls the flush cycle of the vacuum toilet assembly.

- Make sure that the ISC cables and connectors are correctly connected. The ISC is connected to the potentiometer, the flush valve assembly, the rinse valve assembly and to the lavatory vacuum waste/water system.
- Make sure that the ISC cables and connectors are not loose and no sign of corrosion.
 - If one or more ISC cables and connectors are loose, tighten the cables and connectors.
 - If one or more ISC connectors has a sign of corrosion, repair or replace the connectors.
- 3) Push the flush switch for the toilet.
- 4) Make sure that the air noise starts after approximately 2 seconds and stops after approximately 4 more seconds.
- 5) If there is no unusual air noise after approximately 6 seconds, then you corrected the fault.
- If the unusual air noise continues after approximately 6 seconds, then continue.

SHZ ALL 38-30 TASK 816



SHZ 888-899 (Continued)

- (d) Do a check of the rinse valve assembly.
 - 1) Make sure that the ISC connector is connected to the rinse valve assembly.
 - 2) Push the flush switch for the toilet.
 - 3) Make sure that the air noise starts after approximately 2 seconds and stops after approximately 4 more seconds.
 - 4) If there is no unusual air noise after approximately 6 seconds, then you corrected the fault.
 - 5) If the unusual air noise continues after approximately 6 seconds, do these tasks:
 - Vacuum Toilet Assembly Removal, AMM TASK 38-32-01-000-844-003
 - Vacuum Toilet Assembly Installation, AMM TASK 38-32-01-400-844-003
 - 6) Push the flush switch for the toilet again.
 - 7) Make sure that the air noise starts after approximately 2 seconds and stops after approximately 4 more seconds.
 - 8) If there is no unusual air noise after approximately 6 seconds, then you corrected the fault.

SHZ ALL



817. Toilet Flush System - Plugged/Blocked - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-32-00)
- B. Possible Causes
 - (1) These are the probable:
 - (a) Clogged vacuum lines between toilet and the waste tank
 - (b) Saturated or blocked waste tank water separator.

C. Circuit Breakers



BE CAREFUL WHEN YOU ACCESS THE (ROW F) CIRCUIT BREAKERS ON THE INSIDE OF THE P91 AND P92 PANELS. IF POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER BEFORE YOU ACCESS THE INSIDE OF THE P91 AND P92 PANELS. THE P91 AND P92 PANELS CONTAIN HIGH VOLTAGES AND CURRENTS THAT MAY CAUSE INJURIES TO PERSONS.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

EFFECTIVITY SHZ ALL

38-30 TASKS 816-817

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D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

E. Initial Evaluation

- (1) Push the flush switch for the nearest toilet to the waste tank in the system that has a problem.
 - (a) If the toilet operation is not satisfactory, push the flush switch on another toilet.
 - (b) If the other toilet operation is not satisfactory, make sure the waste tank is not full.
 - If the waste tank is full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - 2) Push the flush switch on the first toilet.
 - 3) If the toilet operation is satisfactory, then there was an intermittent fault.
 - (c) If the waste tank is not full, then continue.

F. Fault Isolation Procedure

(1) Push the flush switch for each toilet on the airplane, and make sure the vacuum pressure is satisfactory.

Push the flush switch for each toilet on the airplane, and make sure the vacuum pressure is satisfactory. Do this task: Waste System - Vacuum Pressure Test, AMM TASK 38-32-00-780-801.

(a) If the vacuum pressure at the toilets is not satisfactory, do a check of the waste tank water separators (38-30 TASK SUPPORT Figure 301). If necessary, clean the water separators. These are the tasks:

AMM TASK 38-32-02-000-801

AMM TASK 38-32-02-100-801

AMM TASK 38-32-02-400-801

- 1) Push the flush switch on all the toilets.
- 2) If the operation of the toilets is satisfactory, then you corrected the fault.
- 3) It the operation of the toilets is not satisfactory, continue the procedure.
- (2) Do this check for a blockage of the toilet waste system:
 - (a) Do this task: Vacuum Line Blockage Inspection, AMM TASK 38-32-00-280-801.
 - (b) If you find a waste system blockage, do this task: Vacuum Waste Line Blockage Removal, AMM TASK 38-32-00-160-802.
 - (c) Push the flush switch on the first toilet.
 - (d) If the operation of the first toilet is satisfactory, then you corrected the fault.

END	OF TA	ASK	
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SHZ 888-899

830. Toilet Flush Valve Assembly - Blocked - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-32-00)

SHZ ALL

38-30 TASKS 817-830



SHZ 888-899 (Continued)

B. Possible Causes

(1) Unwanted object in the flush valve assembly.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302
- (2) Component Location (38-30 TASK SUPPORT Figure 301
- (3) SSM 38-32-12

E. Initial Evaluation

- (1) Push the flush switch for the toilet that has a problem.
- (2) The flush valve assembly did not fully close and the rinse water continues to flow and did not stop after the flush cycle.
- (3) Do a re-flush. If the flush valve assembly closed and the flow of the rinse water stops at the end of the rinse cycle, there is an intermittent fault.
- (4) If the flush valve assembly did not fully close at the end of the flush cycle, then do the Fault Isolation Procedure.

F. Fault Isolation Procedure

- (1) Do this check for a blockage on the flush valve assembly:
 - (a) If there is a blockage that does not let the flush valve close, the Integrated System Controller (ISC) will do a re-flush cycle.
 - 1) The re-flush cycle moves the flush valve back to the open position to try to remove the blockage from the valve.
 - 2) After approximately 4 seconds, the flush valve closes.
 - 3) This re-flush cycle will occur a maximum of three times to try to remove the blockage from the valve.
 - 4) Rinse water will flow during the three re-flush cycles.
 - 5) If the blockage continues, subsequent flush and re-flush cycles will continue to try to remove the blockage.
 - 6) To conserve potable water and prevent the risk of the toilet bowl to overflow, rinse water will not flow from this point forward.
 - 7) Push the flush switch for the toilet.

38-30 TASK 830

SHZ ALL



SHZ 888-899 (Continued)

- If the operation of the flush valve assembly is satisfactory, then you corrected the fault.
- 9) The flush system will go back to normal cycles.
- 10) After 15 seconds, the ISC removes the signal to the vacuum generator relay and resets the flush cycle.
- 11) If the flush valve still did not fully close and there is a continuous flow of rinse water, then continue.
- (2) Replace the vacuum toilet assembly. Do these tasks:
 - Vacuum Toilet Assembly Removal, AMM TASK 38-32-01-000-844-003
 - Vacuum Toilet Assembly Installation, AMM TASK 38-32-01-400-844-003



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

818. Lavatory Sink Drain Stopper Inoperative - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-10-00)
- B. Possible Causes
 - (1) Inoperative drain valve
- C. Related Data
 - (1) Component Location (38-30 TASK SUPPORT Figure 301)
 - (2) (SSM 38-32-12)
- D. Initial Evaluation
 - (1) Do a check of the operation for the drain valve assembly.
 - (a) Push the button on the faucet to operate the drain valve assembly.
 - (b) Make sure the drain valve assembly operates.
 - (c) If the operation of the drain valve assembly is satisfactory, then there was an intermittent fault

E. Fault Isolation Procedure

- (1) If the drain valve assembly does not open, replace the drain valve assembly. These are the tasks:
 - Drain Valve Assembly Removal, AMM TASK 38-11-05-000-802 or Drain Valve Assembly Removal, AMM TASK 38-11-05-000-806
 - Drain Valve Assembly Installation, AMM TASK 38-11-05-400-802 or Drain Valve Assembly Installation, AMM TASK 38-11-05-400-806
 - (a) Push the button on the faucet to operate the drain valve assembly.
 - (b) Make sure the drain valve assembly operates.
 - (c) If the operation of the drain valve assembly is satisfactory, then you corrected the fault.
- (2) If the operation of the drain valve assembly is possible but is not satisfactory, do this task: Drain Valve Adjustment, AMM TASK 38-11-05-820-802 or Drain Valve Adjustment, AMM TASK 38-11-05-820-806.

SHZ ALL

38-30 TASKS 830-818



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999 (Continued)

- (a) Push the button on the faucet to operate the drain valve assembly.
 - If the drain valve assembly does not close, then replace the drain valve assembly.
 These are the tasks:
 - Drain Valve Assembly Removal, AMM TASK 38-11-05-000-802 or Drain Valve Assembly Removal, AMM TASK 38-11-05-000-806
 - Drain Valve Assembly Installation, AMM TASK 38-11-05-400-802 or Drain Valve Assembly Installation, AMM TASK 38-11-05-400-806
- (b) If the operation of the drain valve assembly is satisfactory, then you corrected the fault.

SHZ ALL



819. Sink Drain Plugged - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-10-00)
- B. Possible Causes
 - (1) Clogged Galley Sink Drain Line Strainer

SHZ 901-999

(2) Inoperative Forward Drain Valve

SHZ ALL

- (3) Inoperative Drain Line Heater
- (4) Inoperative Drain Mast Heater
- (5) Clogged Drain Line
- (6) Clogged Drain Mast
- C. Related Data
 - (1) Component Location (38-30 TASK SUPPORT Figure 301)
 - (2) SSM 38-32-12
- D. Initial Evaluation
 - (1) Examine the sink outlet for unwanted material.
 - (a) If the sink outlet is clogged, then clean the area of the unwanted material.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If the sink outlet is clean, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

(1) Do a check of the galley sink drain line strainer. If the strainer is clogged then clean the strainer. This is the task: Gray Water System - Cleaning, AMM TASK 38-31-00-100-801.

NOTE: The galley sink drain lines strainers are found below the galley sinks.

(a) Do the Repair Confirmation at the end of this task.

38-30 TASKS 818-819

SHZ ALL

· EFFECTIVITY ·



SHZ 901-999

- (2) Make sure that the forward drain valve for the drain line is open.
 - (a) If the drain valve is not open, then replace the drain valve. These are the tasks:
 - Forward Gray Water Drain Valve Removal, AMM TASK 38-31-02-000-801
 - Forward Gray Water Drain Valve Installation, AMM TASK 38-31-02-400-801
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If the drain valve is open, then continue.

SHZ ALL

- (3) Do this check of the drain line to make sure that it is not frozen:
 - (a) Open this access panel:

<u>Number</u>	Name/Location
822	Aft Cargo Door

- (b) To get access to the drain line(s), do the applicable steps that follow:
 - 1) Do this task: Cargo Compartment Sidewall Lining Removal, AMM TASK 25-52-06-000-801.
 - Do this task: Cargo Compartment Ceiling Liner Removal, AMM TASK 25-52-09-000-801.
 - 3) Do this task: Cargo Floor Panel Removal, AMM TASK 25-52-10-000-801.
- (c) Feel the drain line heater.
- (d) If the drain line is frozen, then replace the drain line heater. These are the tasks:
 - Potable Water Fill Fitting Heater Removal, AMM TASK 30-71-01-000-801
 - Potable Water Fill Fitting Heater Installation, AMM TASK 30-71-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.
- (e) Do these applicable steps to complete the task:
 - Do this task: Cargo Compartment Sidewall Lining Installation, AMM TASK 25-52-06-400-801.
 - 2) Do this task: Cargo Compartment Ceiling Liner Installation, AMM TASK 25-52-09-400-801.
 - 3) Do this task: Cargo Floor Panel Installation, AMM TASK 25-52-10-400-801.
- (f) If the drain line is not frozen, then continue.
- (4) Look for the clogged drain line or drain mast.
 - (a) If a drain line is clogged, then do these steps:
 - 1) Clean the clogged drain line with a liquid cleaner. This is the task: Gray Water System Cleaning, AMM TASK 38-31-00-100-801.
 - a) Do the Repair Confirmation at the end of this task.
 - 2) Remove the clogged drain line.
 - Clean the clogged drain line with a plumbing snake. This is the task: Gray Water System - Cleaning, AMM TASK 38-31-00-100-801.
 - 4) Install the clogged drain line.
 - a) Do the Repair Confirmation at the end of this task.

38-30 TASK 819

SHZ ALL



- 5) Replace the drain line.
 - a) Do the Repair Confirmation at the end of this task.
- (b) If the forward drain mast is clogged, then replace the forward drain mast. These are the tasks:
 - Forward Drain Mast Removal, AMM TASK 38-31-01-000-801
 - Forward Drain Mast Installation, AMM TASK 38-31-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.
- (c) If the aft drain mast is clogged, then replace the aft drain mast. These are the tasks:
 - Aft Drain Mast Removal, AMM TASK 38-31-01-000-802
 - Aft Drain Mast Installation, AMM TASK 38-31-01-400-802
 - 1) Do the Repair Confirmation at the end of this task.
- (d) Do the applicable steps to complete the task:
 - Do this task: Cargo Compartment Sidewall Lining Installation, AMM TASK 25-52-06-400-801.
 - 2) Do this task: Cargo Compartment Ceiling Liner Installation, AMM TASK 25-52-09-400-801.
 - 3) Do this task: Cargo Floor Panel Installation, AMM TASK 25-52-10-400-801.
 - 4) Close this access panel:

Number Name/Location
822 Aft Cargo Door

F. Repair Confirmation

- (1) Make sure that the water flows freely from the applicable drain line or drain mast.
 - (a) If the water flows freely from the applicable drain line or drain mast, then you corrected the problem.
 - (b) If the water does not flow freely from the applicable drain line or drain mast, then continue the Fault Isolation Procedure at the subsequent step.

——— END OF TASK ———

820. Single Toilet Inoperative - Fault Isolation

A. Description

- (1) (SDS SUBJECT 38-32-00)
- B. Possible Causes
 - (1) The toilet flush switch is defective.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

(2) The toilet flush control unit is defective.

SHZ 888-899

(3) The Integrated System Controller (ISC) is defective.

SHZ ALL

(4) The toilet flush valve is obstructed.

38-30 TASKS 819-820

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- (5) The toilet assembly, or a toilet subassembly, is defective.
- (6) The vacuum waste branch tube for the individual toilet is blocked.
- (7) The wire bundle is defective.

C. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-12)

D. Circuit Breakers



BE CAREFUL WHEN YOU DO WORK ON THE ROW-F CIRCUIT-BREAKERS IN THE P91 AND P92 PANELS. IF POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER BEFORE YOU ACCESS THE CIRCUIT-BREAKERS ON THE INSIDE OF THE P91 AND P92 PANELS. THE P91 AND P92 PANELS CONTAIN HIGH VOLTAGES AND CURRENTS THAT CAN CAUSE INJURIES TO PERSONS.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

E. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) (SSM 38-32-12)

F. Initial Evaluation

- (1) Push the flush switch for the toilet that has a defect.
 - (a) If the toilet operation is satisfactory, then there was an intermittent fault.
 - (b) If the toilet operation is not satisfactory, then push the flush switch for each toilet in the airplane.
 - If the operation of all the toilets is not satisfactory, there is a waste system defect.
 Do this task: Toilet Flush System All Toilets Do Not Flush Fault Isolation, 38-30 TASK 811.
 - (c) If a different toilet operates satisfactorily, do the fault isolation procedure for the toilet(s) that does not operate.
- (2) Push the flush switch of the defective toilet, then do these checks:
 - (a) Do a check for water flow into the toilet.
 - 1) If there is water flow into the toilet there is not a defect in the rinse valve.

38-30 TASK 820

SHZ ALL



- 2) If the flush valve and the vacuum blower operate satisfactorily, and there is NOT water flow into the toilet, there is a defect at the rinse valve. Go to the subtask that does a test of the rinse valve.
- (b) Make sure that the flush valve opens and then closes.
 - If the flush valve opens then closes after approximately 15 seconds, there is not a defect at the flush valve.
 - 2) If the rinse valve and the vacuum blower operate satisfactorily, and the flush valve does not operate, there is a defect at the flush valve. Go to subtask that does a test of the flush valve.
- (c) Make sure that the vacuum blower operates for approximately 15 seconds.
 - If the rinse and flush valves operate satisfactorily and the vacuum blower does not operate, one of these is defective:

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

The flush control module

SHZ 888-899

The Integrated System Controller

SHZ ALL

The vacuum waste tube (blocked)

The wire bundle

<u>NOTE</u>: If the operation of a different toilet is satisfactory, the vacuum blower is operable, and there is a defect at the individual toilet.

(d) If there is no water flow into the toilet, the flush valve does not open and close, or the vacuum blower does not operate, then continue.

G. Fault Isolation Procedure

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- (1) If the rinse valve, the flush valve, and the vacuum blower do not operate, then do this test of the flush switch.
 - (a) Use an hexagonal wrench to loosen the screws and then remove the escutcheon.
 - (b) Remove the collar assembly with the flush button hole.
 - (c) Disconnect the electrical connectors for the flush switch.
 - (d) Install a jumper across the electrical connectors for the flush switch.
 - (e) If the toilet operation is satisfactory, then do these steps:
 - 1) Replace the flush switch. These are the tasks:
 - Flush Switch Removal, AMM TASK 38-32-04-000-801 or Flush Switch Removal (General) Yokohama Rubber Co., AMM TASK 38-32-04-000-803
 - Flush Switch Installation, AMM TASK 38-32-04-400-801 or Flush Switch Installation (General) Yokohama Rubber Co., AMM TASK 38-32-04-400-803
 - 2) Push the flush switch for the toilet.
 - 3) If the toilet operation is satisfactory, then you corrected the fault.
 - (f) If the toilet operation is satisfactory, then do these steps to complete the task:

SHZ ALL



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999 (Continued)

- 1) Install the collar assembly.
- (g) If the toilet operation is not satisfactory continue the procedure.

SHZ 888-899

- (2) If the rinse valve, the flush valve, and the vacuum blower do not operate, then do this test of the flush switch.
 - (a) Remove the flush switch.
 - (b) Disconnect the electrical connector
 - (c) Install a jumper across the electrical connectors for the flush switch.
 - (d) If the toilet operation is satisfactory, then replace the flush switch.
 - (e) Push the flush switch for the toilet.
 - (f) If the toilet operation is satisfactory, then you corrected the fault.

SHZ ALL

- (3) Do this check for a blockage of the toilet waste system:
 - (a) Do a check of the waste tank water separators.

NOTE: A blocked or saturated waste tank water separator causes almost the same faults as a bad vacuum blower, or a blocked vacuum waste tube.

1) If necessary, clean the water separators(38-30 TASK SUPPORT Figure 301). These are the tasks:

AMM TASK 38-32-02-000-801

AMM TASK 38-32-02-100-801

AMM TASK 38-32-02-400-801

- Push the flush switch on all the toilets.
- 3) If the operation of the toilets is satisfactory, then you corrected the fault.
- 4) It the operation of the toilets is not satisfactory, continue the procedure.
- (b) Do this task: Vacuum Line Blockage Inspection, AMM TASK 38-32-00-280-801.
- (c) If you find a waste system blockage, then do this task: Vacuum Waste Line Blockage Removal, AMM TASK 38-32-00-160-802.
 - 1) Push the flush switch on the first toilet.
 - 2) If the operation of the first toilet is satisfactory, then you corrected the fault. Restore the airplane to its usual condition.
- (d) If you do not find a waste blockage, then continue.
- (4) Do this Task to remove the toilet shroud: AMM TASK 38-32-01-000-834-002 or AMM TASK 38-32-01-000-801-001 or AMM TASK 38-32-01-000-843-003

SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 876-887, 901-999

- (5) Do a visual check of the flush control unit (FCU) circuit breaker. If the FCU circuit breaker is open, close the circuit breaker.
 - (a) Push the flush button for the toilet.

38-30 TASK 820

SHZ ALL



SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 876-887, 901-999 (Continued)

- If the toilet operation is satisfactory, push the toilet flush button again. If the toilet operation is satisfactory, you corrected the fault. Restore the airplane to its usual condition.
- 2) If the toilet operation is not satisfactory, continue the procedure.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

- (6) Do this check for 28 VDC at the flush control module:
 - (a) Disconnect the connector D37XX from the flush control module (WDM 38-32-12).
 - (b) Do a check for 28 VDC at pin 43 and at pin 31 of the D37XX connector.
 - NOTE: The toilet flush control module has two isolated circuits. The D37XX pin 43 supplies electricity to the blower control circuit. The D37XX the pin 31 supplies electricity to the toilet flush circuit.
 - 1) If there is not 28 VDC at the D37XX pin 43, repair the wire (WDM 38-32-12).
 - 2) If there is not 28 VDC at the D37XX pin 31, repair the wire (WDM 38-32-12).
 - (c) Do a continuity check between the D37XX pin 15 and ground.
 - 1) If the check shows that the circuit is open, repair the wire .
 - (d) Do a continuity check between the D37XX pin 30 and ground.
 - 1) If the check shows that the circuit is open, repair the wire.
 - (e) Connect the D37XX connector to the flush control module.
 - (f) Push the flush switch for the toilet. If the toilet operation is satisfactory, you corrected the fault. Restore the airplane to its usual condition.
 - (g) If the toilet operation is not satisfactory, continue.
- (7) Push the toilet flush switch. Do a check of the rinse valve, the flush valve, and the vacuum blower.
 - (a) If the rinse and flush valves operate satisfactorily, and the vacuum blower does not operate, replace the flush control unit. These are the Tasks:

NOTE: You can hear the vacuum noise, if the vacuum blower operates.

NOTE: The toilet flush control module has two isolated circuits, the blower control circuit and the flush control circuit.

- Flush Control Assembly Removal, AMM TASK 38-32-01-000-806-001 or Flush Control Assembly Removal, AMM TASK 38-32-01-000-839-002
- Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001 or Flush Control Assembly Installation, AMM TASK 38-32-01-400-839-002
- (b) Push the toilet flush switch. If the toilet operates satisfactorily, you corrected the fault. Restore the airplane to its usual condition.
- (c) If the toilet operation is not satisfactory, continue the procedure.
- (8) Do this test of the rinse valve:
 - (a) Push and hold the flush switch for the toilet.
 - (b) Do a check for rinse water in the toilet bowl.
 - (c) If there is no rinse water, then do these steps:

NOTE: Make sure the manual shutoff valve for the rinse water supply line is open.

SHZ ALL



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999 (Continued)

- 1) Disconnect the rinse valve connector J1 from the flush control unit.
- 2) Push and hold the flush switch for the toilet.
- Do a check for 28 VDC at the pin B and C of connector J1 on the flush control module.
 NOTE: Voltage is only at the connector for approximately 1 second per flush cycle.
- 4) If there is not 28 VDC at pin B and C, then do these steps.
 - a) Replace the flush control module. These are the tasks:
 - Flush Control Assembly Removal, AMM TASK 38-32-01-000-806-001 or Flush Control Assembly Removal, AMM TASK 38-32-01-000-839-002
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001 or Flush Control Assembly Installation, AMM TASK 38-32-01-400-839-002
- 5) If there is 28 VDC at the pin B, then do these steps:
 - a) Replace the rinse valve. These are the tasks:
 - Rinse Valve Removal, AMM TASK 38-32-01-000-812-001 or Rinse Valve Removal, AMM TASK 38-32-01-000-842-002
 - Rinse Valve Installation, AMM TASK 38-32-01-400-842-002 or Rinse Valve Installation, AMM TASK 38-32-01-400-812-001
- 6) Connect the connector J1.
- 7) Push the flush switch for the toilet.
- 8) If the toilet operation is satisfactory, then you corrected the fault. Restore the airplane to its usual condition.
- (d) If the toilet operation is not satisfactory, continue the procedure.
- (9) Do this test of the flush valve:
 - (a) Push the flush switch for the toilet.

SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 876-887, 901-999

(b) Do a visual check of the flush valve operation. If the flush valve opens and does not fully close, there is an obstruction in the flush valve, or the flush valve limit switches are defective. These are the applicable Tasks:

NOTE: If a flush valve jam occurs, the normal flush cycle is followed by a dry flush cycle. During the dry flush cycle, only the flush valve opens or closes. No rinse water is used.

AMM TASK 38-32-01-000-840-002

AMM TASK 38-32-01-400-840-002

SHZ 706, 721-799, 865, 866, 871-874

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(c) If the flush valve opens and does not fully close, there is an obstruction in the flush valve, or the flush valve limit switches are defective. These are the applicable Tasks:

AMM TASK 38-32-01-000-808-001

AMM TASK 38-32-01-400-808-001

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999

SHZ ALL



SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-887, 901-999 (Continued)

- (d) Push the flush switch for the toilet. Do a visual check of the flush valve operation. If the flush valve does not open, then do these steps:
 - Disconnect the connector J2, for the flush motor power, from the flush control module.
 - 2) Push and hold the flush switch for the toilet.
 - Do a check for 28 VDC at the pins B and C of connector J2 on the flush control module.
 - a) If there is not 28 VDC at pin B and C, replace the flush control module. These are the tasks:
 - Flush Control Assembly Removal, AMM TASK 38-32-01-000-806-001 or Flush Control Assembly Removal, AMM TASK 38-32-01-000-839-002
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001 or Flush Control Assembly Installation, AMM TASK 38-32-01-400-839-002
 - b) If there is 28 VDC at the pin B, replace the flush valve. These are the tasks:
 - Flush Valve Removal, AMM TASK 38-32-01-000-808-001 or Flush Valve Removal, AMM TASK 38-32-01-000-840-002
 - Flush Valve Installation, AMM TASK 38-32-01-400-840-002 or Flush Valve Installation, AMM TASK 38-32-01-400-808-001
 - Connect the connector J2.
 - 5) Push the flush switch for the toilet.
 - 6) If the toilet operation is satisfactory, then you corrected the fault. Restore the airplane to its usual condition.

SHZ 888-899

(10) Do this check of the Integrated System Controller (ISC).

NOTE: The ISC controls the flush cycle of the vacuum toilet assembly.

- (a) Make sure that the ISC cables and connectors are correctly connected. The ISC is connected to the potentiometer, the flush valve assembly, the rinse valve assembly and to the lavatory vacuum waste/water system.
- (b) Make sure that the ISC cables and connectors are not loose and no sign of corrosion.
 - If one or more ISC cables and connectors are loose, tighten the cables and connectors.
 - If one or more ISC connectors has a sign of corrosion, repair or replace the connectors.
- (c) Push the flush switch for the toilet.
- (d) If the toilet flush cycle operates satisfactorily, you corrected the fault.
- (e) If the toilet flush cycle does not operate satisfactorily, then continue.
 - 1) Do these steps to power cycle the ISC.
 - a) Disconnect the electrical connector for the toilet assembly.

38-30 TASK 820

SHZ ALL



SHZ 888-899 (Continued)

- b) Move the flush valve override lever to the mid point.
 - NOTE: The override lever is on the flush valve at back of the toilet. The flush valve is closed when the override lever is in the down position and open when the lever is in the up position.
- c) Wait 10-15 seconds, then connect the toilet assembly electrical connector.
- d) Make sure that the flush valve override lever moves down (closed) and then up (open).
- (f) Push the flush switch for the toilet.
 - If the toilet does not flush, then repeat the steps to power cycle the ISC.
 - 2) If the toilet flushes, then flush the toilet 5-10 times to verify continued operation.
- (g) If the toilet flush cycle operates satisfactorily, you corrected the fault.
- (h) If the toilet flush cycle does not operate satisfactorily, then continue.
- (11) Do this check of the rinse valve assembly.
 - (a) Make sure that the ISC connector is connected to the rinse valve assembly.
 - (b) Push the flush switch for the toilet.
 - (c) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - (d) If the flow of rinse water stops after approximately 1.7 seconds, then the rinse valve assembly is satisfactory.
 - (e) If the flow of rinse water continues after 1.7 seconds, then continue.
- (12) Do this check of the flush valve assembly.
 - (a) Make sure that the ISC connector is connected to the potentiometer and the flush valve assembly.
 - (b) Push the flush switch for the toilet.
 - (c) Make sure that the flush valve assembly fully open and close for each flush cycle.
 - (d) If the flush valve does not fully open and close, examine the flush valve for blockage.
 - (e) If the flush valve have blockage, do this task: Toilet Flush Valve Assembly Blocked -Fault Isolation, 38-30 TASK 830.
 - (f) Push the flush switch for the toilet.
 - (g) If the toilet flush cycle operates satisfactorily, you corrected the fault.
 - (h) If the toilet flush cycle does not operate satisfactorily, replace the vacuum toilet assembly. Do these tasks:
 - Vacuum Toilet Assembly Removal, AMM TASK 38-32-01-000-844-003
 - Vacuum Toilet Assembly Installation, AMM TASK 38-32-01-400-844-003Vacuum Toilet Assembly Installation, AMM TASK 38-32-01-400-844-003
 - (i) Push the flush switch for the toilet again.
 - (j) If the toilet flush cycle operates satisfactorily, you corrected the fault.

SHZ ALL

SHZ ALL



H. Restore the airplane to its usual condition.

- (1) Do this task: Toilet Shroud Installation, AMM TASK 38-32-01-400-834-002 or Toilet Shroud Installation, AMM TASK 38-32-01-400-801-001 or Toilet Shroud Installation, AMM TASK 38-32-01-400-843-003.
- (2) Do this task to remove the electrical power, if it is no longer necessary.AMM TASK 24-22-00-860-812

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

821. Vacuum Blower Inoperative - Fault Isolation

A. Description

- (1) The Vacuum Blower removes air from the Waste Tank.
- (2) The Vacuum Blower operates when the airplane is below 16.000 feet altitude and these conditions are true:
 - · Waste Drain Ball Valve is closed
 - · Waste Tank is not full
 - · Lavatory Flush Switch operates
- (3) The Barometric Pressure Switch senses ambient pressure. When the airplane is below 16,000 feet, the Barometric Pressure Switch is closed.
- (4) If the Vacuum Blower, M1721 operates in some toilets and does not operate at a different toilet(s), then do the applicable task for the bad Toilet(s):
 - Single Toilet Inoperative Fault Isolation, 38-30 TASK 820
 - Toilet Flush System Plugged/Blocked Fault Isolation, 38-30 TASK 817

B. Possible Causes

- (1) The Waste Tank is full
- (2) Proximity Switch, S1034 on the Waste Drain Ball Valve
- (3) Altitude Pressure Switch, S1033
- (4) Vacuum Blower Relay, R581
- (5) Vacuum Blower, M1721
- (6) Blocked or saturated Waste Tank Water Separator
- (7) Clogged vacuum lines between the Toilets and the Waste Tank
- (8) Wiring

38-30 TASKS 820-821

SHZ ALL



C. Circuit Breakers



DO NOT TOUCH THE CONDUCTORS IN THE P91 AND P92 PANELS. BE CAREFUL WHEN YOU GET ACCESS TO THE CIRCUIT BREAKERS ON THE INNER SIDE OF THE P91 AND P92 PANELS (ROW F). IF IT IS POSSIBLE, REMOVE AIRPLANE ELECTRICAL POWER FIRST. THE P91 AND P92 PANELS HAVE HIGH VOLTAGES AND CURRENTS. ELECTRICAL VOLTAGE AND CURRENT CAN KILL YOU OR CAUSE INJURIES.

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT
F	2	C01389	VACUUM WASTE BLOWER

D. Related Data

- (1) SDS SUBJECT 38-32-00
- (2) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (3) Component Location (38-30 TASK SUPPORT Figure 301)
- (4) SSM 38-32-12
- (5) WDM 38-32-12

E. Initial Evaluation

- (1) Push the flush switch for each toilet that has a problem.
 - (a) If the toilet operation is satisfactory, then there was an intermittent problem.
 - (b) If the toilet operation is not satisfactory, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do a check of the waste indicator at the Attendant Panel.
 - (a) If the waste indicator reads full, then do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If the waste indicator not reads full, then continue.
- (2) Do these steps to close the Waste Drain Valve:
 - (a) Open this access panel:

<u>Number</u>	Name/Location
145AL	Waste Service Door

- (b) Push the waste drain valve control handle in to the stop.
- (c) Make sure that the Waste Drain Valve is closed.

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(d) Close this access panel:

Number Name/Location

145AL Waste Service Door

- (e) Do the Repair Confirmation at the end of this task.
- (3) Push the flush switch in each toilet on the airplane, and do a check of the Vacuum Blower. Make sure that the Vacuum Blower operates.

NOTE: You can hear the air vacuum operation, when you flush the toilet. However, if the vacuum waste line for all the toilets is blocked, you must access the vacuum blower to make sure that it operates. A vacuum tube blockage between the aft most toilet(s) and the waste tank can cause a loss of vacuum at all the toilets.

NOTE: A blocked or saturated waste tank water separator causes almost the same faults as an inoperative vacuum blower, or a blocked vacuum waste tube.

- (a) If the Vacuum Blower, M1721 operates, and the vacuum pressure is not satisfactory, then do a check of the Waste Tank Water Separators.
 - 1) If necessary, clean the Water Separators (38-30 TASK SUPPORT Figure 301). These are the tasks:
 - Liquid Separator Removal, AMM TASK 38-32-02-000-801
 - Liquid Separator and Liquid Separator Filter Cleaning, AMM TASK 38-32-02-100-801
 - Liquid Separator Installation, AMM TASK 38-32-02-400-801
 - 2) Do the Repair Confirmation at the end of this task.
- (b) If the Vacuum Blower, M1721 does not operate at all of the toilets, then continue.
- (4) Do this voltage check (WDM 38-32-12):
 - (a) Get access to the Waste Drain Ball Valve Proximity Switch, S1034.
 - (b) Disconnect connector D11716 from the Waste Drain Ball Valve Proximity Switch, S1034.
 - (c) Do a check for 28 VDC at pin 1 of connector D11716.
 - 1) If there is 28 VDC at the D11716 connector pin 1, then do these steps:
 - a) Install a jumper from the D11716 connector pin 1 to an accessible airplane electrical ground terminal.

NOTE: This will remove the lavatory modules from the electrical circuit, and supply 115 VAC to the Vacuum Blower. If the Altitude Pressure Switch, S1033, the Vacuum Blower Relay, R581, and the wiring do not have a problem.

- b) Do a check of the Vacuum Blower, M1721. If the vacuum operates, remove the ground jumper, and adjust or replace the Waste Drain Ball Valve Proximity Switch. S1034. These are the tasks:
 - Waste Drain Ball Valve Limit Switch Removal, AMM TASK 38-32-03-000-803
 - Waste Drain Ball Valve Limit Switch Installation, AMM TASK 38-32-03-400-803
 - Waste Drain Ball Valve and Control Rod Adjustment, AMM TASK 38-32-03-820-801
 - Waste Drain Ball Valve and Control Rod Adjustment, AMM TASK 38-32-03-820-801

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- c) Do the Repair Confirmation at the end of this task.
- 2) If there is not 28 VDC, then continue.
- (5) Do this continuity check (WDM 38-32-12):
 - (a) Get access to the Waste Drain Ball Valve and the Vacuum Blower, M1721.
 - (b) Disconnect the electrical connector D11718 from the Vacuum Blower, M1721.
 - (c) Do a continuity check as follows (WDM 38-32-12):

- 1) If there is no continuity, then do these steps:
 - a) Replace the Altitude Pressure Switch, S1033. These are the tasks:
 - Vacuum Blower Barometric Switch Removal, AMM TASK 38-32-12-000-801
 - Vacuum Blower Barometric Switch Installation, AMM TASK 38-32-12-400-801
 - b) Do a continuity check as follows:

VACUUM BLOWER D11718

pin 6 GND

- <1> If there is no continuity, then do these steps:
 - <a> Repair the wiring.
 - Remove the ground jumper from pin 1 of the electrical connector D11716.
 - <c> Re-connect the electrical connector D11716.
 - <d> Re-connect the electrical connector D11718.
 - <e> Do the Repair Confirmation at the end of this task.
- <2> If there is continuity, then do these steps:
 - <a> Remove the ground jumper from pin 1 of the electrical connector D11716.
 -

 Re-connect the electrical connector D11716.
 - <c> Do the Repair Confirmation at the end of this task.
- 2) If there is continuity, then do these steps and continue:
 - a) Remove the ground jumper from pin 1 of the electrical connector D11716.
 - b) Re-connect the electrical connector D11716.
- (6) Do this continuity check (WDM 38-32-12):
 - (a) Disconnect the electrical connector D11718 from the Vacuum Blower, M1721.
 - (b) Do a check for continuity as follows:

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VACUUM BLOWER D11718

pin 7 GND

- 1) If there is no continuity, then repair the wire.
- (c) Do a check for 28 VDC at the pin 5 of connector D11718.
 - 1) If there is 28 VDC at the pin 5 of connector D11718, then replace the Vacuum Blower, M1721. These are the tasks:
 - Vacuum Blower Removal, AMM TASK 38-32-05-000-801
 - Vacuum Blower Installation, AMM TASK 38-32-05-400-801
 - 2) If there is not 28 VDC at the pin 5 of connector D11718, then replace the Vacuum Blower Relay, R581, at the Power Distribution Panel 1, P91 (WDM 38-32-12).
- (d) Do a check for continuity as follows:

VACUUM
BLOWER
CONNECTOR
socket 5 socket 6

- (e) If the continuity check shows an open circuit, then replace the Vacuum Blower, M1721. These are the tasks:
 - Vacuum Blower Removal, AMM TASK 38-32-05-000-801
 - Vacuum Blower Installation, AMM TASK 38-32-05-400-801
- (f) If you find any problem, then do these steps:
 - 1) Connect the connector D11718 to the Vacuum Blower, M1721.
 - 2) Do the Repair Confirmation at the end of this task.
- (g) If you do not find any problem, then continue.
- (7) Do this voltage check (WDM 38-32-12):
 - (a) Get access to the Power Distribution Panel 1, P91.
 - (b) Disconnect connector D11434 from the Power Distribution Panel 1, P91.
 - (c) Do a check for 28 VDC at pin 23 of receptacle D11434.
 - If there is 28 VDC at the pin 23 of receptacle D11434, then do a check for continuity as follows:

 P91 POWER
 VACUUM

 DISTRIBUTION
 VACUUM

 PANEL
 BLOWER

 D11434
 D11718

 pin 23
 pin 5

- a) If there is no continuity then do these steps:
 - <1> Repair the wiring.
 - <2> Re-connect connector D11718 to the Vacuum Blower, M1721.

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- <3> Re-connect connector D11434 to the Power Distribution Panel 1, P91.
- <4> Do the Repair Confirmation at the end of this task.
- b) If there is continuity, then do these steps and continue:
 - <1> Re-connect connector D11718 to the Vacuum Blower, M1721.
 - <2> Re-connect connector D11434 to the Power Distribution Panel 1, P91.
- 3) If there is no 28 VDC at pin 23 of receptacle D11434, then do these steps and continue:
 - a) Re-connect connector D11718 to the Vacuum Blower, M1721.
 - b) Re-connect connector D11434 to the Power Distribution Panel 1, P91.
- (8) Do this check of the Vacuum Blower System wiring (WDM 38-32-12).
 - (a) Do a check of the wires between the Waste Drain Valve connector D11716 and the Lavatory Modules.
 - (b) Do a check of the wiring between the VACUUM WASTE BLOWER circuit breaker, C1389 and Vacuum Blower Relay, R581.
 - (c) Do a check of the wiring between the electrical connector D11428 at the Power Distribution Panel 1, P91 and connector D11718 at the Vacuum Waste Blower.
 - (d) Do a check of the wiring between the VACUUM WASTE CONT circuit breaker, C1388 and the Lavatory Modules.
 - 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Push the flush switch for each toilet that has a problem.
 - (a) If the toilet operation is satisfactory, then you corrected the problem.
 - 1) Restore the airplane to its usual condition as necessary.
 - (b) If the toilet operation is not satisfactory, then continue the Fault Isolation Procedure at the subsequent step.

—— END OF TASK ——

SHZ 821-825, 827-847, 850-852, 855-859, 865, 866, 881-899, 901-999

822. Waste Level Not Accurate at Service Panel - Fault Isolation

- A. Description
 - (1) (SDS SUBJECT 38-33-00)
- B. Possible Causes
 - (1) The waste system full
 - (2) A continuous level sensor is not serviceable
 - (3) Panel gauge is not serviceable

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SHZ 821-825, 827-847, 850-852, 855-859, 865, 866, 881-899, 901-999 (Continued)

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (38-30 TASK SUPPORT Figure 301)
- (3) (SSM 38-32-13)

E. Initial Evaluation

- (1) Do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
- (2) Do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
 - (a) If the waste indicator shows at or near E, then you corrected the fault.
 - (b) If the waste indicator shows other than E, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this task: LCM BITE Procedure, 38-30 TASK 801.
 - (a) If the LCM BITE Test shows a Sensor J3 fault, then, do this task: Waste Tank Sensor J3 Fault Isolation, 38-30 TASK 808.
 - Do a check of the waste indicator again.
 - a) If the waste indicator is at or near E, then you corrected the fault.
 - (b) If the waste indicator shows other than E, then continue.
- (2) If the LCM BITE Test show a TANK FULL fault, do this task: Waste Tank Tank Full Indication Fault Isolation, 38-30 TASK 809.
 - (a) Do a check of the waste indicator again.
 - 1) If the waste indicator is at or near E, then you corrected the fault.
 - (b) If the waste indicator is other than E, then continue.
- (3) If the waste indicator is other than E, replace the waste quantity indicator. These are the tasks:
 - Service Panel Waste Quantity Gauge Removal, AMM TASK 38-33-05-000-801
 - Service Panel Waste Quantity Gauge Installation, AMM TASK 38-33-05-400-801
 - (a) Do a check of the waste indciator again.
 - 1) If the waste indicator is at or near E, then you corrected the fault.

——— END OF TASK ———

SHZ 002, 009-699, 821-825, 827-847, 850-852, 855-859, 865, 866, 881-899, 901-999

823. Service Panel - Sensor Fouled Light - Fault Isolation

A. Description

(1) (SDS SUBJECT 38-33-00)

SHZ ALL 38-30 TASKS 822-823



SHZ 002, 009-699, 821-825, 827-847, 850-852, 855-859, 865, 866, 881-899, 901-999 (Continued)

B. Possible Causes

- (1) Fouled point level sensor
- (2) Failed point level sensor
- (3) Failed LCM
- (4) Faulty wiring between LCM and point level sensor

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	<u>Col</u>	Number	<u>Name</u>
D	19	C01423	VACUUM WASTE

Power Distribution Panel Number 1, P91

Row	Col	<u>Number</u>	<u>Name</u>
С	11	C01388	VACUUM WASTE CONT

D. Related Data

- (1) Simplified Schematic (38-30 TASK SUPPORT Figure 302)
- (2) Component Location (Figure 201)
- (3) (SSM 38-32-13)

E. Initial Evaluation

- (1) Do a check of the waste indicator at the attendant's panel.
 - (a) If the waste indicator reads full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - (b) Do a check of the waste system at the attendant's panel, (LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802).
 - 1) If the CLEAN/CHECK SENSOR light is off, then you corrected the fault.
 - (c) If the CLEAN/CHECK SENSOR light is on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) If the CLEAN/CHECK SENSOR light is on, do this task: LCM BITE Procedure, 38-30 TASK 801.
 - (a) If the Sensor J1 (J2) lights flash after you do the LCM BITE Test, do this task: Waste Tank Cleaning, AMM TASK 38-32-07-100-801 or, do this task: Waste Tank Point Level Sensor Cleaning, AMM TASK 38-33-01-100-801.
 - NOTE: The procedure to clean the waste tank can be done from the waste service panel. This procedure is not as effective as cleaning the point level sensor but it is not necessary to open the waste tank. To clean the point level sensor it is necessary to remove the point level sensor.
 - 1) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801.
 - 2) If the Sensor J1 (J2) lights do not flash after the LCM BITE Test, then you corrected the fault.
 - (b) If the Sensor J1 (J2) lights are on and do not flash, then continue.

SHZ ALL

38-30 TASK 823



SHZ 002, 009-699, 821-825, 827-847, 850-852, 855-859, 865, 866, 881-899, 901-999 (Continued)

- (2) Do these steps to check the electrical harness wiring.
 - (a) Disconnect the J1 connector from the T504 point level sensor
 - (b) Disconnect the J2 connector from the T505 point level sensor.
 - (c) Disconnect the D13428 and D13430 connectors from the M1722 logic control unit.
 - (d) Do a check of the electrical harness wires between the T504 connector J1 and the D13428 connector. Do a check of the electrical harness between the T505 connector J2 and the D13430 connector (WDM 38-32-12).

		D13428																	
D13428																	J1		
D1	34	2	8																J1
Α																			Α
С																			С
D																			D
Ε																			Ε
F																			F

				D13430																
D1	D13430															J2				
D13430													J2							
Α																				Α
С																				С
D																				D
Ε																				Ε
F																				F

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (f) Connect the J1 connector to the T504 point level sensor
- (g) Connect the J2 connector to the T505 point level sensor
- (h) Connect the D13428 and D13430 connectors to the M1772 logic control unit.
- (i) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801 or, do this task: LAVS INOP BITE Test at the Attendant's Panel, 38-30 TASK 802.
- (j) If the Sensor J1 (J2) lights do not show a fault indication after the LCM BITE Test, then you corrected the fault.

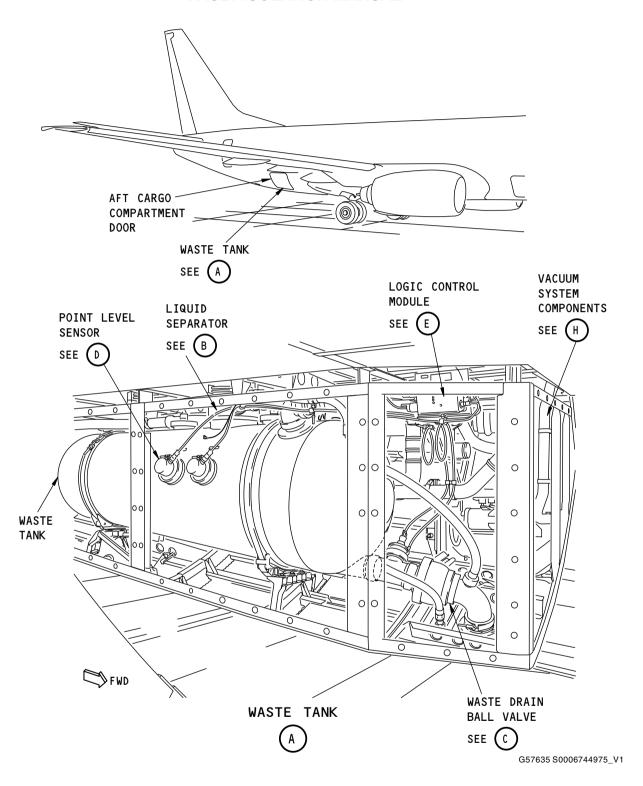
ENID	OE	TASK	
	UГ	IASN	

SHZ ALL

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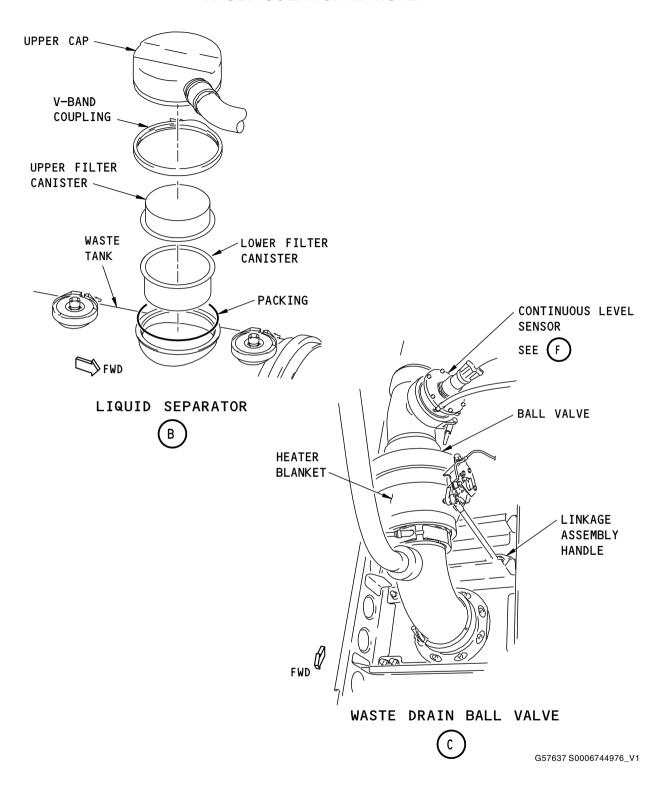


Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 1 of 9)

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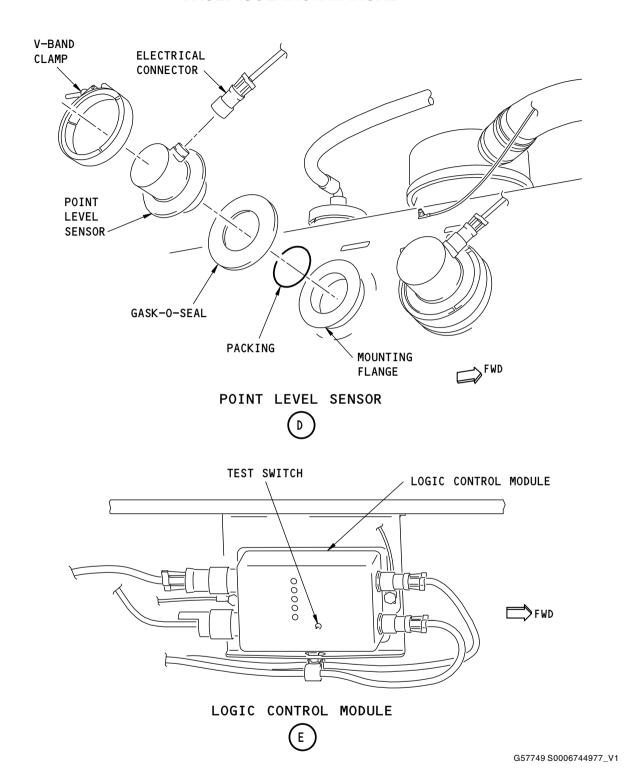
Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 2 of 9)

SHZ ALL 38-30 TASK

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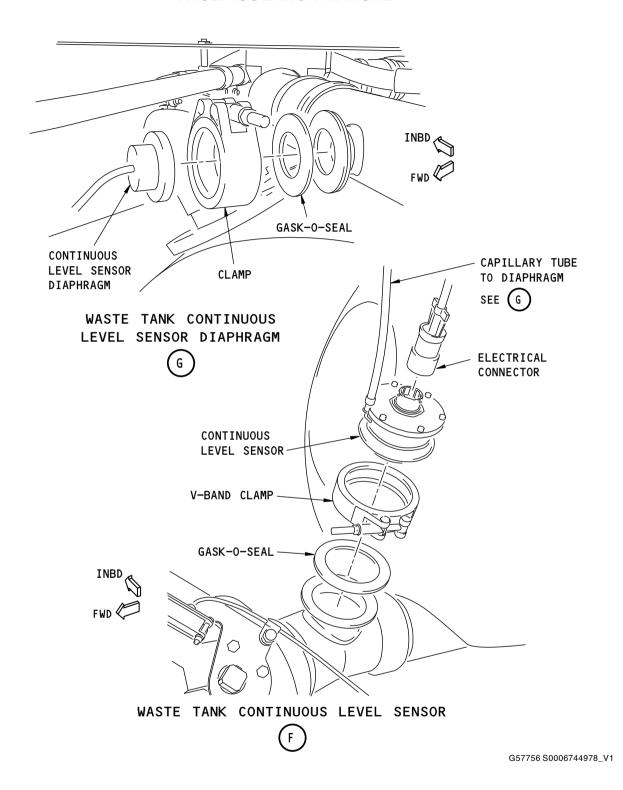


Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 3 of 9)

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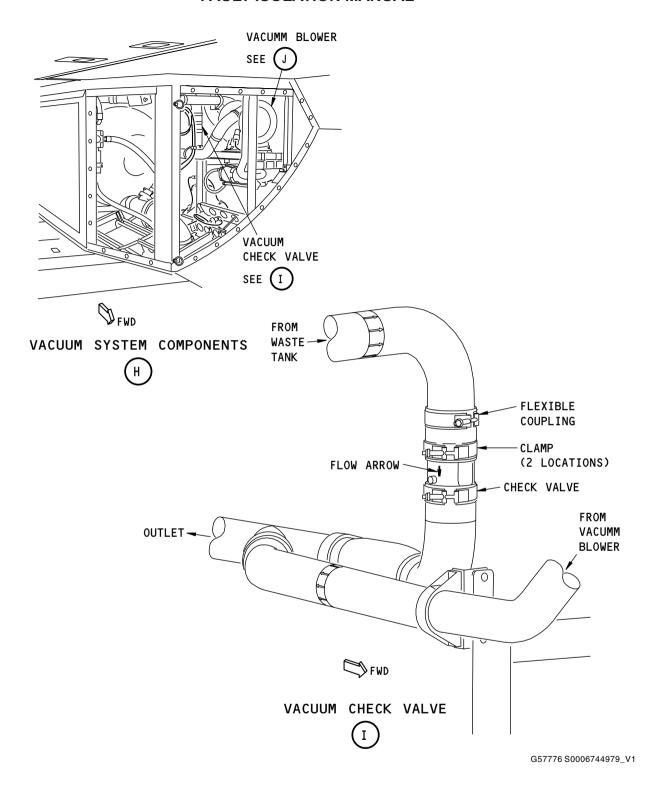
Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 4 of 9)

SHZ ALL

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Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 5 of 9)

SHZ ALL

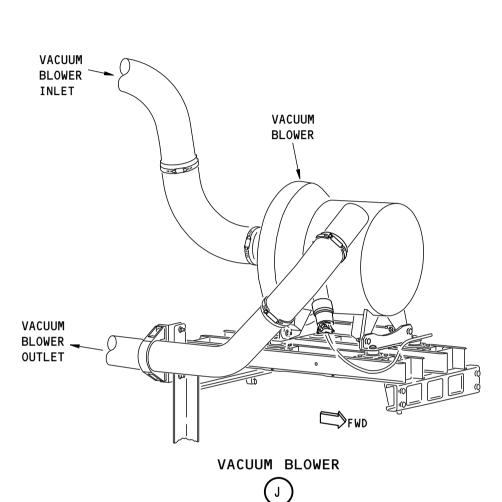
38-30 TASK SUPPORT

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ECCN 9E991 BOEING PROPRIETARY - See title page for details





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Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 6 of 9)

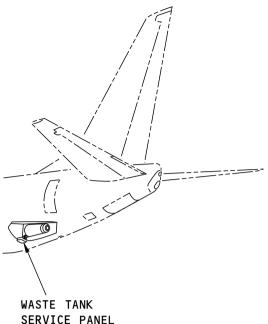
SHZ ALL

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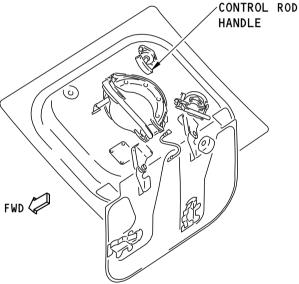
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FAULT ISOLATION MANUAL



SERVICE PANEL SEE (K)



WASTE TANK SERVICE PANEL



G58170 S0006744982_V2

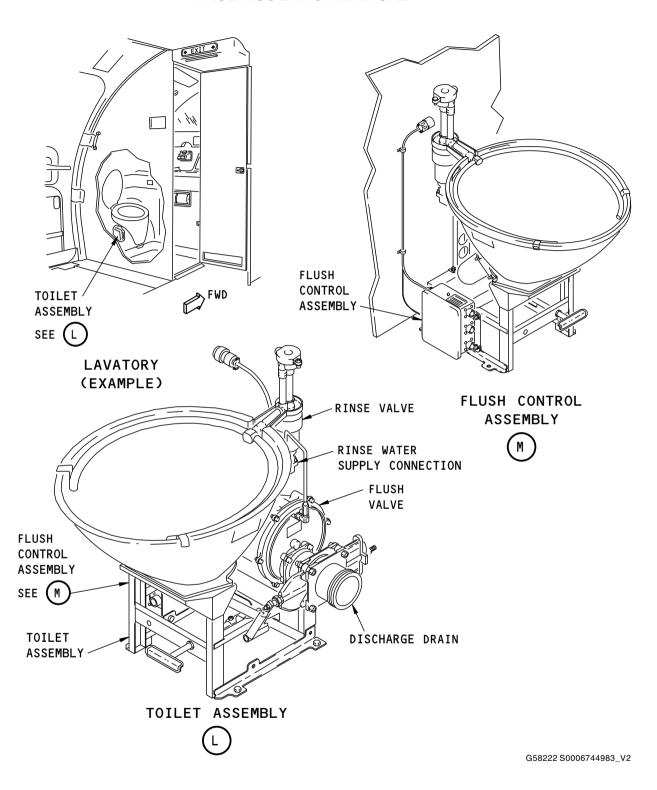
Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 7 of 9)

- EFFECTIVITY SHZ ALL

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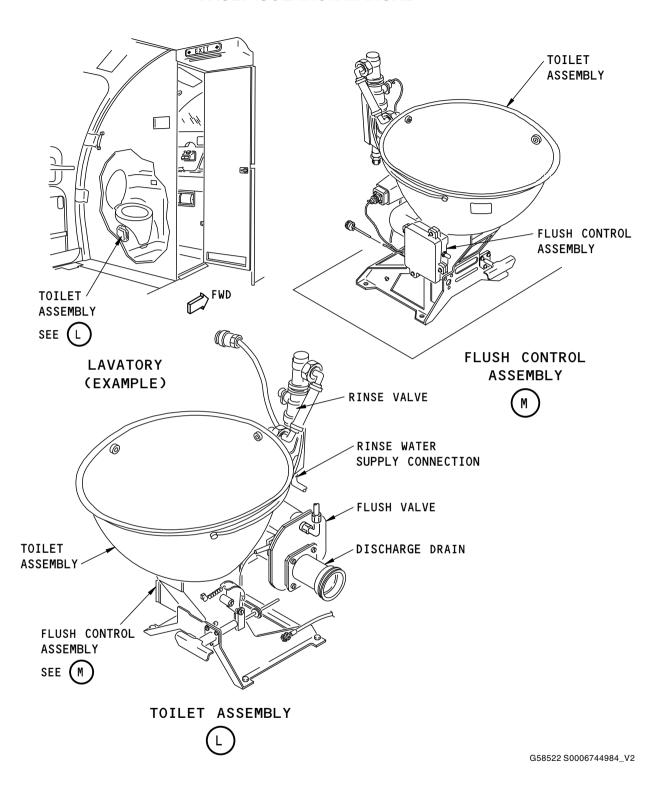
Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 8 of 9)

SHZ 706, 721-799, 865, 866, 871-874

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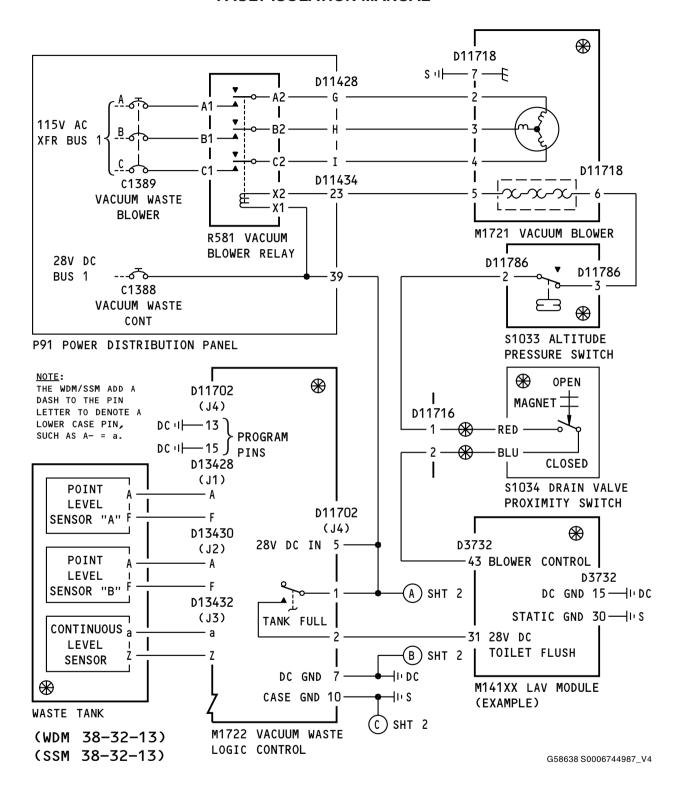


Waste System Component Location Figure 301/38-30-00-990-801 (Sheet 9 of 9)

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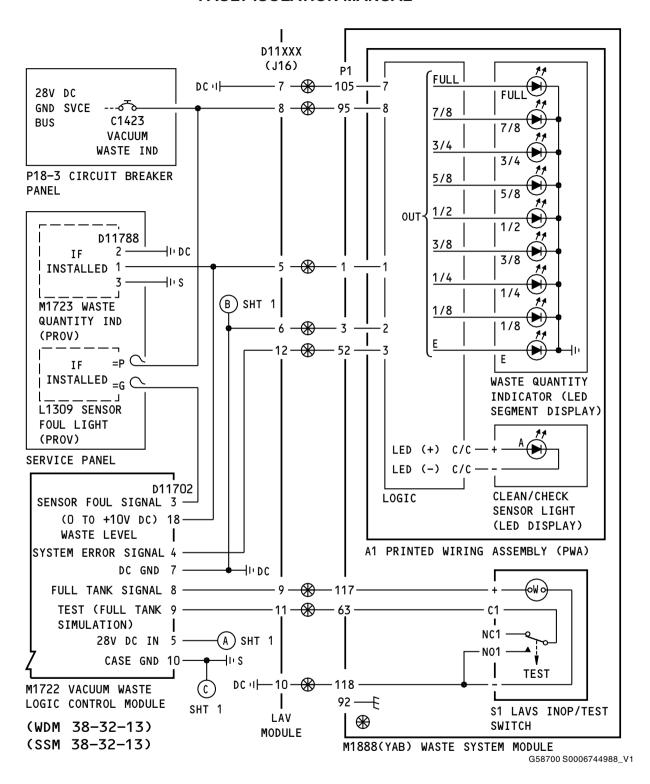




Vacuum Waste System Control Simplified Schematic Figure 302/38-30-00-990-802 (Sheet 1 of 3)







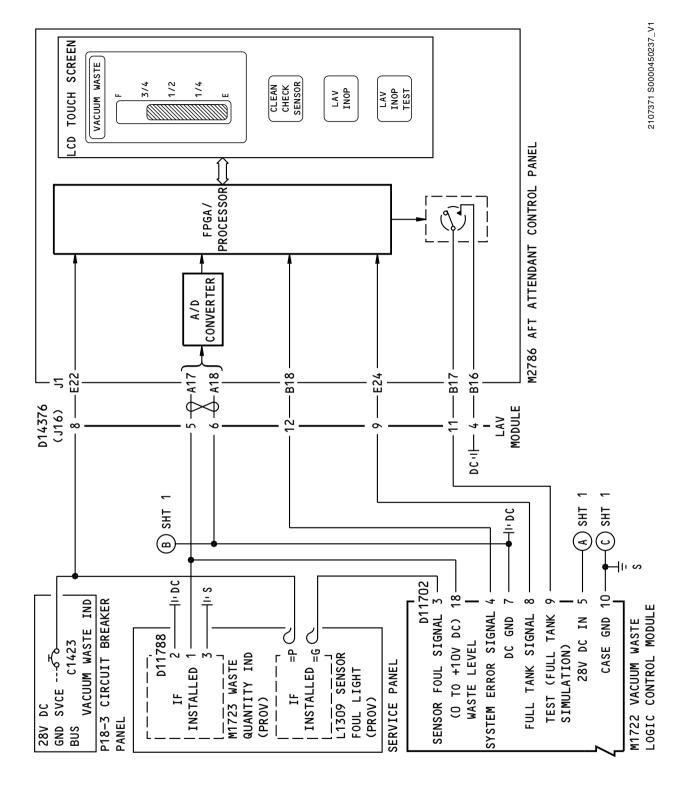
Vacuum Waste System Control Simplified Schematic Figure 302/38-30-00-990-802 (Sheet 2 of 3)

EFFECTIVITY
SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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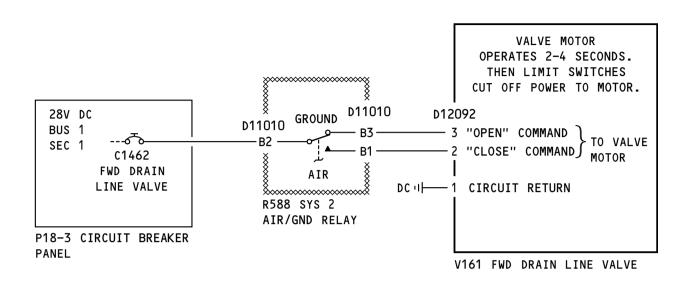
Vacuum Waste System Control Simplified Schematic Figure 302/38-30-00-990-802 (Sheet 3 of 3)

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

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(WDM 38-31-31) (SSM 38-31-31)

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Gray Water Drain Simplified Schematic Figure 303/38-30-00-990-803

SHZ 901-999

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