

CHAPTER

38

WATER/WASTE



**737-600/700/800/900
FAULT ISOLATION MANUAL**

**CHAPTER 38
WATER/WASTE**

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
38-EFFECTIVE PAGES			38-10 TASKS (cont)			38-30 TASKS (cont)		
1 thru 2	Oct 15/2023		O 221	Oct 15/2023		O 224	Oct 15/2023	
38-HOW TO USE THE FIM			222	BLANK		O 225	Oct 15/2023	
1	Oct 15/2021		38-10 TASK SUPPORT			226	Feb 15/2023	
2	Oct 15/2021		301	Oct 15/2021		227	Feb 15/2023	
3	Oct 15/2021		302	Jun 15/2022		228	Feb 15/2023	
4	Oct 15/2021		303	Oct 15/2021		229	Feb 15/2023	
5	Oct 15/2021		304	Oct 15/2021		230	Feb 15/2023	
6	Oct 15/2021		305	Oct 15/2021		231	Feb 15/2023	
38-FAULT CODE INDEX			306	Oct 15/2021		232	Feb 15/2023	
101	Oct 15/2021		307	Jun 15/2022		233	Feb 15/2023	
102	Oct 15/2021		308	Oct 15/2021		234	Feb 15/2023	
38-MAINT MSG INDEX			309	Oct 15/2021		235	Feb 15/2023	
101	Oct 15/2021		310	BLANK		236	Feb 15/2023	
102	Oct 15/2021		38-30 TASKS			237	Feb 15/2023	
103	Oct 15/2021		201	Oct 15/2021		238	Feb 15/2023	
104	BLANK		202	Oct 15/2021		239	Feb 15/2023	
38-10 TASKS			203	Oct 15/2021		240	Feb 15/2023	
201	Oct 15/2021		204	Oct 15/2021		241	Feb 15/2023	
202	Oct 15/2021		205	Feb 15/2023		242	Feb 15/2023	
203	Oct 15/2021		206	Feb 15/2023		243	Feb 15/2023	
204	Feb 15/2022		207	Feb 15/2023		244	Feb 15/2023	
205	Feb 15/2022		208	Feb 15/2023		245	Feb 15/2023	
206	Feb 15/2022		209	Feb 15/2023		246	Feb 15/2023	
207	Jun 15/2022		210	Feb 15/2023		247	Feb 15/2023	
208	Feb 15/2022		211	Feb 15/2023		248	Feb 15/2023	
209	Oct 15/2021		R 212	Oct 15/2023		38-30 TASK SUPPORT		
210	Oct 15/2021		R 213	Oct 15/2023		301	Oct 15/2021	
211	Oct 15/2021		R 214	Oct 15/2023		302	Oct 15/2021	
212	Oct 15/2021		R 215	Oct 15/2023		303	Oct 15/2021	
213	Oct 15/2022		O 216	Oct 15/2023		304	Oct 15/2021	
214	Oct 15/2022		O 217	Oct 15/2023		305	Oct 15/2021	
215	Oct 15/2022		O 218	Oct 15/2023		306	Oct 15/2021	
216	Oct 15/2022		O 219	Oct 15/2023		307	Oct 15/2021	
217	Oct 15/2022		O 220	Oct 15/2023		308	Oct 15/2021	
R 218	Oct 15/2023		O 221	Oct 15/2023		309	Feb 15/2023	
R 219	Oct 15/2023		O 222	Oct 15/2023				
O 220	Oct 15/2023		O 223	Oct 15/2023				

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

38-EFFECTIVE PAGES



**737-600/700/800/900
FAULT ISOLATION MANUAL**

**CHAPTER 38
WATER/WASTE**

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
38-30 TASK SUPPORT (cont)								
310	Oct 15/2021							

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

38-EFFECTIVE PAGES

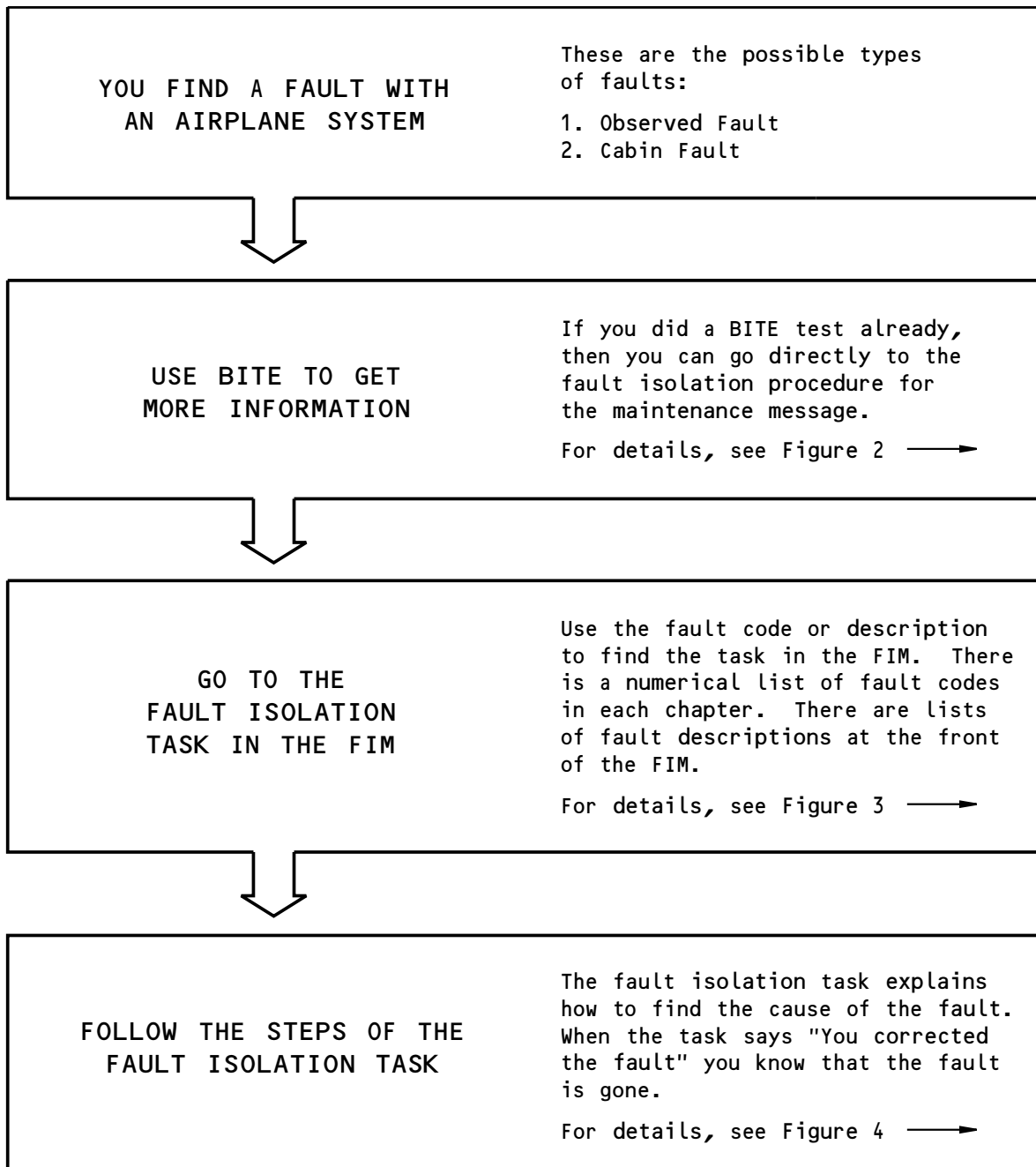
D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 2
Oct 15/2023



737-600/700/800/900
FAULT ISOLATION MANUAL



G04902 S0000148576_V1

Basic Fault Isolation Process
Figure 1



737-600/700/800/900 FAULT ISOLATION MANUAL

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

EFFECTIVITY
SIA ALL

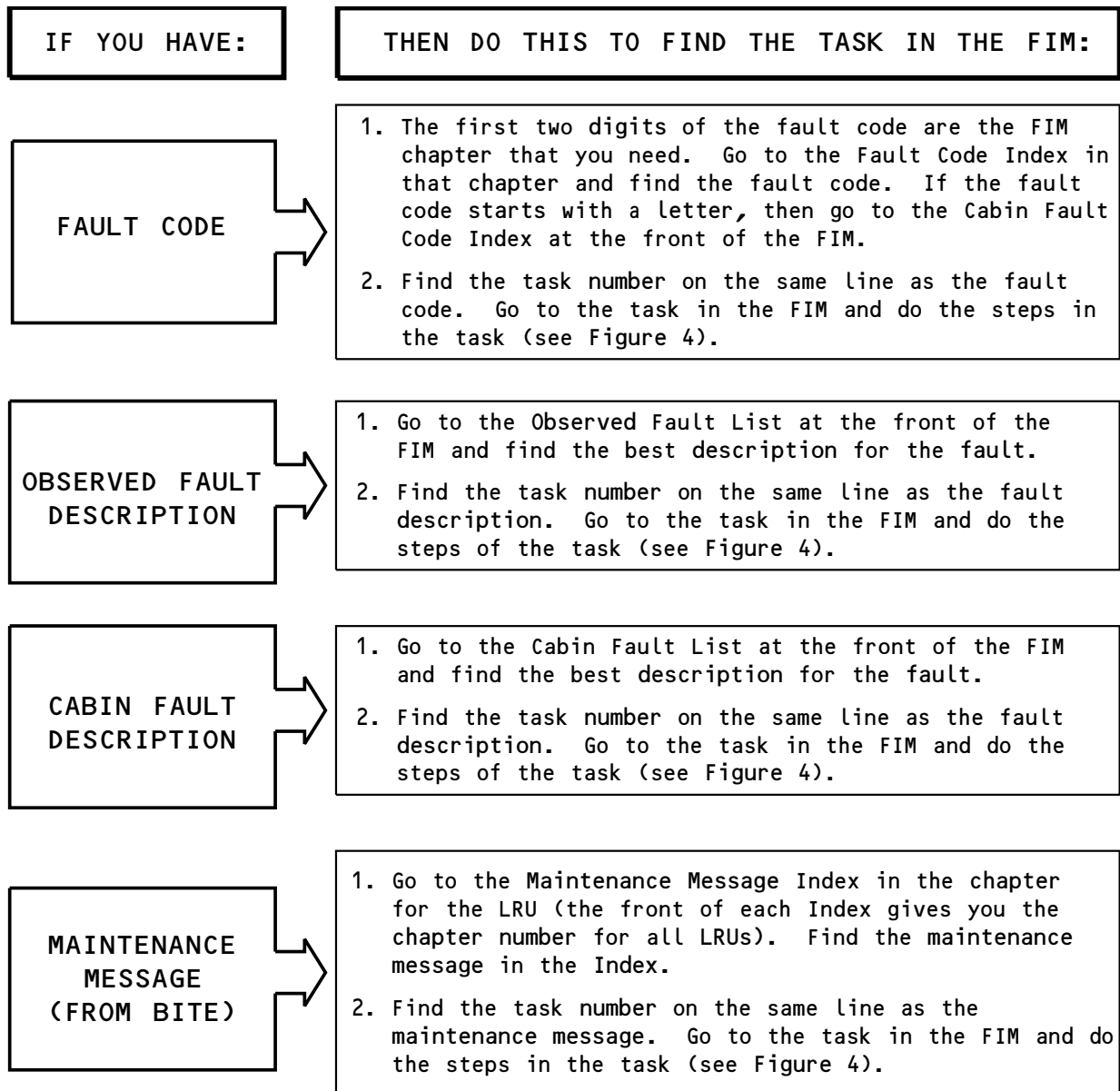
38-HOW TO USE THE FIM

D633A103-SIA

Page 2
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**



G04979 S0000148579_V2

**Finding the Fault Isolation Task in the FIM
Figure 3**

EFFECTIVITY
SIA ALL

38-HOW TO USE THE FIM

D633A103-SIA

Page 3
Oct 15/2021



737-600/700/800/900 FAULT ISOLATION MANUAL

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 intermittent fault.
 - 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

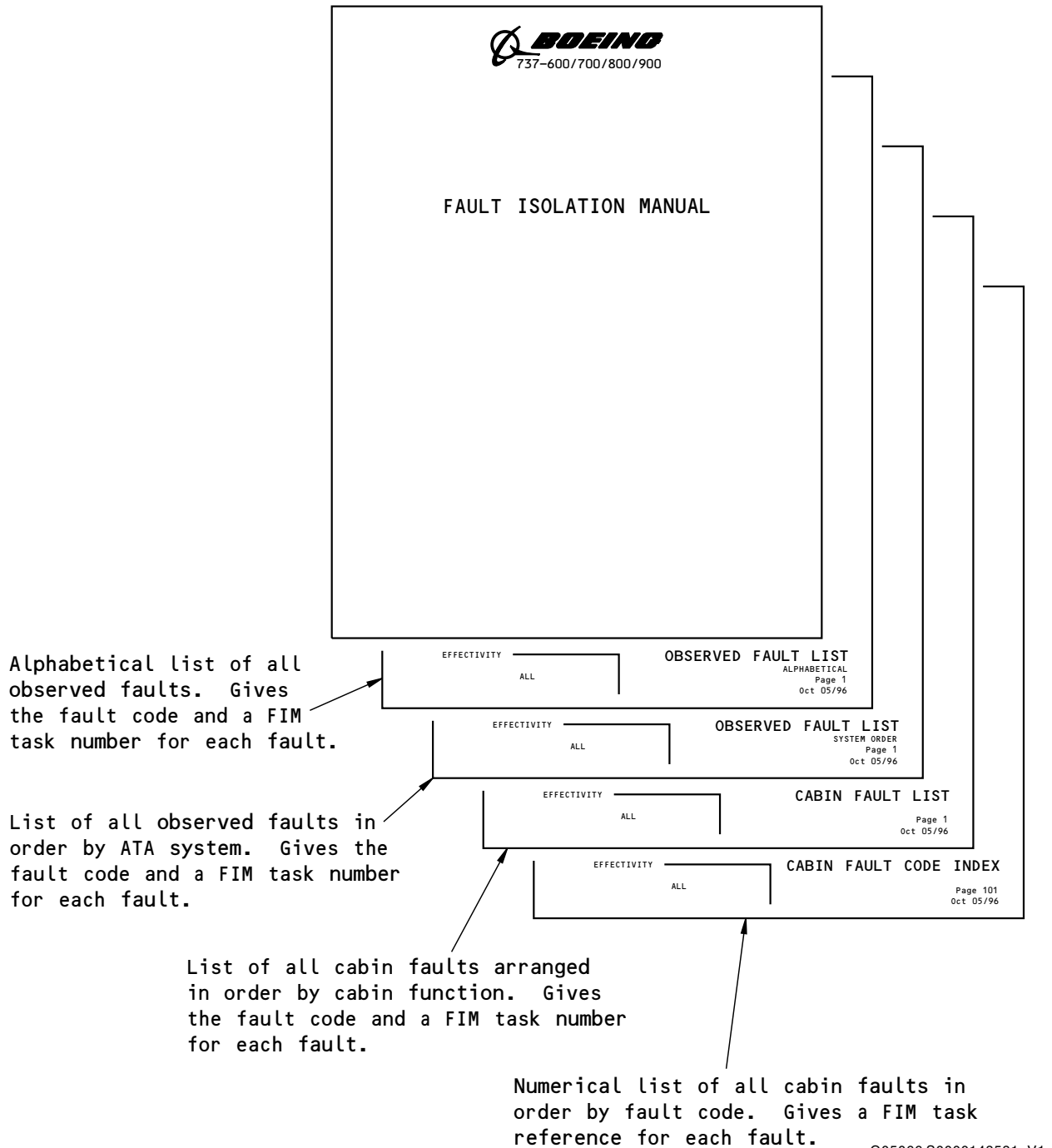
EFFECTIVITY
SIA ALL

38-HOW TO USE THE FIM

D633A103-SIA

Page 4
Oct 15/2021

 BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



Subjects at Front of FIM
Figure 5

EFFECTIVITY ☐ ALL

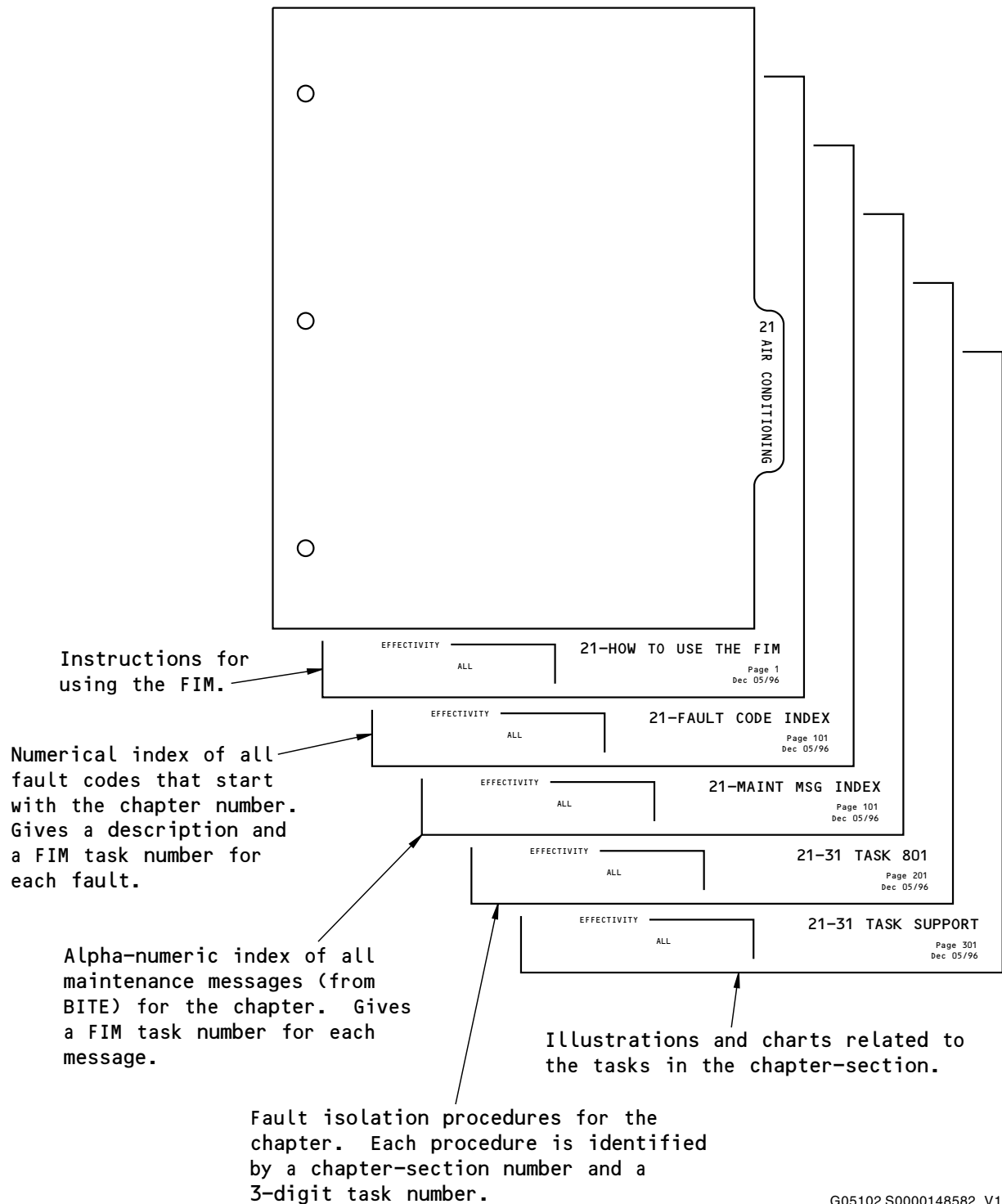
SIA ALL

38-HOW TO USE THE FIM

D633A103-SIA

Page 5
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



G05102 S0000148582_V1

Subjects in Each FIM Chapter
Figure 6

EFFECTIVITY	
SIA ALL	

38-HOW TO USE THE FIM

D633A103-SIA

Page 6
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
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
383 030 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
383 040 00	Waste quantity indicator: Shows tank is full when tank is not full - attendant's panel.	38-30 TASK 810

EFFECTIVITY
SIA ALL

38-FAULT CODE INDEX

D633A103-SIA

Page 101
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
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

EFFECTIVITY
SIA ALL

38-FAULT CODE INDEX

D633A103-SIA

Page 102
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

<u>LRU/SYSTEM</u>	<u>SHORT NAME</u>	<u>CHAPTER</u>
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
Cargo Electronic Unit - Lower Aft	CEU - LWR AFT	26
Cargo Electronic Unit - Lower Forward	CEU - LWR FWD	26
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
Flight Data Acquisition Unit	FDAU	31

EFFECTIVITY
SIA ALL

38-MAINT MSG INDEX



**737-600/700/800/900
FAULT ISOLATION MANUAL**

<u>LRU/SYSTEM</u>	<u>SHORT NAME</u>	<u>CHAPTER</u>
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
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
Satellite Communications System	SATCOM	23
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

EFFECTIVITY
SIA ALL

38-MAINT MSG INDEX

D633A103-SIA

Page 102
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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

EFFECTIVITY
SIA ALL

38-MAINT MSG INDEX

D633A103-SIA

Page 103
Oct 15/2021



737-600/700/800/900 FAULT ISOLATION MANUAL

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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C00873	POT WATER COMPRESSOR

D. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
- (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:
 - 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.

EFFECTIVITY
SIA ALL

38-10 TASK 801

D633A103-SIA

Page 201
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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:
 - 1) 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.
 - a) To complete this task, do this task: Aft Cargo Compartment Aft Bulkhead Liner - Installation, AMM TASK 25-52-19-400-801.

————— **END OF TASK** —————

802. Potable Water Tank Leak - Fault Isolation

A. Description

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

B. Possible Causes

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

C. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

EFFECTIVITY
SIA ALL

38-10 TASKS 801-802

D633A103-SIA

Page 202
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

D. Fault Isolation Procedure

- (1) 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:
 - 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.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

38-10 TASK 802

D633A103-SIA

Page 203
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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
- (4) Cut-out switch on the water service panel
- (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
- (11) The CABIN/UTIL switch is in the OFF position
- (12) Wiring problem.

C. Circuit Breakers

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00138	WATER QTY IND
D	11	C00873	POT WATER COMPRESSOR

D. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
- (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.

EFFECTIVITY
SIA ALL

38-10 TASK 803

D633A103-SIA

Page 204
Feb 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (3) Do this check for a blockage of the water lines:
- (a) Open this access door:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 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.
 - 4) 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:
- (a) Do this check of the cut-out switch at the water service door:
- 1) Open this access door:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 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:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 146AR | Water Service Door |
- then continue.
- (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.

EFFECTIVITY
SIA ALL

38-10 TASK 803

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 205
Feb 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 3) Close this access door:
- | <u>Number</u> | <u>Name/Location</u> |
|---------------|----------------------|
| 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.
 - 6) 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

EFFECTIVITY
SIA ALL

38-10 TASK 803

D633A103-SIA

Page 206
Feb 15/2022



737-600/700/800/900 FAULT ISOLATION MANUAL

- 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:
 - (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.
 - 1) 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.
 - 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.
 - c) 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.
 - 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.

EFFECTIVITY
SIA ALL

D633A103-SIA

38-10 TASK 803

Page 207
Jun 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- b) 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.
- 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).

D1990

pin 2

D11432

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

pin 19

CB 873

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.

EFFECTIVITY
SIA ALL

38-10 TASK 803

D633A103-SIA

Page 208
Feb 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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

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

B. Possible Causes

- (1) Broken line/fitting
(2) Condensation

C. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
(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: 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.
2) 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

EFFECTIVITY
SIA ALL

38-10 TASKS 803-804

D633A103-SIA

Page 209
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 5) If you removed the ceiling panels, do this task: 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:
 - (a) 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.
 - (b) 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:
 - a) Do this task: Cargo Compartment Sidewall Lining - Installation, AMM TASK 25-52-06-400-801.
 - (c) 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.
 - 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.

EFFECTIVITY
SIA ALL

38-10 TASK 804

D633A103-SIA

Page 210
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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.

————— **END OF TASK** —————

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 303)
- (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

- (1) 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

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

B. Possible Causes

- (1) Low water level
- (2) Isolation valve closed
- (3) Frozen water line
- (4) Faucet does not open
- (5) Water filter clogged

C. Related Data

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

EFFECTIVITY
SIA ALL

38-10 TASKS 804-806

D633A103-SIA

Page 211
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

D. Initial Evaluation

- (1) 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.
 - 3) If the water flow is satisfactory, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (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 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.
- (2) 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
 - Shutoff Valve Installation, AMM TASK 38-11-07-400-801
 - 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
 - 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 38-11-05-000-805
 - Faucet Assembly Installation, AMM TASK 38-11-05-400-805
 - 1) Open the faucet for 10 seconds.

EFFECTIVITY
SIA ALL

38-10 TASK 806

D633A103-SIA

Page 212
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 2) If the water flow is satisfactory, then you corrected the fault.

————— **END OF TASK** —————

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

<u>Row</u>	<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

D. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
(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

- (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 38-11-05-820-805
 - 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 38-11-05-820-805
 - 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 38-11-05-820-805
 - Cartridge Valve Assembly - Replacement, AMM TASK 38-11-05-960-803

EFFECTIVITY
SIA ALL

38-10 TASKS 806-807

D633A103-SIA

Page 213
Oct 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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

<u>Row</u>	<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

D. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
- (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

- (1) 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.

NOTE: 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.

EFFECTIVITY
SIA ALL

38-10 TASKS 807-808

D633A103-SIA

Page 214
Oct 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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.

END OF TASK

809. Faucet Water Pressure Too High - Fault Isolation

A. Description

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

B. Possible Causes

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

C. Related Data

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
- (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

EFFECTIVITY
SIA ALL

38-10 TASKS 808-809

D633A103-SIA

Page 215
Oct 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (a) Open the water faucet for 10 seconds.
- (b) If the water pressure is satisfactory, then you corrected the fault.

————— **END OF TASK** —————

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

- (1) Simplified Schematic (38-10 TASK SUPPORT Figure 303)
- (2) Component Location (38-10 TASK SUPPORT Figure 301)

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.

————— **END OF TASK** —————

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

EFFECTIVITY
SIA ALL

38-10 TASKS 809-811

D633A103-SIA

Page 216
Oct 15/2022



737-600/700/800/900 FAULT ISOLATION MANUAL

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<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

D. Related Data

- (1) Simplified Schematic 38-10 TASK SUPPORT Figure 303
- (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.

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).

EFFECTIVITY
SIA ALL

38-10 TASK 811

D633A103-SIA

Page 217
Oct 15/2022



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (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
- (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

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

D. Related Data

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

- (1) If the Water Quantity Indicator does not read full, do the steps that follow:
- (2) Disconnect the applicable airplane connector from the Receptacle J16 at the Attendant's Panel (WDM 38-41-11).
- (3) 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:
 - Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

EFFECTIVITY
SIA ALL

38-10 TASKS 811-812

D633A103-SIA

Page 218
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

- Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802
 - 1) Do the Repair Confirmation at the end of this task.
- (4) Adjust the Water Quantity Indicator. This is the task: Water Quantity Transmitter Adjustment, AMM TASK 38-14-01-800-801.
 - (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.
- (5) 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:
 - (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.
 - 2) 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
FULL (40 / 40 GAL OR 60 / 60 GAL)	2500 ± 300 pf	6700 ± 600 pf	-15

Table 202 FIBERGLASS POTABLE WATER TANK WITH ABS LINER

Standpipe/Tank Configuration	Capacitance Levels-Empty	Capacitance Levels-Full	Mating Adapter Cable
FULL (40 / 40 GAL OR 60 / 60 GAL)	0	4500 ± 900 pf	-15

- (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

EFFECTIVITY
SIA ALL

38-10 TASK 812

D633A103-SIA

Page 219
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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.

———— **END OF TASK** ————

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

<u>Row</u>	<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

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

<u>Row</u>	<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

- (1) 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

EFFECTIVITY
SIA ALL

38-10 TASKS 812-828

D633A103-SIA

Page 220
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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

<u>Row</u>	<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.

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

38-10 TASK 828

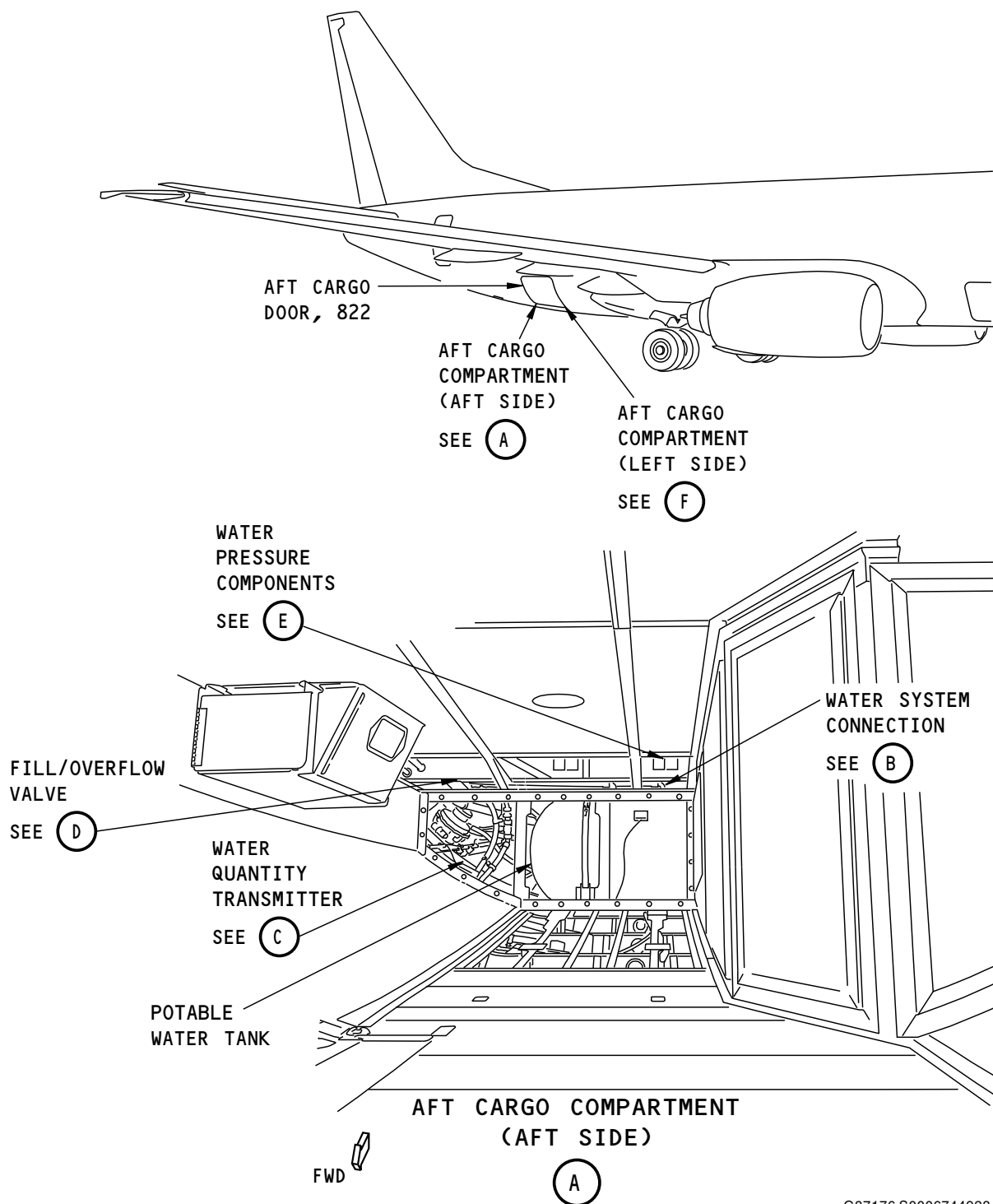
D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 221
Oct 15/2023



737-600/700/800/900
FAULT ISOLATION MANUAL



G87176 S0006744928_V1

Potable Water Component Location
Figure 301/38-10-00-990-801 (Sheet 1 of 7)

EFFECTIVITY
SIA ALL

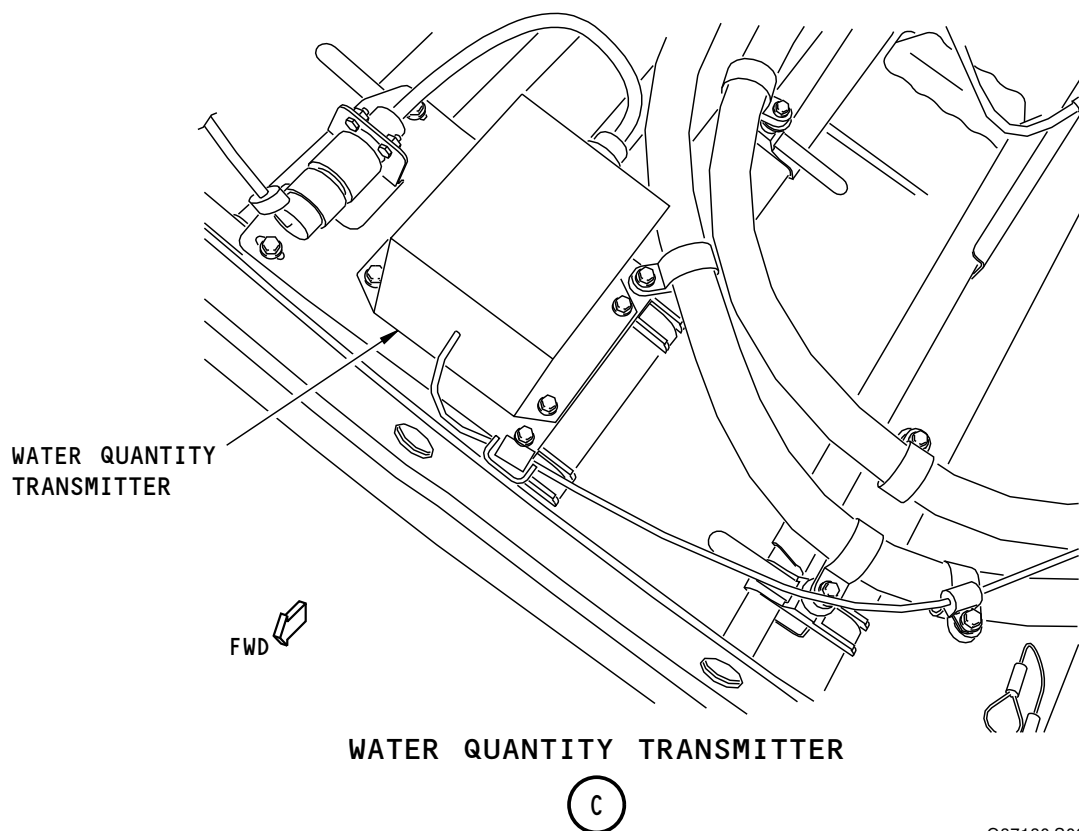
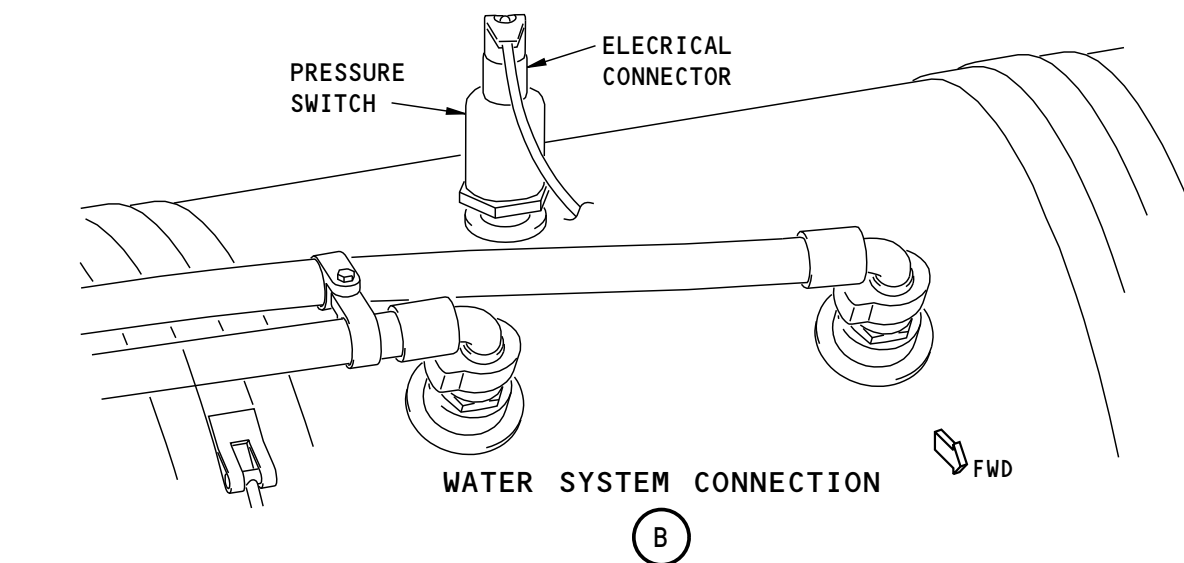
38-10 TASK SUPPORT

D633A103-SIA

Page 301
Oct 15/2021



737-600/700/800/900
FAULT ISOLATION MANUAL



G87180 S0006744931_V2

Potable Water Component Location
Figure 301/38-10-00-990-801 (Sheet 2 of 7)

EFFECTIVITY
SIA ALL

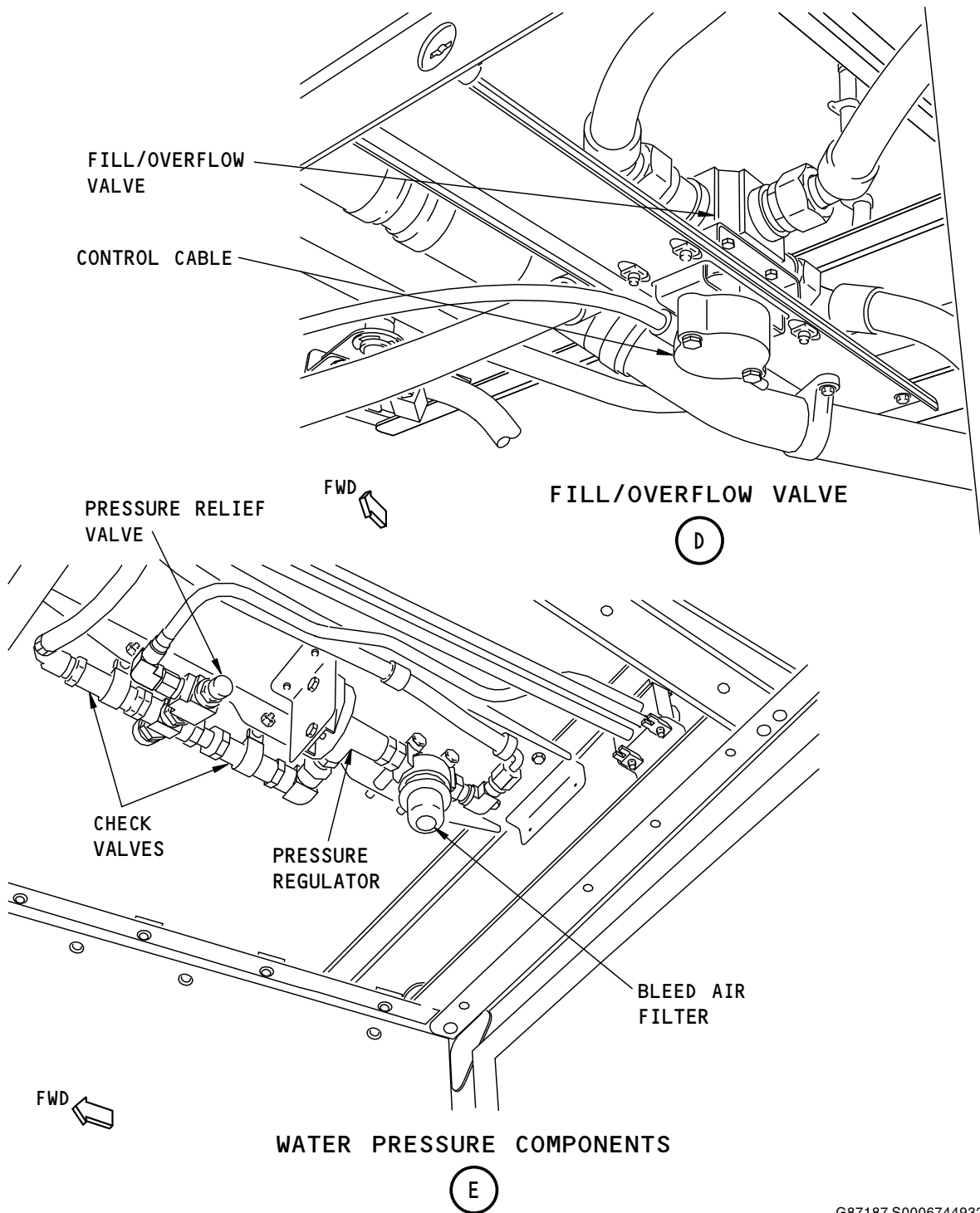
38-10 TASK SUPPORT

D633A103-SIA

Page 302
Jun 15/2022



737-600/700/800/900
FAULT ISOLATION MANUAL



G87187 S0006744932_V1

Potable Water Component Location
Figure 301/38-10-00-990-801 (Sheet 3 of 7)

EFFECTIVITY
SIA ALL

38-10 TASK SUPPORT

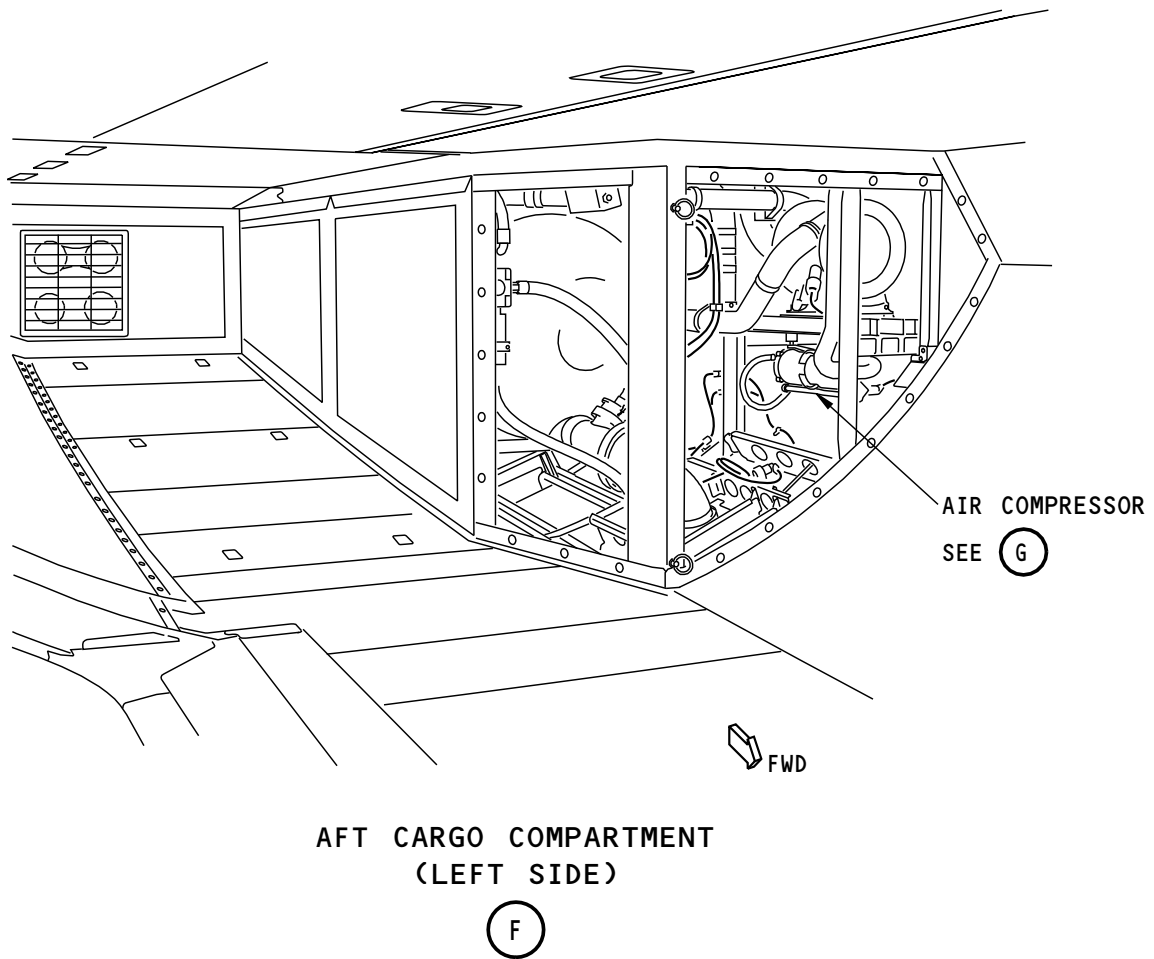
D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 303
Oct 15/2021



737-600/700/800/900
FAULT ISOLATION MANUAL



N37104 S0006744933_V1

Potable Water Component Location
Figure 301/38-10-00-990-801 (Sheet 4 of 7)

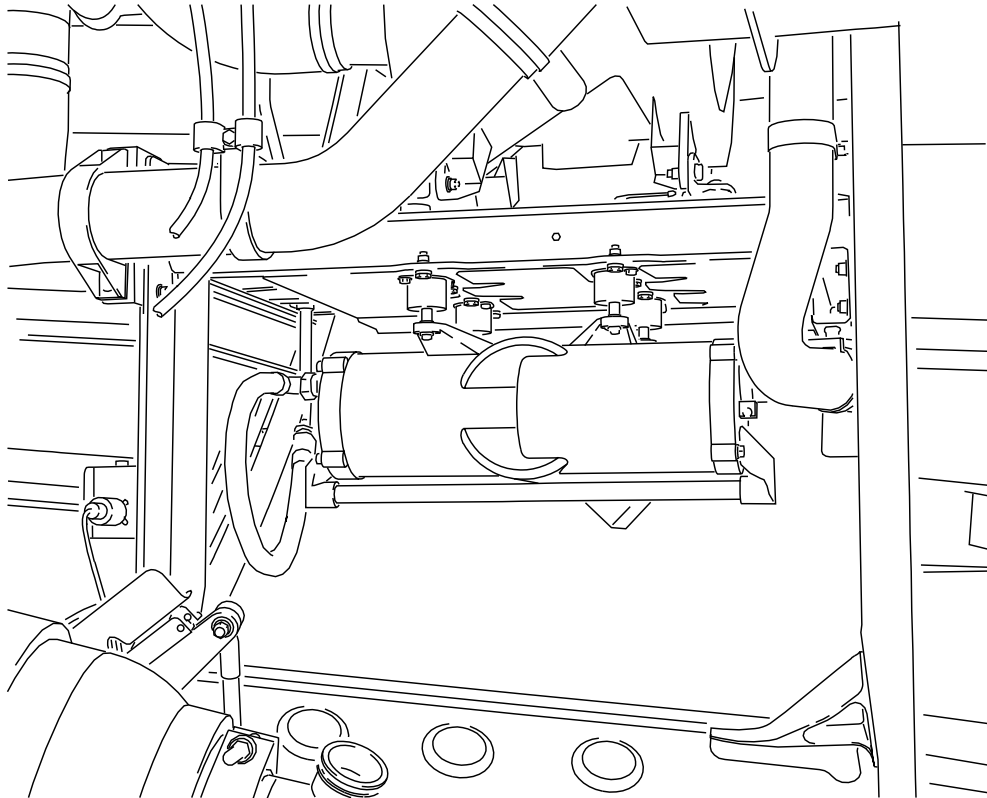
EFFECTIVITY
SIA ALL

38-10 TASK SUPPORT

D633A103-SIA

Page 304
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



➡ FWD

AIR COMPRESSOR

G

G87890 S0006744935_V1

Potable Water Component Location
Figure 301/38-10-00-990-801 (Sheet 5 of 7)

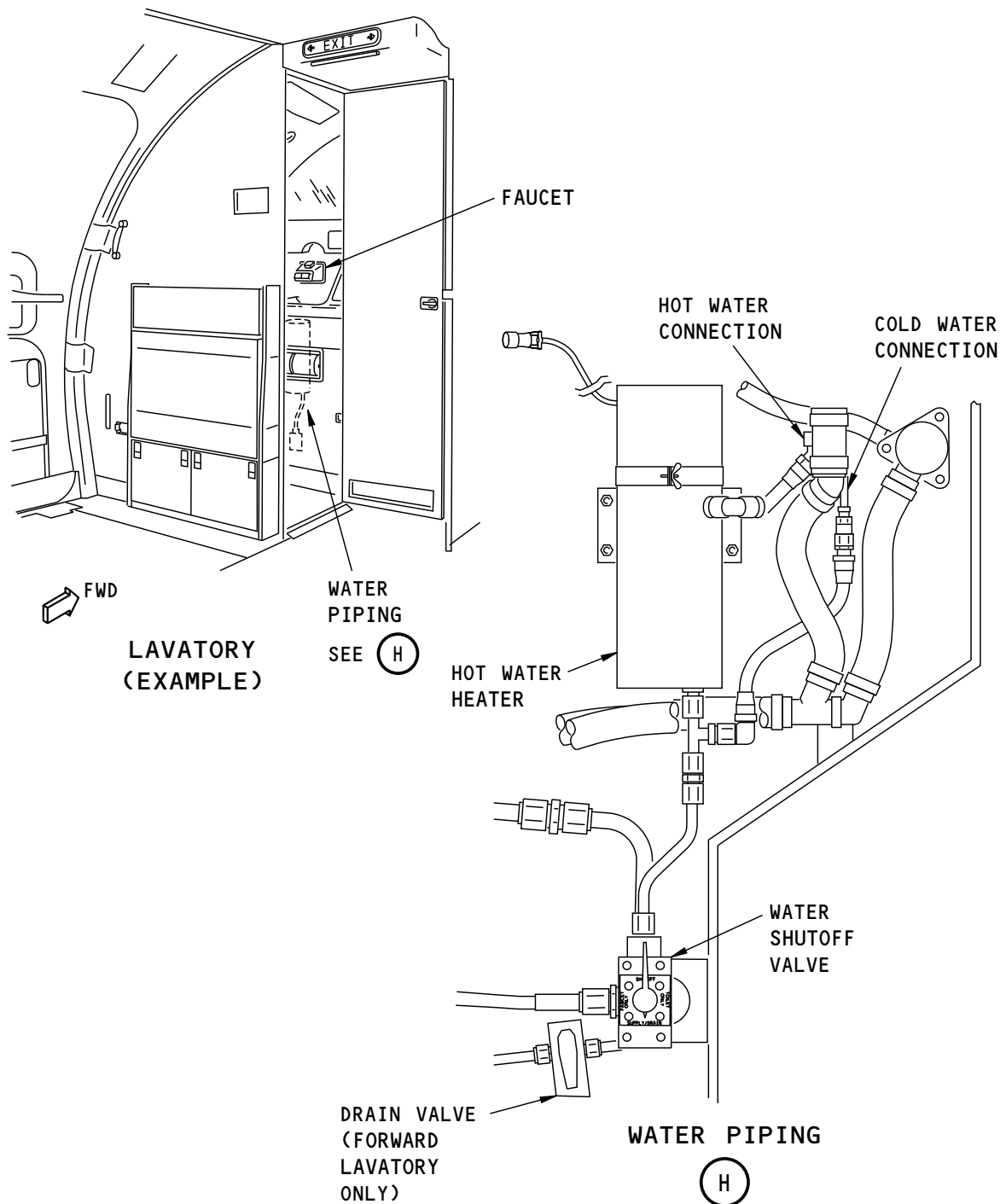
EFFECTIVITY
SIA ALL

38-10 TASK SUPPORT

D633A103-SIA

Page 305
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



G87892 S0006744936_V1

Potable Water Component Location
Figure 301/38-10-00-990-801 (Sheet 6 of 7)

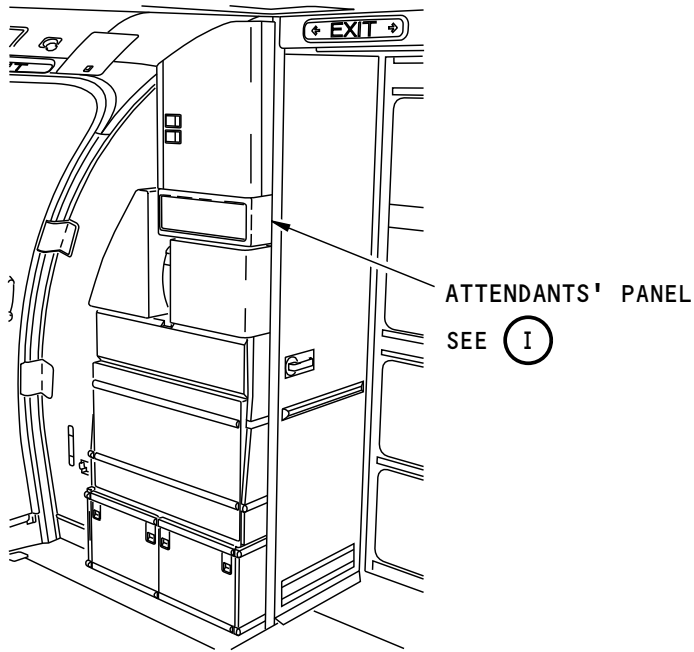
EFFECTIVITY
SIA ALL

38-10 TASK SUPPORT

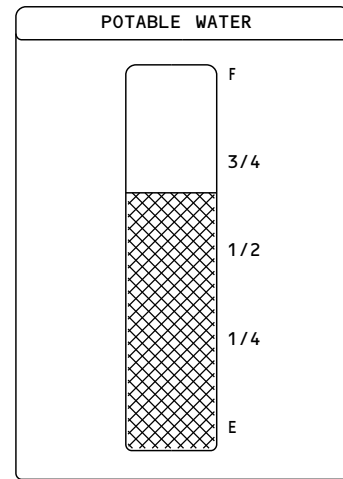
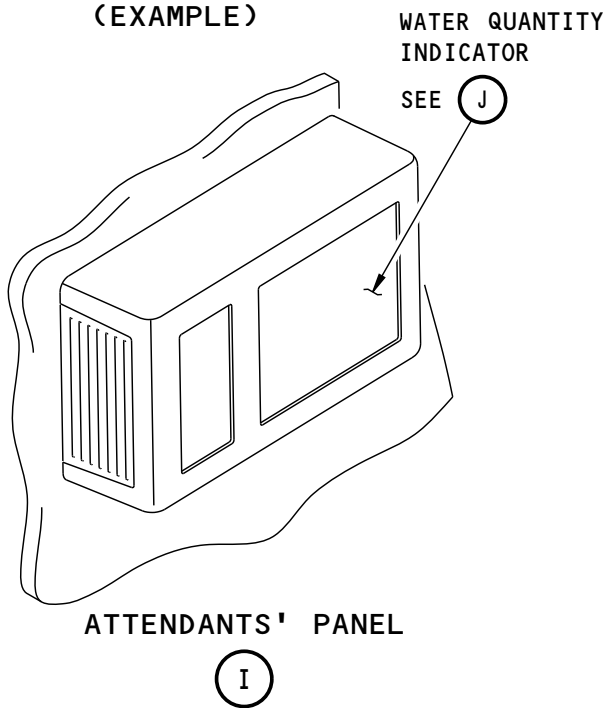
D633A103-SIA

Page 306
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



**ENTRY DOOR
 (EXAMPLE)**



WATER QUANTITY INDICATOR

(J)

L91570 S0006744941_V3

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

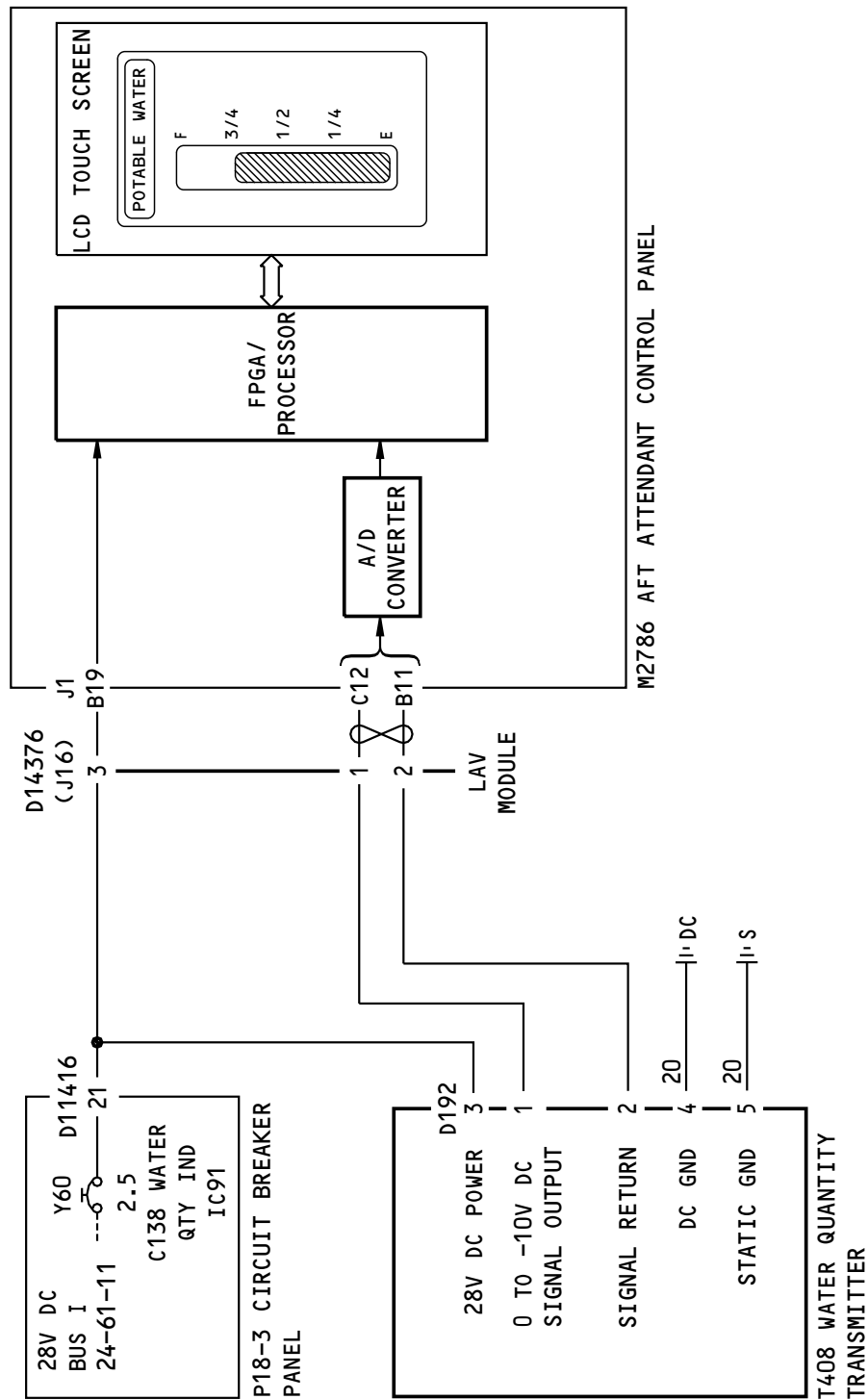
EFFECTIVITY
 SIA ALL

38-10 TASK SUPPORT

D633A103-SIA

Page 307
 Jun 15/2022

737-600/700/800/900
FAULT ISOLATION MANUAL



Water Indication System Simplified Schematic
Figure 302/38-10-00-990-804

2107352 S0000450240_V1

EFFECTIVITY
SIA ALL

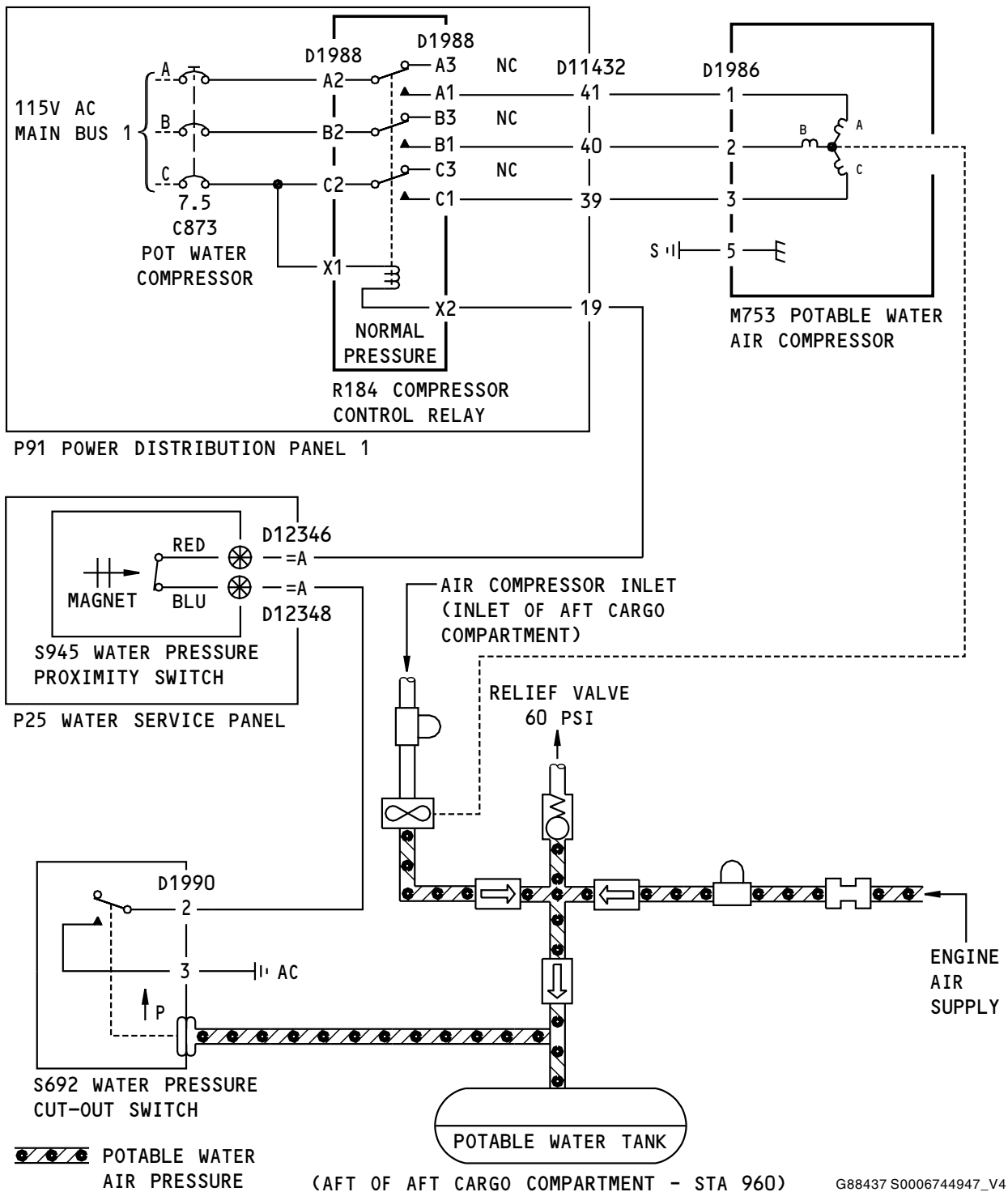
38-10 TASK SUPPORT

D633A103-SIA

Page 308
Oct 15/2021



737-600/700/800/900 FAULT ISOLATION MANUAL



Water Pressurization System Simplified Schematic
Figure 303/38-10-00-990-803

EFFECTIVITY
SIA ALL

38-10 TASK SUPPORT

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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

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

- (2) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
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

 WARNING	SEAL THE CARGO COMPARTMENT WITH THE LINING. OBEY THE INSTRUCTIONS IN THE SPECIFIED PROCEDURE WHEN YOU INSTALL THE LINING. IF YOU INSTALL THE LINING INCORRECTLY, THE 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
SIA ALL

38-30 TASK 801

D633A103-SIA

Page 201
Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (2) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
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** —————

EFFECTIVITY
SIA ALL

D633A103-SIA

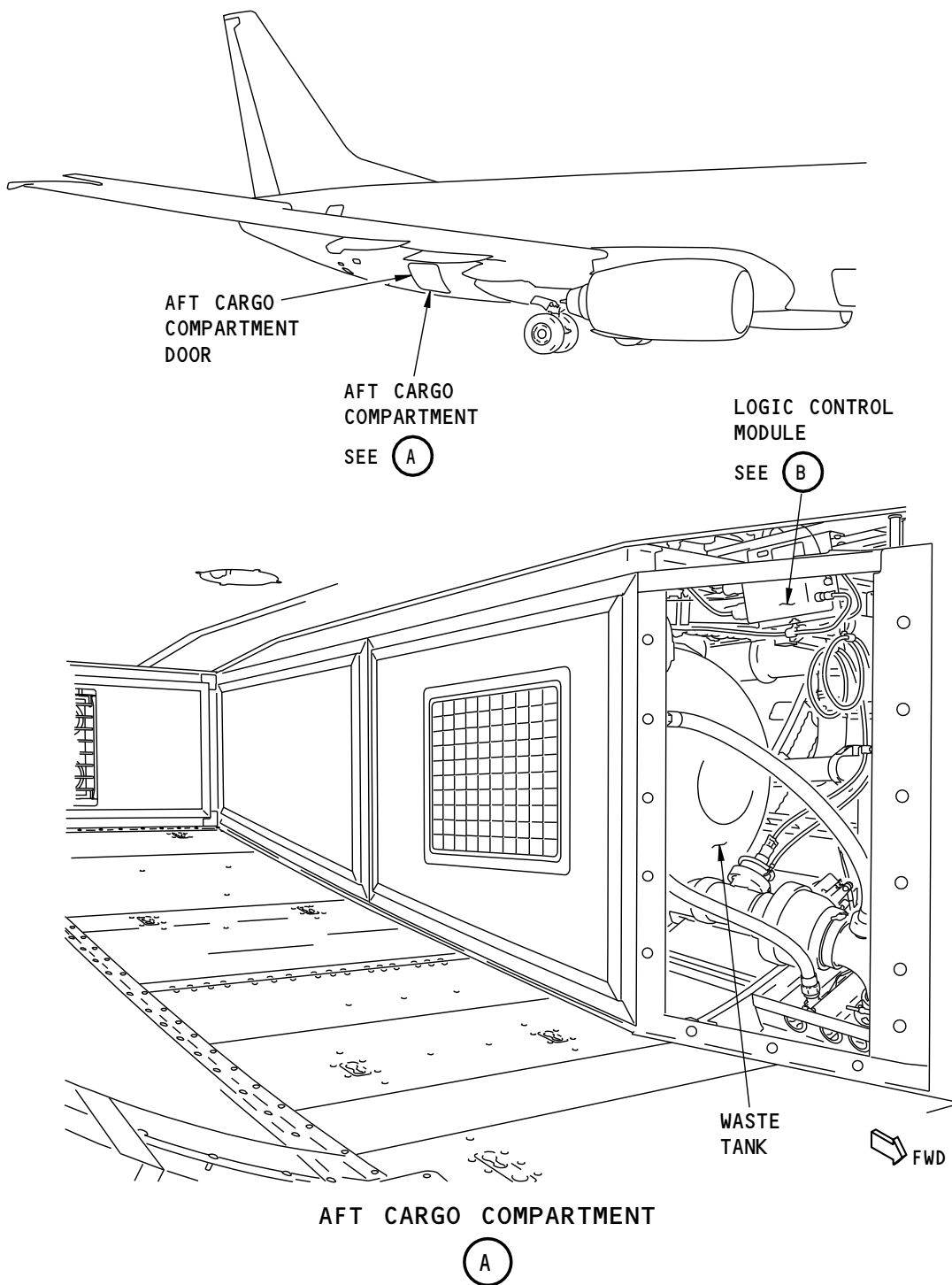
ECCN 9E991 BOEING PROPRIETARY - See title page for details

38-30 TASK 801

Page 202
Oct 15/2021



737-600/700/800/900
FAULT ISOLATION MANUAL



G41381 S0000147193_V1

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

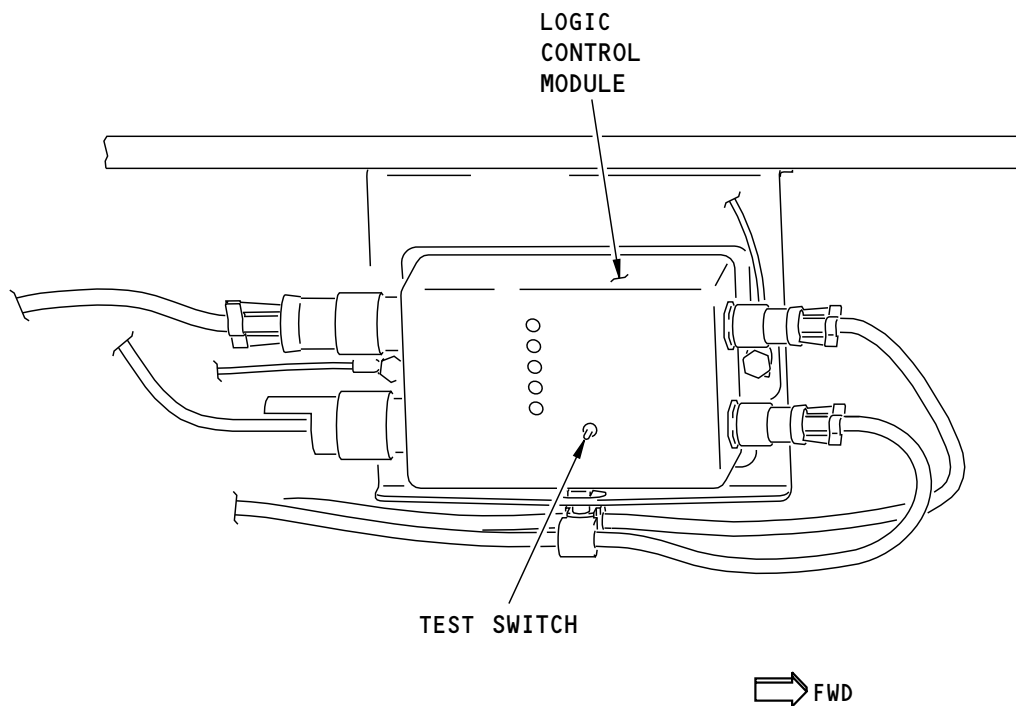
EFFECTIVITY
SIA ALL

38-30 TASK 801

D633A103-SIA

Page 203
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



LOGIC CONTROL MODULE

(B)

G41383 S0000147194_V1

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

EFFECTIVITY
SIA ALL

38-30 TASK 801

D633A103-SIA

Page 204
 Oct 15/2021



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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

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

C. LAVS INOP BITE Test

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

EFFECTIVITY
SIA ALL

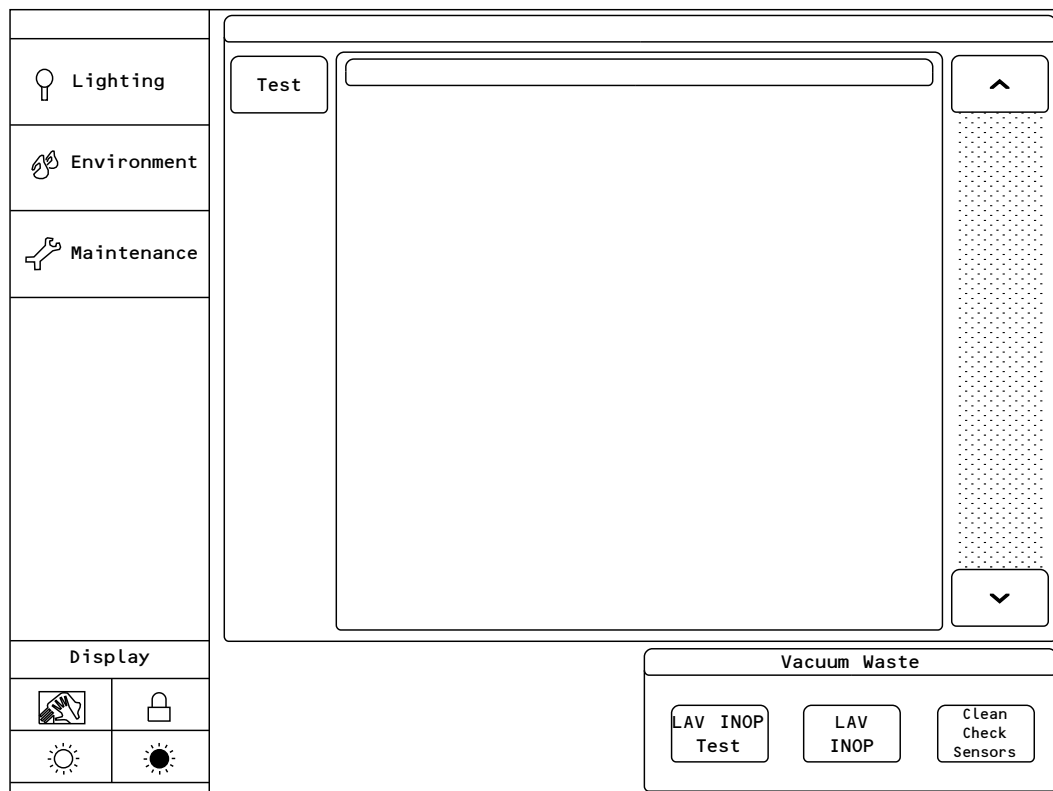
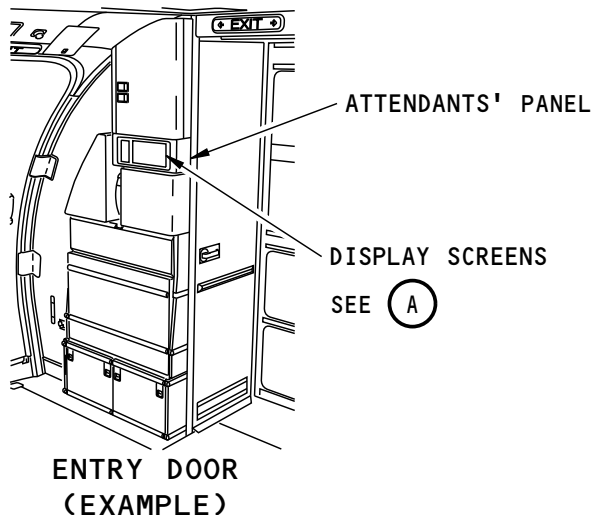
D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

38-30 TASK 802

Page 205
Feb 15/2023

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



MAINTENANCE DISPLAY, AFT ACP
(V4 SOFTWARE VERSION)

(A)

3022267 S0000794556_V1

Attendant's Panel Waste Quantity Indicator Operational Test
Figure 202/38-30-00-990-809 (Sheet 1 of 4)

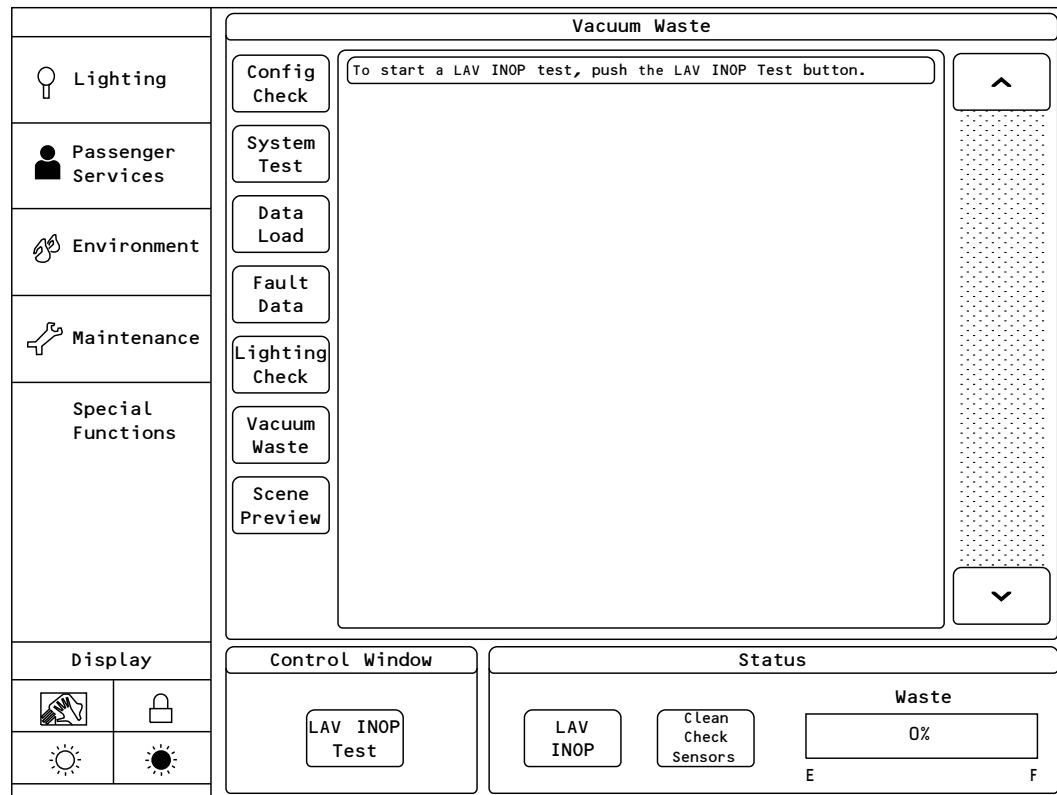
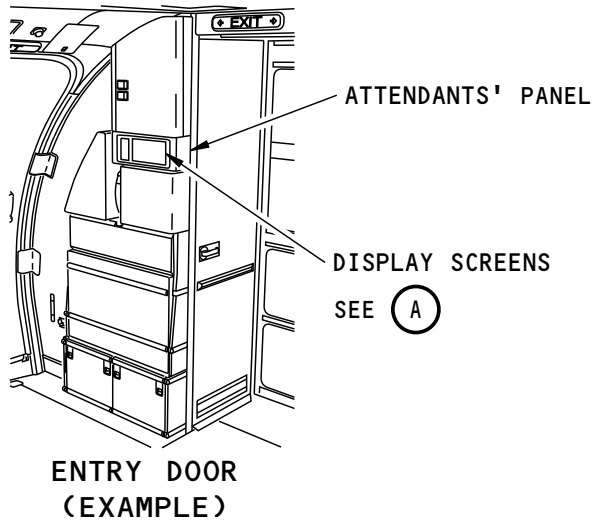
EFFECTIVITY
SIA ALL

38-30 TASK 802

D633A103-SIA

Page 206
Feb 15/2023

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



MAINTENANCE DISPLAY, FORWARD ACP
(V5 SOFTWARE VERSION)

(A)

3022268 S0000794557_V1

Attendant's Panel Waste Quantity Indicator Operational Test
Figure 202/38-30-00-990-809 (Sheet 2 of 4)

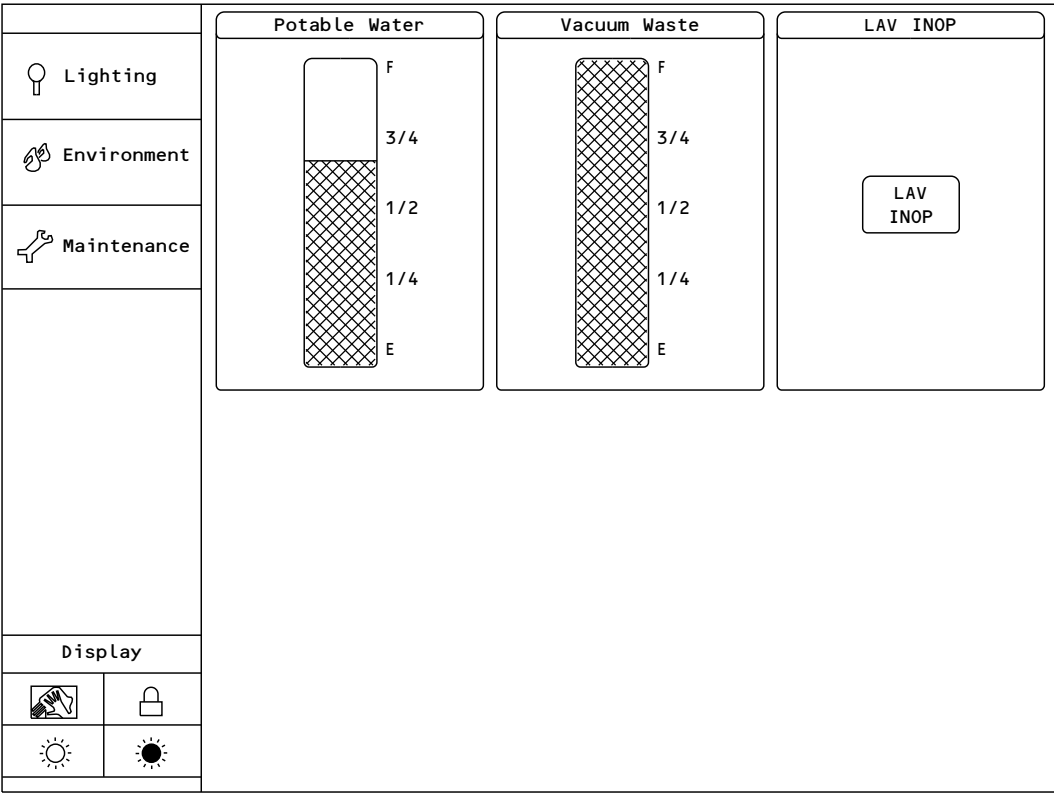
EFFECTIVITY
SIA ALL

38-30 TASK 802

D633A103-SIA

Page 207
Feb 15/2023

737-600/700/800/900
FAULT ISOLATION MANUAL



ENVIRONMENT DISPLAY, AFT ACP
(V4 SOFTWARE VERSION)

A

3022269 S0000794558_V1

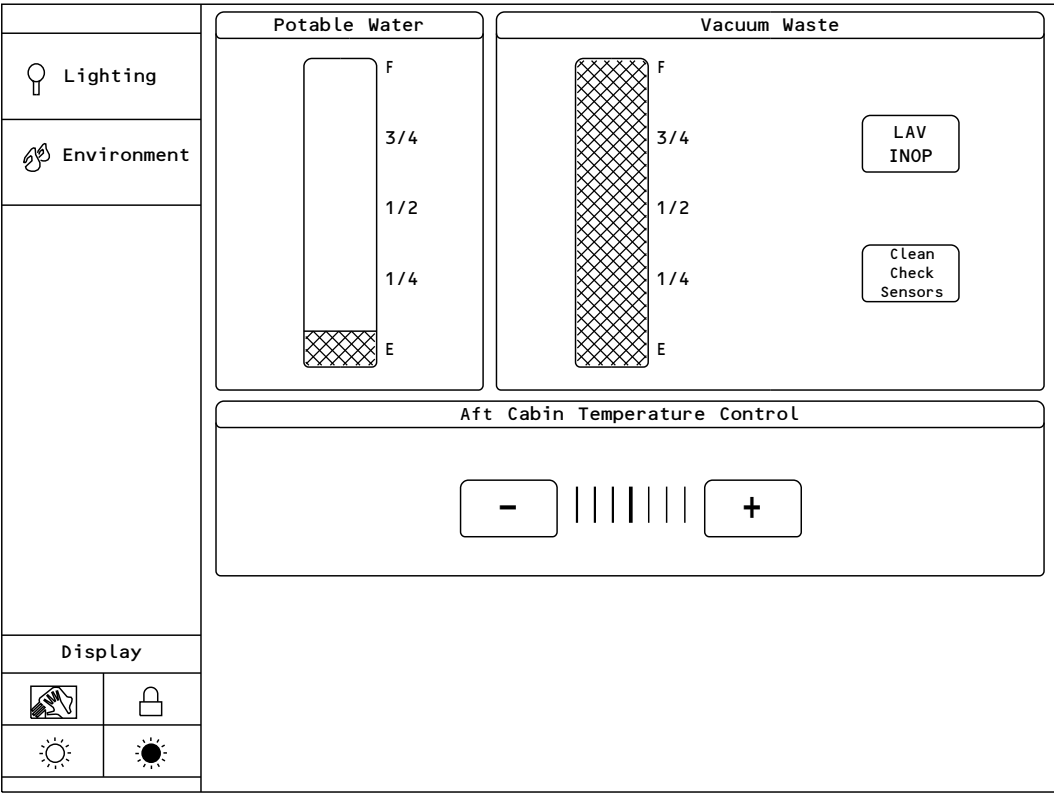
Attendant's Panel Waste Quantity Indicator Operational Test
Figure 202/38-30-00-990-809 (Sheet 3 of 4)

EFFECTIVITY

SIA ALL

38-30 TASK 802

737-600/700/800/900
FAULT ISOLATION MANUAL



ENVIRONMENT DISPLAY, AFT ACP
(V5 SOFTWARE VERSION)

A

3022270 S0000794559_V1

Attendant's Panel Waste Quantity Indicator Operational Test
Figure 202/38-30-00-990-809 (Sheet 4 of 4)

EFFECTIVITY
SIA ALL

38-30 TASK 802



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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
SIA ALL

38-30 TASK 803

D633A103-SIA

Page 210
Feb 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

- 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.
 - 1) 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).

EFFECTIVITY
SIA ALL

38-30 TASK 803

D633A103-SIA

Page 211
Feb 15/2023



737-600/700/800/900
FAULT ISOLATION MANUAL

D13428

D13428	J1
D13428	J1
A	A
C	C
D	D
E	E
F	F

D13430

D13430	J2
D13430	J2
A	A
C	C
D	D
E	E
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

- (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.

EFFECTIVITY
SIA ALL

38-30 TASKS 803-808

D633A103-SIA

Page 212
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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.
 - 1) 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
 - 1) 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:

EFFECTIVITY
SIA ALL

38-30 TASK 808

D633A103-SIA

Page 213
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (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).

D13432	J3
B	B
C	C
D	D
E	E
F	F
G	G
L	L
M	M
P	P
R	R
S	S
U	U
V	V
X	X
Z	Z
A-	A -
B-	B -
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.

EFFECTIVITY
SIA ALL

38-30 TASK 808

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 214
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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.
 - 1) If the waste indicator reads empty, and the CLEAN/CHECK SENSOR and LAV INOP lights are off, then you corrected the fault.

EFFECTIVITY
SIA ALL

38-30 TASKS 808-809

D633A103-SIA

Page 215
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (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.
 - 2) 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 38-32-00-160-805.
 - (b) To do LCM BITE Test again, do this task: LCM BITE Procedure, 38-30 TASK 801.
 - 1) 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.
 - 1) If the TANK FULL does not show a fault indication after the LCM BITE Test, then you corrected the fault.

————— **END OF TASK** —————

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

EFFECTIVITY
SIA ALL

38-30 TASKS 809-810

D633A103-SIA

Page 216
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<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 (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
 - Flush Valve Installation, AMM TASK 38-32-01-400-808-001
- (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.

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.

EFFECTIVITY
SIA ALL

38-30 TASK 810

D633A103-SIA

Page 217
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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.
 - 1) 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.
 - 1) 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.
- (4) 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.
- (5) 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.
- (6) 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

EFFECTIVITY
SIA ALL

38-30 TASKS 810-811

D633A103-SIA

Page 218
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

- (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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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:
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.

EFFECTIVITY
SIA ALL

38-30 TASK 811

D633A103-SIA

Page 219
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (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) If 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) If 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.
 - 1) 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
- (3) Clogged rinse nozzle

EFFECTIVITY
SIA ALL

38-30 TASKS 811-812

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 220
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<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.

NOTE: 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>	<u>Name/Location</u>
822	Aft Cargo Door
 - (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 tasks:
 - 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:
 - a) Do this task: Waste Tank Enclosure Panel - Installation, AMM TASK 25-52-20-400-801.
 - b) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
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.

EFFECTIVITY
SIA ALL

38-30 TASK 812

D633A103-SIA

Page 221
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (a) If the rinse filter is clogged, do one of these steps:
 - 1) 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
 - 3) 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.
 - 1) To complete this task, do this task: Waste Tank Rinse Nozzle Installation, AMM TASK 38-32-10-400-801.
 - a) 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.
 - a) 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

EFFECTIVITY
SIA ALL

38-30 TASKS 812-813

D633A103-SIA

Page 222
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	19	C01423	VACUUM WASTE
E	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>	<u>Name/Location</u>
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.
 - (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

EFFECTIVITY
SIA ALL

38-30 TASK 813

D633A103-SIA

Page 223
Oct 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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 38-32-00-160-805.
 - (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
 - (c) Inoperative flush control assembly
 - (d) Inoperative flush valve
 - (e) Waste tank water separator is blocked or saturated
 - (f) 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

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

Power Distribution Panel Number 1, P91

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

EFFECTIVITY
SIA ALL

38-30 TASKS 813-814

D633A103-SIA

Page 224
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

(Continued)

Power Distribution Panel Number 1, P91

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

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

EFFECTIVITY
SIA ALL

38-30 TASK 814

D633A103-SIA

Page 225
Oct 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

- 1) Push the flush switch on all the toilets.
 - 2) If the operation of the toilets is satisfactory, then you corrected the fault.
 - 3) If 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 38-32-01-000-801-001.
 - (b) Push the flush switch for the toilet.
 - (c) Make sure the flush valve opens for approximately 4 seconds and then closes.
 - 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.
 - 2) If the toilet has a blockage, do this task: Toilet Blockage Removal, AMM TASK 38-32-00-160-801.
 - 3) Push the flush switch for the toilet.
 - 4) If the operation of the toilet is satisfactory, then you corrected the fault.
 - 5) 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	Col	Number	Name
C	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.
 - c) If the flow of rinse water fully stops after approximately 1.7 seconds, then there was an intermittent fault.
 - 2) If the flow of rinse water does not stop, then continue.
- (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
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001
 - 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 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.

EFFECTIVITY
SIA ALL

38-30 TASK 814

D633A103-SIA

Page 226
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (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
 - Rinse Valve Installation, AMM TASK 38-32-01-400-812-001
 - 2) Push the flush switch for the toilet.
 - 3) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.

————— **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

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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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)

EFFECTIVITY
SIA ALL

38-30 TASKS 814-815

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 227
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

E. Initial Evaluation

- (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

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01388	VACUUM WASTE CONT
- (c) If the other toilet operation is not satisfactory, make sure the waste tank is not full.
 - 1) If the waste tank is full, do this task: Waste Tank Servicing, AMM TASK 12-17-01-610-801.
 - 2) If the waste tank is not full, 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 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) If 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 38-32-01-000-801-001.
 - (b) Push the flush switch for the toilet.
 - (c) Make sure the flush valve opens for approximately 4 seconds and then closes.

EFFECTIVITY
SIA ALL

38-30 TASK 815

D633A103-SIA

Page 228
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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.
 - 2) If the toilet has a blockage, do this task: Toilet Blockage Removal, AMM TASK 38-32-00-160-801.
 - 3) Push the flush switch for the toilet.
 - 4) 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 TASK

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
- (2) Inoperative flush control assembly

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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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:

EFFECTIVITY
SIA ALL

38-30 TASKS 815-816

D633A103-SIA

Page 229
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 1) This is the circuit breaker:

Power Distribution Panel Number 1, P91

<u>Row</u>	<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:
- 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.
- (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
 - 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.
 - 4) 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
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001
 - 2) Push the flush switch for the toilet.
 - 3) Make sure that the flow of rinse water stops after approximately 1.7 seconds.
 - 4) If the flow of rinse water stops after approximately 1.7 seconds, then you corrected the fault.
- (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.
 - 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.
 - b) If there is a blockage in the toilet, do this task: Toilet Blockage Removal, AMM TASK 38-32-00-160-801.
 - c) Push the flush switch for the toilet.
 - d) Make sure that the air noise starts after approximately 2 seconds and then stops after approximately 4 more seconds.
 - e) 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.
- (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

EFFECTIVITY
SIA ALL

38-30 TASK 816

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 230
Feb 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

- 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.
 - c) 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
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001
 - 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.

END OF TASK

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

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

Power Distribution Panel Number 1, P91

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

EFFECTIVITY
SIA ALL

38-30 TASKS 816-817

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 231
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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.
 - 1) 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) If 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 TASK** —————

818. Lavatory Sink Drain Stopper Inoperative - Fault Isolation

A. Description

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

EFFECTIVITY
SIA ALL

38-30 TASKS 817-818

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 232
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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 38-11-05-000-806
 - 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 38-11-05-820-806.
 - (a) Push the button on the faucet to operate the drain valve assembly.
 - 1) If the drain valve assembly does not close, then replace the drain valve assembly. These are the tasks:
 - Drain Valve Assembly Removal, AMM TASK 38-11-05-000-806
 - 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.

————— **END OF TASK** —————

819. Sink Drain Plugged - Fault Isolation

A. Description

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

B. Possible Causes

- (1) Clogged Galley Sink Drain Line Strainer
- (2) Inoperative Drain Line Heater
- (3) Inoperative Drain Mast Heater
- (4) Clogged Drain Line
- (5) Clogged Drain Mast

EFFECTIVITY
SIA ALL

38-30 TASKS 818-819

D633A103-SIA

Page 233
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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

<u>Number</u>	<u>Name/Location</u>
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.
 - 2) 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:
 - 1) 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.
- (3) 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.

EFFECTIVITY
SIA ALL

38-30 TASK 819

D633A103-SIA

Page 234
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 2) Remove the clogged drain line.
- 3) 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.
- 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:
 - 1) 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:

<u>Number</u>	<u>Name/Location</u>
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 flows 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.
- (2) The toilet flush control unit is defective.
- (3) The toilet flush valve is obstructed.
- (4) The toilet assembly, or a toilet subassembly, is defective.

EFFECTIVITY
SIA ALL

38-30 TASKS 819-820

D633A103-SIA

Page 235
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (5) The vacuum waste branch tube for the individual toilet is blocked.
- (6) 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



WARNING

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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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.
 - 1) 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.
 - 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.

EFFECTIVITY
SIA ALL

38-30 TASK 820

D633A103-SIA

Page 236
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (b) Make sure that the flush valve opens and then closes.
 - 1) 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.
 - 1) If the rinse and flush valves operate satisfactorily and the vacuum blower does not operate, one of these is defective:
 - The flush control module
 - The vacuum waste tube (blocked)
 - The wire bundle

NOTE: 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

- (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 (General) Yokohama Rubber Co., AMM TASK 38-32-04-000-803
 - 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:
 - 1) Install the collar assembly.
 - (g) If the toilet operation is not satisfactory continue the procedure.
- (2) 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

EFFECTIVITY
SIA ALL

D633A103-SIA

38-30 TASK 820

Page 237
Feb 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

AMM TASK 38-32-02-400-801

- 2) Push the flush switch on all the toilets.
- 3) If the operation of the toilets is satisfactory, then you corrected the fault.
- 4) If 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.
- (3) Do this Task to remove the toilet shroud: AMM TASK 38-32-01-000-801-001
- (4) 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 15 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.
- (5) 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
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001
 - (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.
- (6) Do this test of the rinse valve:

EFFECTIVITY
SIA ALL

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

38-30 TASK 820

Page 238
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (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.

- 1) Disconnect the rinse valve connector J1 from the flush control unit.
- 2) Push and hold the flush switch for the toilet.
- 3) 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
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001
- 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
 - 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.

- (7) Do this test of the flush valve:

- (a) Push the flush switch for the toilet.
- (b) 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

- (c) 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:

- 1) Disconnect the connector J2, for the flush motor power, from the flush control module.
- 2) Push and hold the flush switch for the toilet.
- 3) 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
 - Flush Control Assembly Installation, AMM TASK 38-32-01-400-806-001
 - 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
 - Flush Valve Installation, AMM TASK 38-32-01-400-808-001

EFFECTIVITY
SIA ALL

38-30 TASK 820

D633A103-SIA

Page 239
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 4) 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.

H. Restore the airplane to its usual condition.

- (1) Do this task: Toilet Shroud Installation, AMM TASK 38-32-01-400-801-001.
- (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

EFFECTIVITY
SIA ALL

38-30 TASKS 820-821

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 240
Feb 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

C. Circuit Breakers



WARNING

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

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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>	<u>Name/Location</u>
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.

EFFECTIVITY
SIA ALL

38-30 TASK 821

D633A103-SIA

Page 241
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- (d) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
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

EFFECTIVITY
SIA ALL

38-30 TASK 821

D633A103-SIA

Page 242
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- 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):

**VACUUM
BLOWER
D11718**

pin 6 GND

- 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:

EFFECTIVITY
SIA ALL

38-30 TASK 821

D633A103-SIA

Page 243
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

**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

**VACUUM
BLOWER
CONNECTOR**

- (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.
 - 1) If there is 28 VDC at the pin 23 of receptacle D11434, then do a check for continuity as follows:

**P91 POWER
DISTRIBUTION
PANEL
D11434**

pin 23 pin 5

**VACUUM
BLOWER
D11718**

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

EFFECTIVITY
SIA ALL

38-30 TASK 821

D633A103-SIA

Page 244
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

- <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** ————

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

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

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

EFFECTIVITY
SIA ALL

38-30 TASKS 821-822

D633A103-SIA

Page 245
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

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.
 - 1) 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 indicator again.
 - 1) If the waste indicator is at or near E, then you corrected the fault.

————— **END OF TASK** —————

823. Service Panel - Sensor Fouled Light - Fault Isolation

A. Description

- (1) (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

EFFECTIVITY
SIA ALL

38-30 TASKS 822-823

D633A103-SIA

Page 246
Feb 15/2023



737-600/700/800/900 FAULT ISOLATION MANUAL

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

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

Power Distribution Panel Number 1, P91

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	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.
- (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).

EFFECTIVITY
SIA ALL

38-30 TASK 823

D633A103-SIA

Page 247
Feb 15/2023



**737-600/700/800/900
FAULT ISOLATION MANUAL**

D13428

D13428	J1
D13428	J1
A	A
C	C
D	D
E	E
F	F

D13430

D13430	J2
D13430	J2
A	A
C	C
D	D
E	E
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** ————

EFFECTIVITY
SIA ALL

38-30 TASK 823

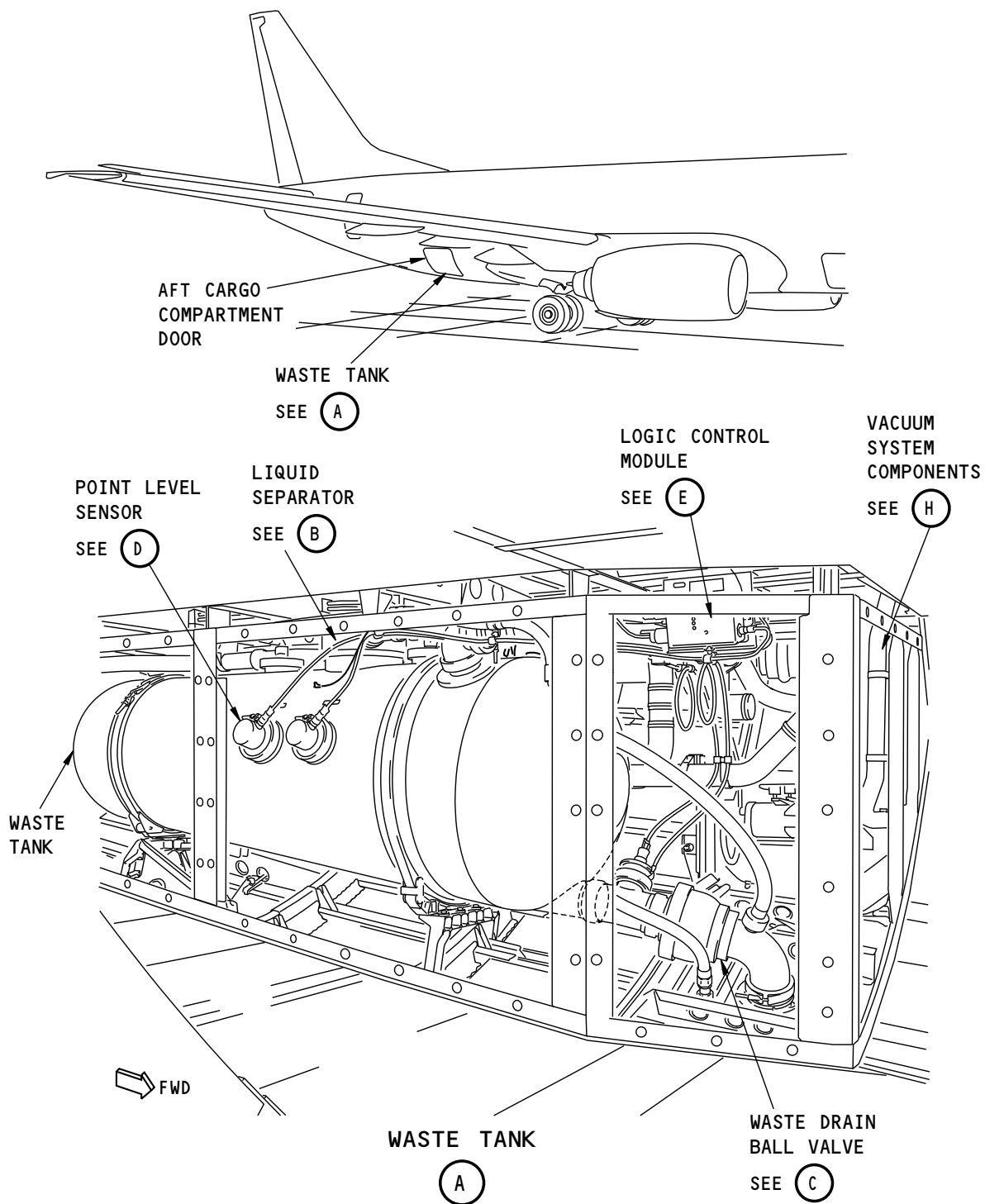
D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Page 248
Feb 15/2023



737-600/700/800/900
FAULT ISOLATION MANUAL



G57635 S0006744975_V1

Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 1 of 8)

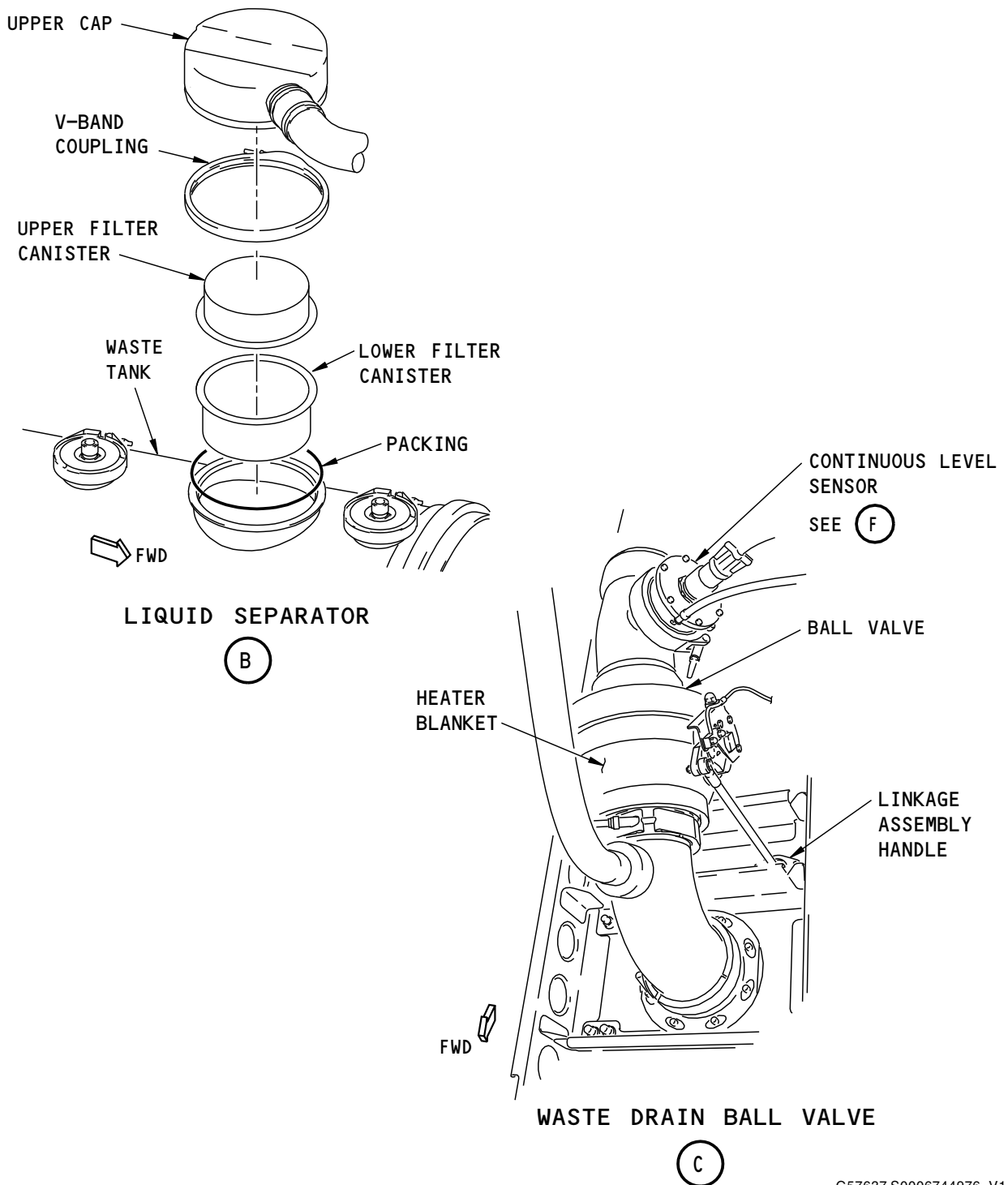
EFFECTIVITY
SIA ALL

38-30 TASK SUPPORT

D633A103-SIA

Page 301
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



G57637 S0006744976_V1

Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 2 of 8)

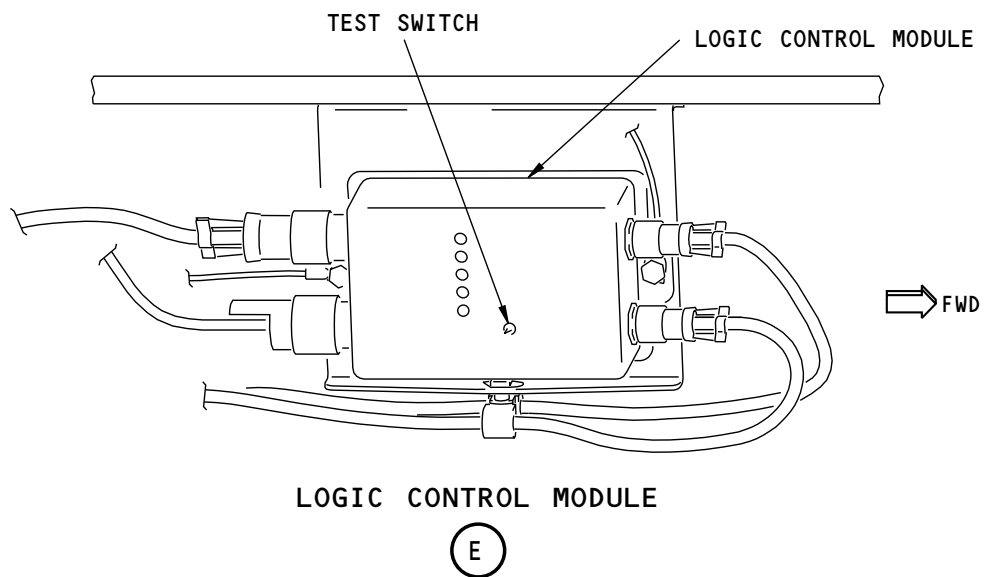
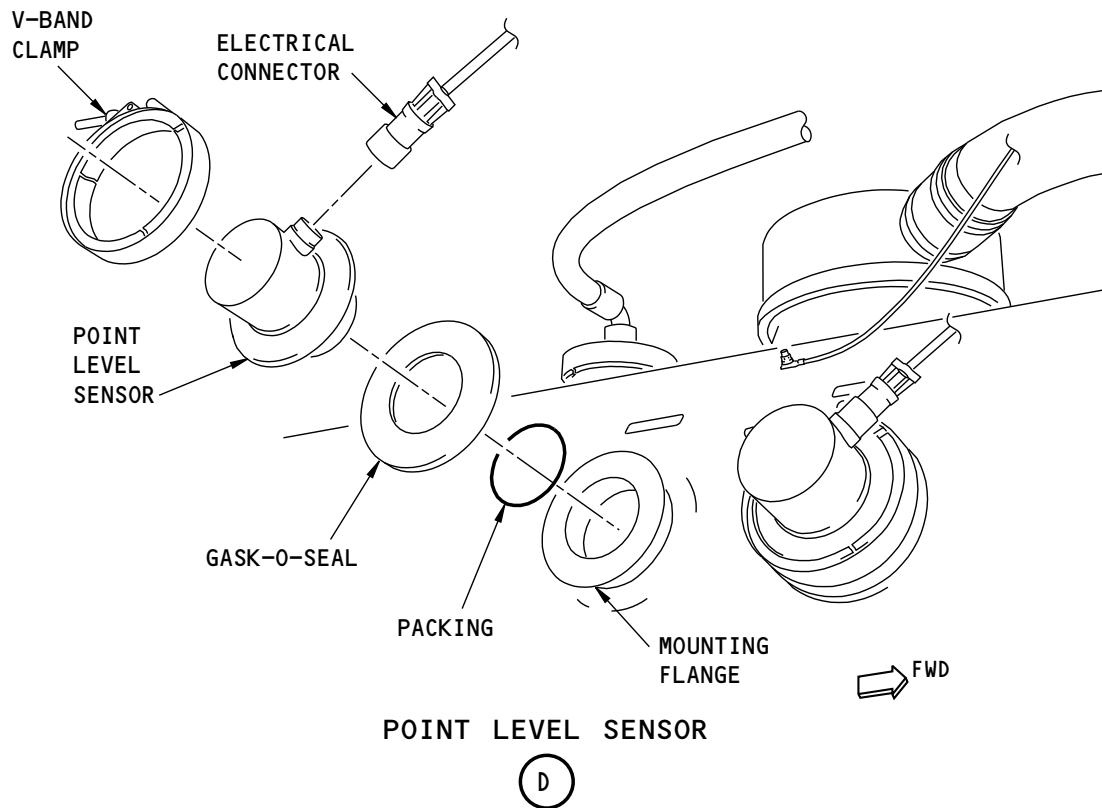
EFFECTIVITY
SIA ALL

38-30 TASK SUPPORT

D633A103-SIA

Page 302
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



G57749 S0006744977_V1

Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 3 of 8)

EFFECTIVITY SIA ALL

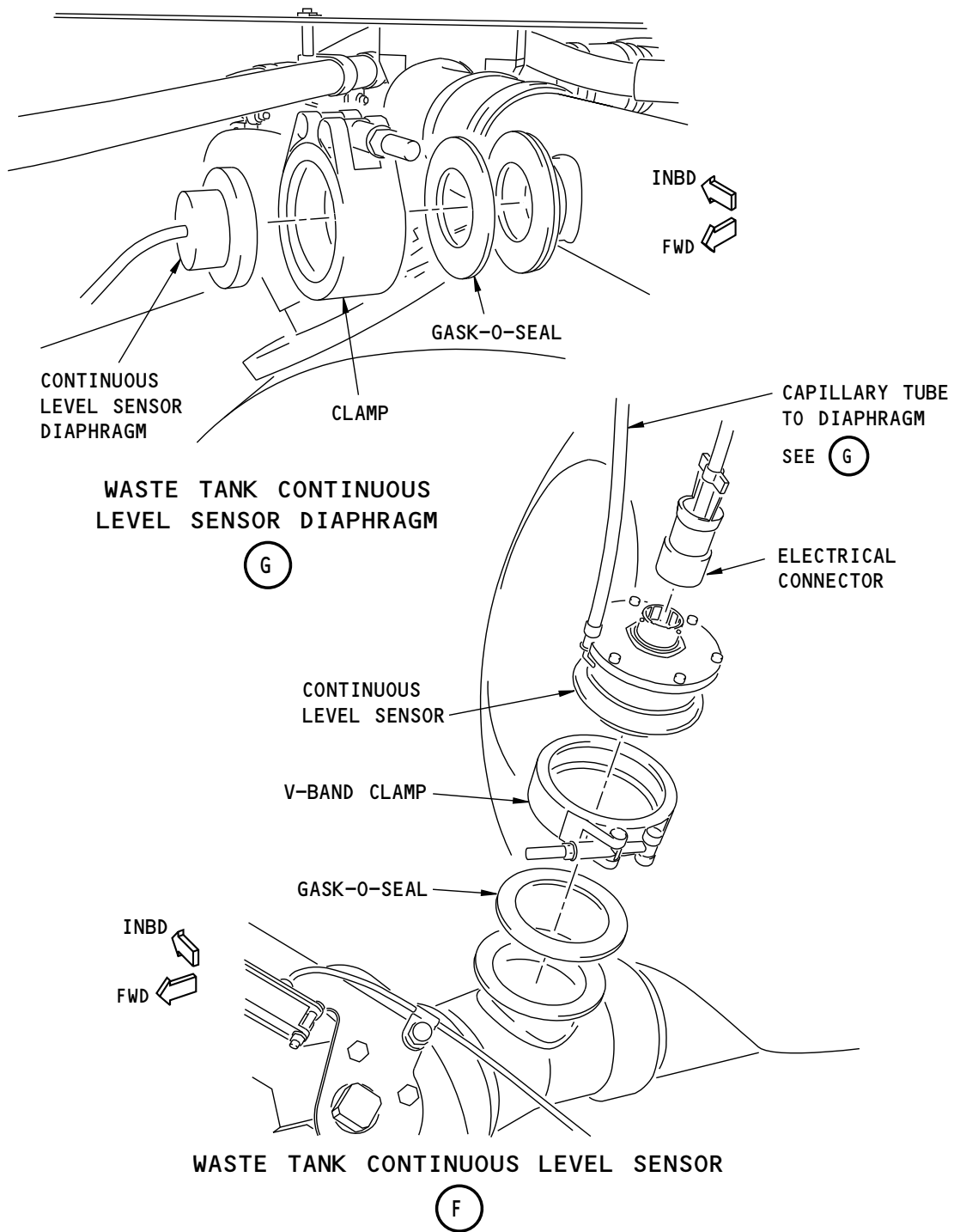
38-30 TASK SUPPORT

Page 303
 Oct 15/2021

D633A103-SIA



737-600/700/800/900
FAULT ISOLATION MANUAL



G57756 S0006744978_V1

Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 4 of 8)

EFFECTIVITY
SIA ALL

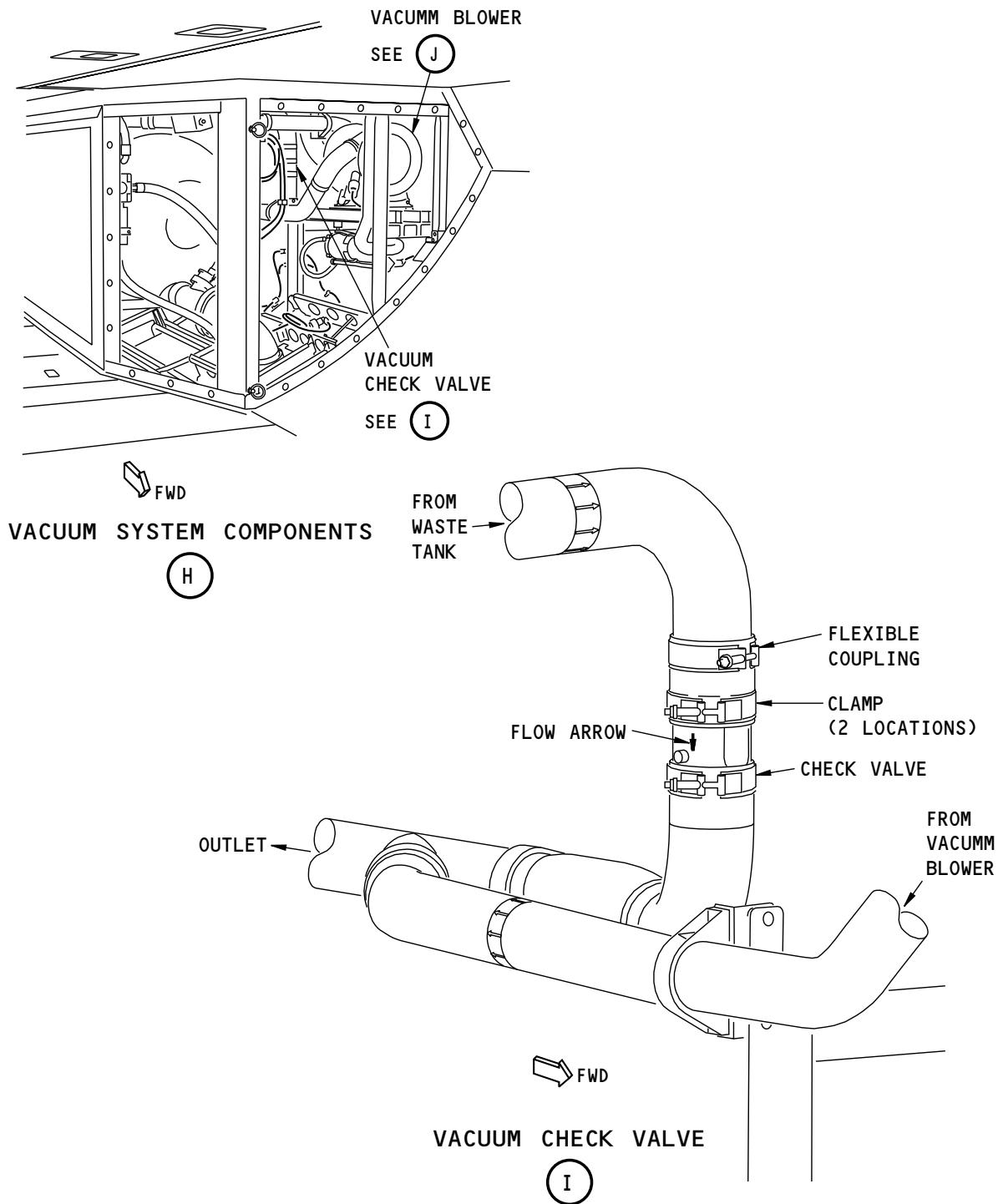
38-30 TASK SUPPORT

D633A103-SIA

Page 304
Oct 15/2021



737-600/700/800/900
FAULT ISOLATION MANUAL



G57776 S0006744979_V1

Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 5 of 8)

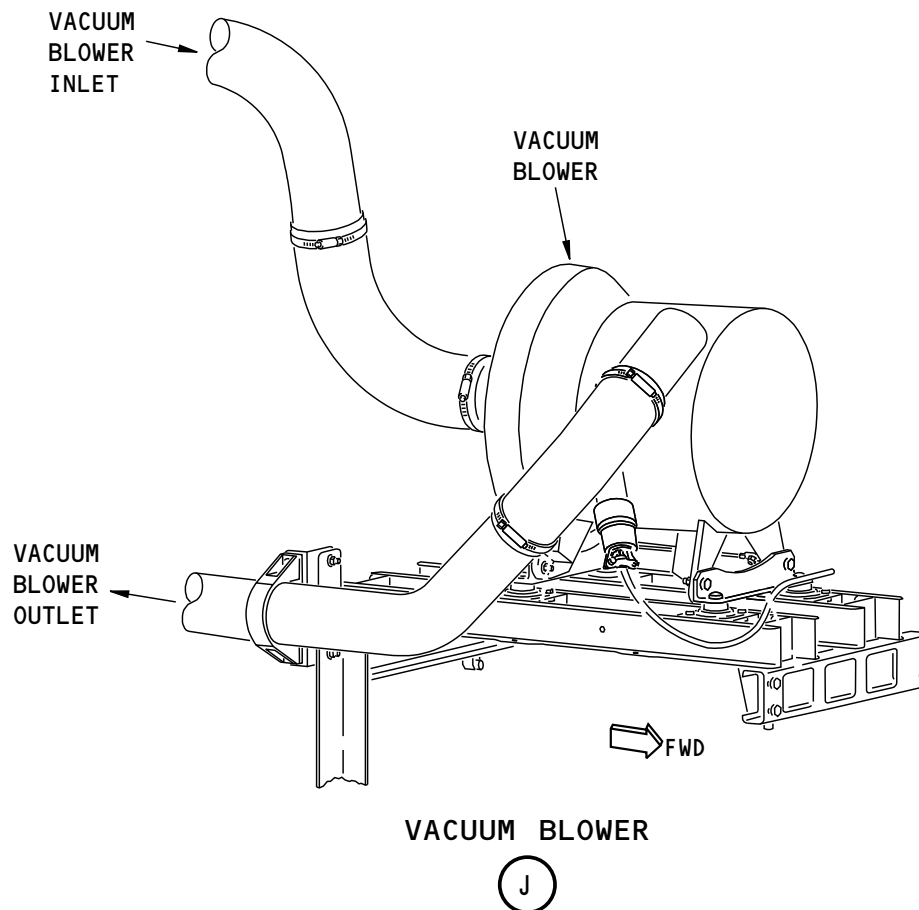
EFFECTIVITY
SIA ALL

38-30 TASK SUPPORT

D633A103-SIA

Page 305
Oct 15/2021

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



G58162 S0006744980_V2

Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 6 of 8)

EFFECTIVITY SIA ALL

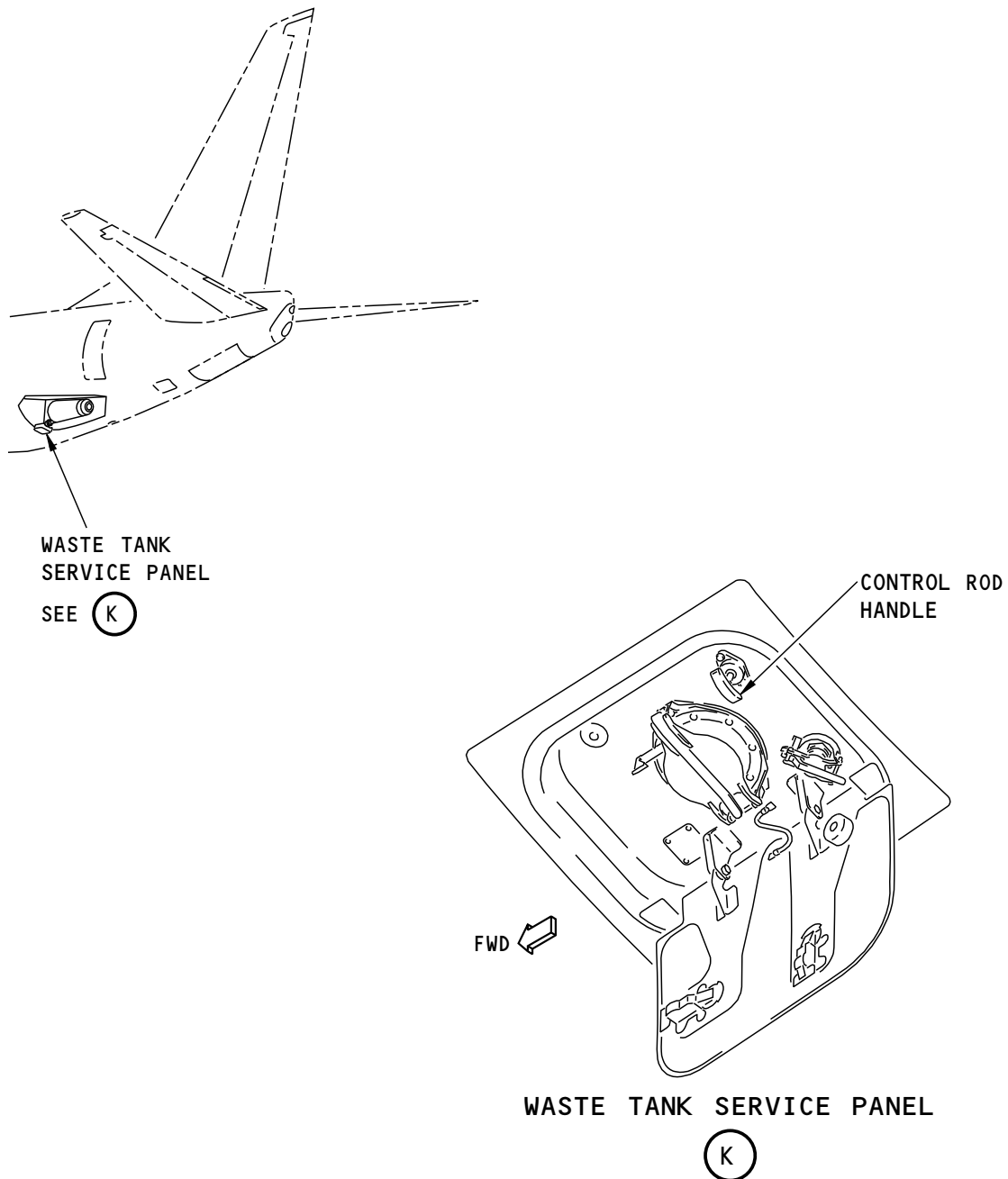
38-30 TASK SUPPORT

Page 306
 Oct 15/2021

D633A103-SIA

ECCN 9E991 BOEING PROPRIETARY - See title page for details

BOEING
737-600/700/800/900
FAULT ISOLATION MANUAL



G58170 S0006744982_V2

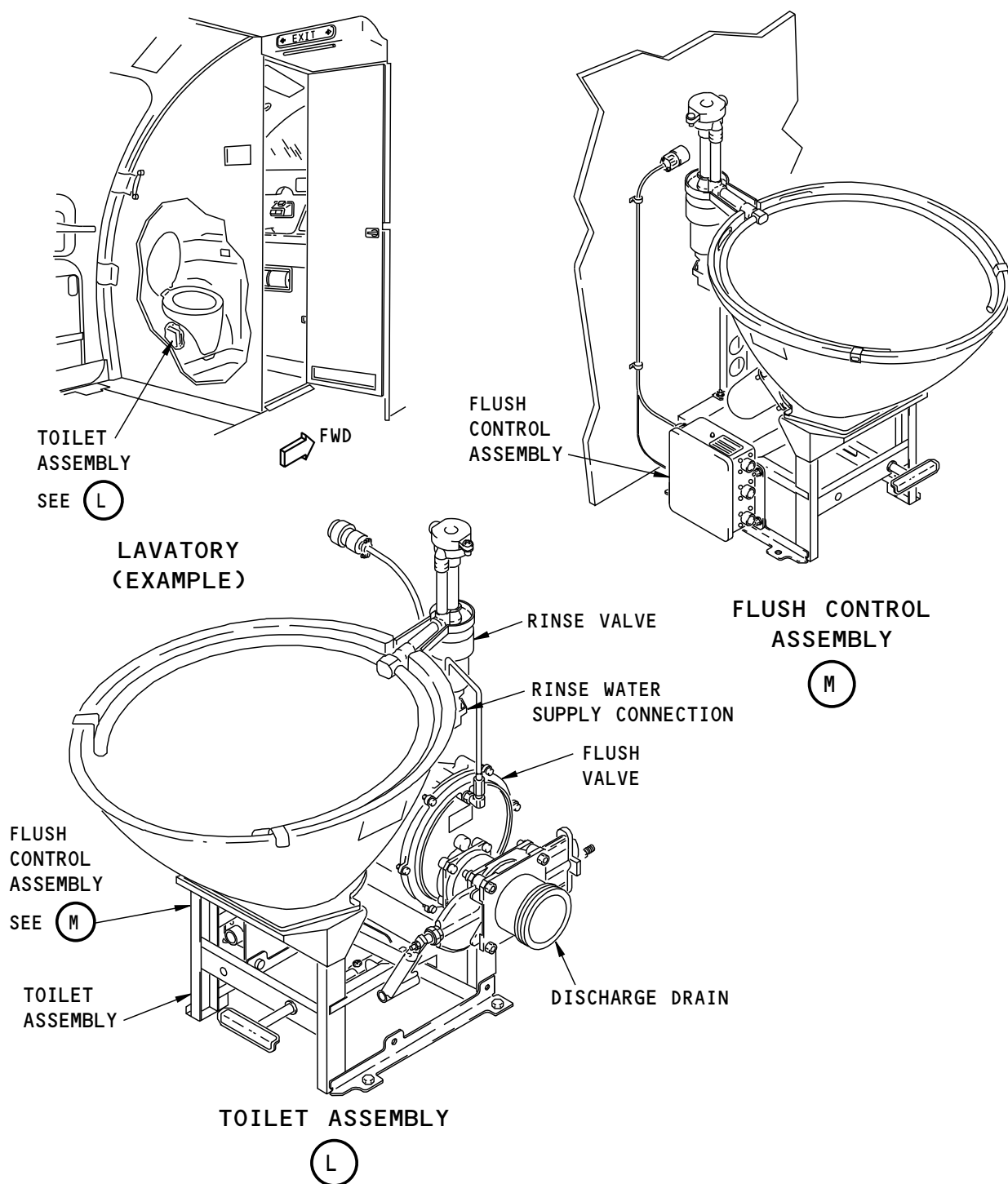
Waste System Component Location
Figure 301/38-30-00-990-801 (Sheet 7 of 8)

EFFECTIVITY
SIA ALL

38-30 TASK SUPPORT

D633A103-SIA

Page 307
 Oct 15/2021



G58222 S0006744983_V2

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

EFFECTIVITY
SIA ALL

38-30 TASK SUPPORT

D633A103-SIA

Page 308
Oct 15/2021

