TECHNICAL MANUAL

JOB GUIDE ORGANIZATIONAL MAINTENANCE

SERVICING WATER/WASTE

(12-38-00 THROUGH 12-38-06)

300i
AIRCRAFT

MCDONNELL DOUGLAS CORPORATION
MILITARY TRANSPORT AIRCRAFT
F33657-81-C-2108
FA8526-12-D-0001

THIS MANUAL SUPERSEDES TO 1300i-2-12JG-38-1 DATED 1 NOVEMBER 2020.

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Original 0 1 Jun 21

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 222 CONSISTING OF THE FOLLOWING:

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INTRODUCTION

SCOPE.

This manual contains maintenance procedures for the servicing, draining, and purging of the water and waste system.

MODEL(S) COVERED.

All

ABBREVIATIONS.

The following is a list of non-standard abbreviations used throughout this manual:

EPC Electrical Power Center

PLCS Places

MSDS Material Safety Data Sheet

CHANGE REQUEST.

Recommendations for routine changes to this Technical Order (TO) will be on AFTO Form 22, Technical Manual (TM) Change Recommendation and Reply, in accordance with TO 00-5-1. Completed forms will be forwarded through the Command Control Point (CCP) to Boeing Airlift and Tanker, 300i Technical Publications group mailbox at 300i-techpubspcrs@boeing.com. Information copies will be sent to AFLCMC/WLMC TOMA, Robins AFB, GA.

Urgent AFTO Form 22s will be routed through the CCP to AFLCMC/WLMC TOMA, Robins AFB, GA. Emergency AFTO Form 22s will be transmitted by immediate message, e-mail, or fax to AFLCMC/WLMC TOMA. Information copies will be sent to HQ AMC/A4M, Scott AFB, IL and AFLCMC/WLMC TOMA, Robins AFB, GA.

300i TO INFORMATION.

General 300i TO/eTO and TO Manager information can be found in the Enhanced Technical Information Management System (ETIMS). 300i TO supplement and finalized AFTO Form 22 information can be found on the 300i TO System Application Site at: https://asw.robins.af.mil/afto22/AFTO22

This list of TCTO's contains all current TCTO's that affect the technical content of text or illustrations found in this manual.

TCTO NUMBER	TITLE	TCTO DATE	APPLICABILITY
1300i-2384	Modification of Crew Lavatory Toilet Tank Installation, Part No. 17P1B2402-505 to Part No. 17P1B2402-507 (Ref Des 381AA001), 300i Aircraft		$\langle \overline{AA} \rangle \rightarrow \langle \overline{MM} \rangle$

SECTION 1

GENERAL INFORMATION (12-38-00)

1-1. GENERAL INFORMATION.

- 1-2. This section provides general information that is essential for ensuring complete and safe maintenance procedures contained throughout this manual.
- 1-3. All adhesive sealants, sealants, and compounds used in this manual are listed with a primary part number and/or primary specification number. Any suitable substitutes and/or interchangeable adhesive sealants, sealants, and compounds may be used unless otherwise specified. Suitable substitutes and/or interchangeable adhesive sealants, sealants, and compounds are listed in the system peculiar corrosion control manual (Refer to TO 1300i-23, Chapter 1, Section III).

Task

SECTION 2

POTABLE WATER SERVICING (12-38-01)

GENERAL MAINTENANCE INPUT CONDITIONS:

Applicability:

	Task
All	All
Additional information:	
This procedure consists of the following	ng tasks:
01-1. Power on servicing.	
01-2. Manual servicing.	
01-3. Power on servicing after tan	k/system drain.
01-4. Manual servicing after tank/	system drain.
Additional data:	Task
TO 1300i-2-10JG-60-1	01-1, 01-3
TO 1300i-2-38JG-10-1	01-3, 01-4
Personnel recommended:	Task
One	All
Safety conditions:	Task
NA	135K

Supplies:

NA

Nomenclature

<u>PN</u>

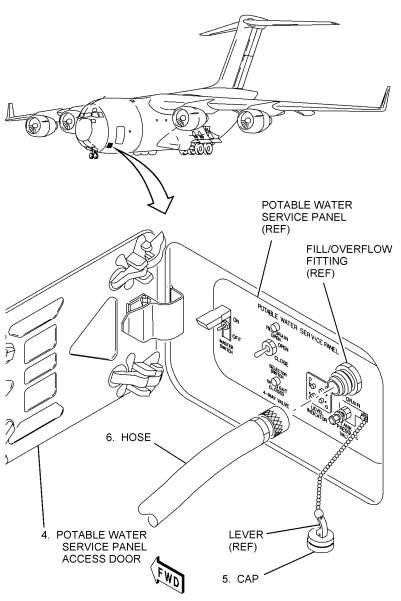
Specification

Qty

<u>Task</u>

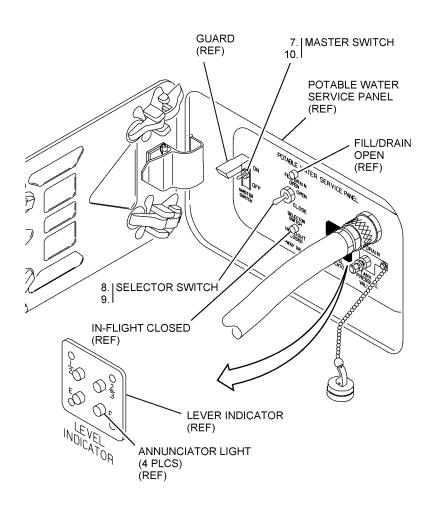
01-1. POWER ON SERVICING.

- 1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
- 2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
- 3. Connect external electrical power (10-61-01, task 01-1).
- 4. Unlatch and open potable water service panel access door (235ALD).
- 5. Pull lever and remove cap from **FILL/OVERFLOW** fitting on **POTABLE WATER SERVICE PANEL**.
- 6. Connect hose from truck to fitting or an approved water source to fitting.



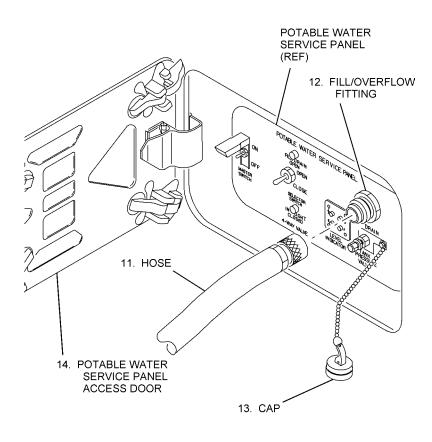
ICN-88277-G1238001-003-01

- 7. Raise guard and set MASTER SWITCH on POTABLE WATER SERVICE PANEL to ON.
- 8. Set **SELECTOR SWITCH** to **OPEN**.
 - **FILL/DRAIN OPEN** light comes on.
 - All annunciator lights on LEVEL INDICATOR come on when filled.
- 9. Set **SELECTOR SWITCH** to **CLOSE**.
 - FILL/DRAIN OPEN light goes off.
 - IN-FLIGHT CLOSED light comes on.
- 10. Set MASTER SWITCH to OFF and lower guard.
 - IN-FLIGHT CLOSED light goes off.
 - Annunciator lights go off.



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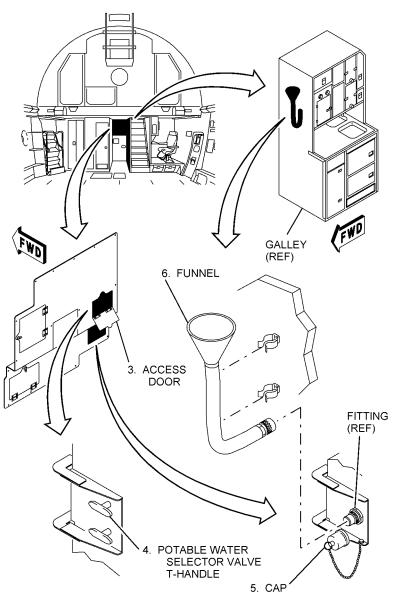
- 11. Disconnect hose from **FILL/OVERFLOW** fitting on **POTABLE WATER SERVICE PANEL**.
- 12. Allow trapped water to drain from **FILL/OVERFLOW** fitting.
- 13. Install cap on fitting.
- 14. Close and latch potable water service panel access door (235ALD).
- 15. Disconnect external electrical power (10-61-01, task 01-2).



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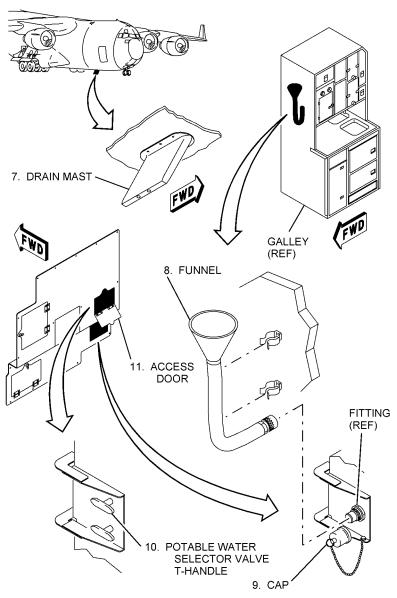
01-2. MANUAL SERVICING.

- 1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
- 2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
- 3. Unlatch and open access door (237RZD).
- 4. Pull potable water selector valve T-handle.
- 5. Remove cap from fitting.
- 6. Remove funnel from galley and connect to fitting.



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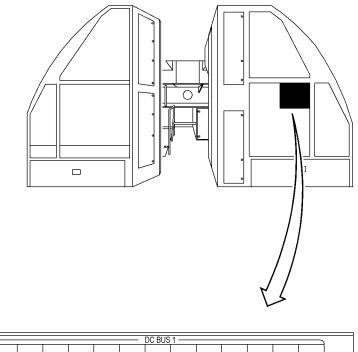
- 7. Fill potable water system until water comes out of drain mast.
- 8. Disconnect funnel from fitting and install on galley.
- 9. Install cap on fitting.
- 10. Push potable water selector valve T-handle in.
- 11. Close and latch access door (237RZD).

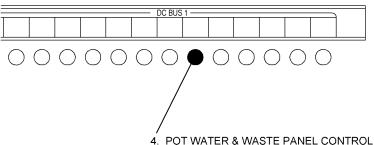


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01-3. POWER ON SERVICING AFTER TANK/ SYSTEM DRAIN.

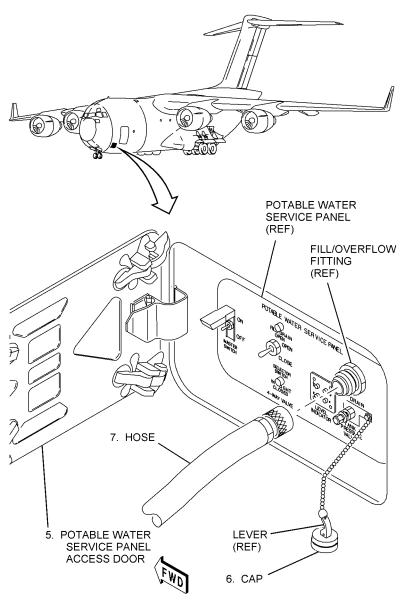
- 1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
- 2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
- 3. Connect external electrical power (10-61-01, task 01-1).
- 4. Remove warning tag and close **POT WATER & WASTE PANEL CONTROL** circuit breaker, on electrical power center, row **L**, column **61**.





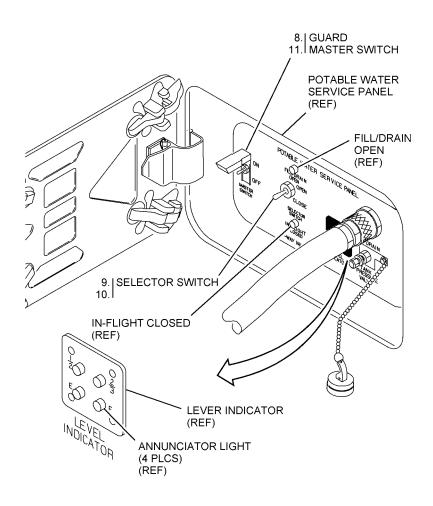
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- 5. Unlatch and open potable water service panel access door (235ALD).
- 6. Pull lever and remove cap from **FILL/OVERFLOW** fitting on **POTABLE WATER SERVICE PANEL**.
- 7. Connect hose from truck to fitting or an approved water source to fitting.



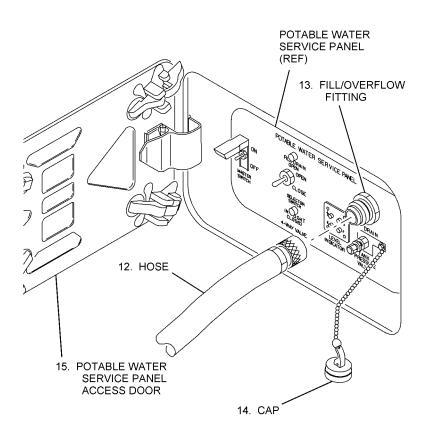
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- 8. Raise guard and set MASTER SWITCH on POTABLE WATER SERVICE PANEL to ON.
- 9. Set **SELECTOR SWITCH** to **OPEN**.
 - FILL/DRAIN OPEN light comes on.
 - All annunciator lights on LEVEL INDICATOR come on when filled.
- 10. Set **SELECTOR SWITCH** to **CLOSE**.
 - FILL/DRAIN OPEN light goes off.
 - IN-FLIGHT CLOSED light comes on.
- 11. Set MASTER SWITCH to OFF and lower guard.
 - IN-FLIGHT CLOSED light goes off.
 - Annunciator lights go off.



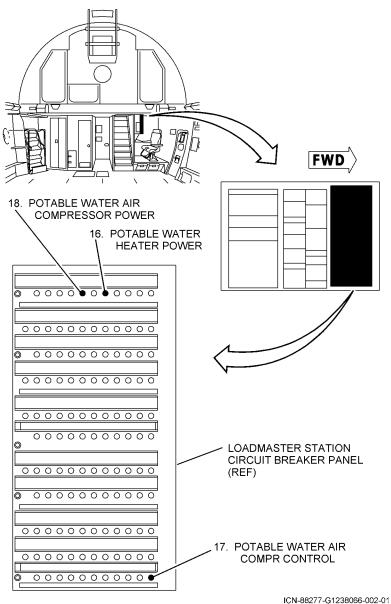
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- 12. Disconnect hose from **FILL/OVERFLOW** fitting on **POTABLE WATER SERVICE PANEL**.
- 13. Allow trapped water to drain from **FILL/OVERFLOW** fitting.
- 14. Install cap on fitting.
- 15. Close and latch potable water service panel access door (235ALD).

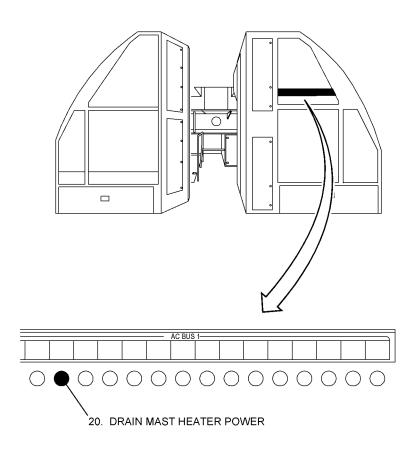


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- 16. Remove warning tag and close **POTABLE WATER HEATER POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **8**.
- 17. Remove warning tag and close **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**.
- 18. Remove warning tag and close **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **6**.
- 19. Disconnect external electrical power (10-61-01, task 01-2).



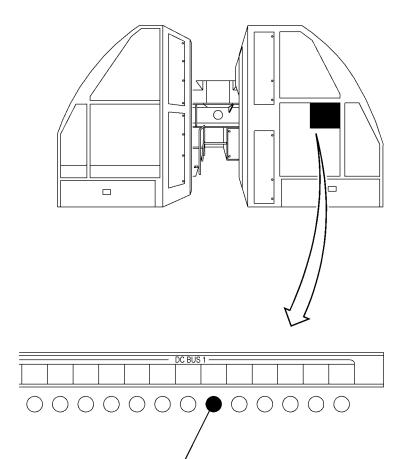
- 20. Remove warning tag and close DRAIN MAST HEATER POWER circuit breaker on electrical power center, row J, column **52**.
- 21. Perform operational checkout (38-11-01).



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01-4. MANUAL SERVICING AFTER TANK/SYSTEM DRAIN.

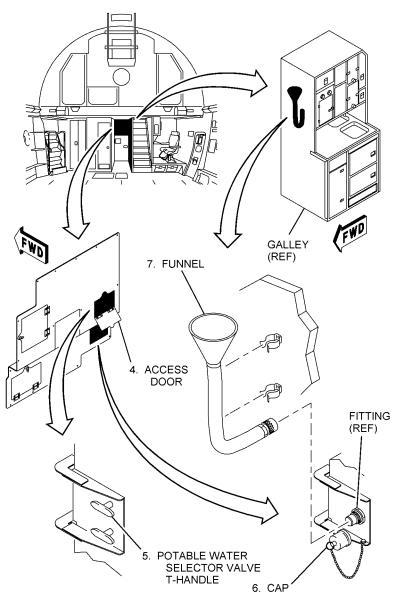
- 1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
- 2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
- 3. Remove warning tag and close **POT WATER & WASTE PANEL CONTROL** circuit breaker, on electrical power center, row **L**, column **61**.



3. POT WATER & WASTE PANEL CONTROL

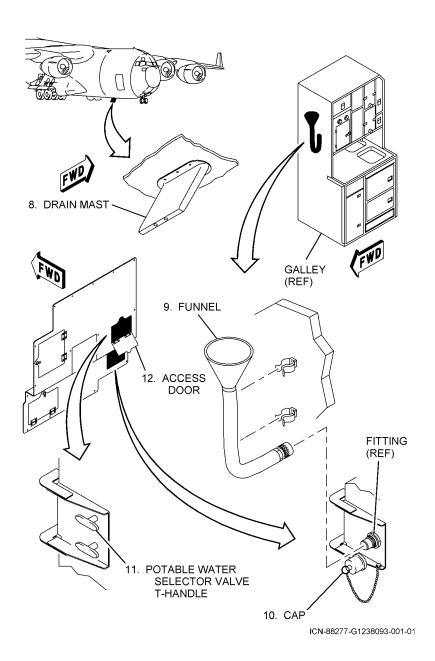
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- 4. Unlatch and open access door (237RZD).
- 5. Pull potable water selector valve T-handle.
- 6. Remove cap from fitting.
- 7. Remove funnel from galley and connect to fitting.



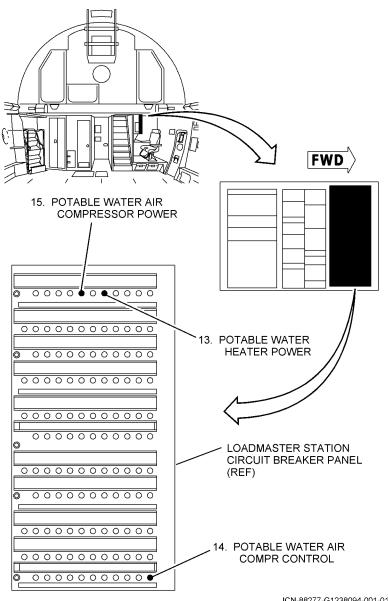
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- 8. Fill potable water system until water comes out of drain mast.
- 9. Disconnect funnel from fitting and install on galley.
- 10. Install cap on fitting.
- 11. Push potable water selector valve T-handle in.
- 12. Close and latch access door (237RZD).



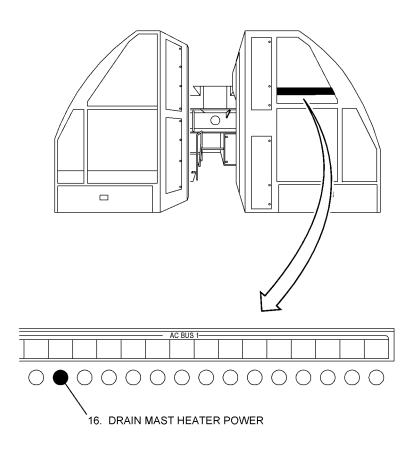
12-38-01-42-31

- 13. Remove warning tag and close **POTABLE WATER HEATER POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **8**.
- 14. Remove warning tag and close **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**.
- 15. Remove warning tag and close **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **6**



ICN-88277-G1238094-001-01

- Remove warning tag and close DRAIN MAST HEATER
 POWER circuit breaker on electrical power center, row J, column
 52.
- 17. Perform operational checkout (38-11-01).



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12-38-01-4 2-35/(2-36 blank)

POTABLE WATER DRAINING (12-38-02)

GENERAL MAINTENANCE INPUT CONDITIONS:

Applicability:	Task
All	All
Additional information:	
This procedure consists of the following tasks:	
02-1. Preparation.02-2. Tank draining.02-3. System draining - cold weather protection.	
Additional data:	Task
NA	
Personnel recommended:	Task
One	All
Safety conditions:	Task
NA	

Support	equipment:
---------	------------

<u>Nomenclature</u>	
Grating, Metal Safety	

<u>PN</u>

17G110013-1

Specification

<u>Qty</u>

Qty

<u>Task</u> 02-3

<u>Task</u>

02-1

Supplies:

_	 -	_	 _	_	_

<u>PN</u>

Specification

5 2

02-3

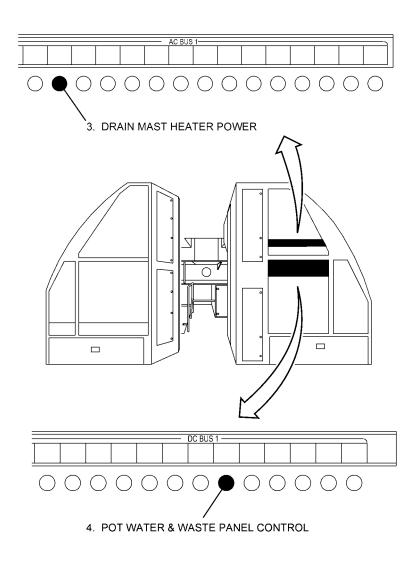
Tag, Warning

Nomenclature

Tag, Warning

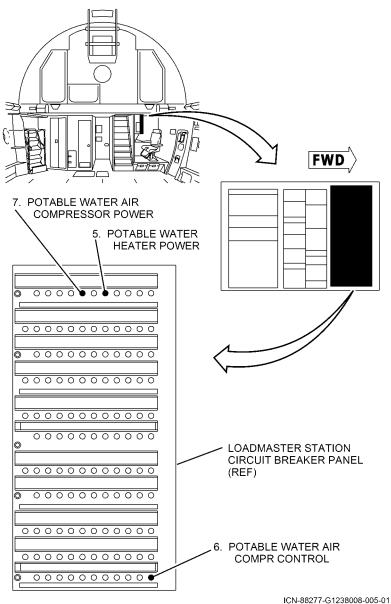
02-1. PREPARATION.

- 1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
- 2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
- 3. Open **DRAIN MAST HEATER POWER** circuit breaker on electrical power center, row **J**, column **52**, and attach warning tag.
- 4. Open **POT WATER & WASTE PANEL CONTROL** circuit breaker on electrical power center, row **L**, column **61**, and attach warning tag.



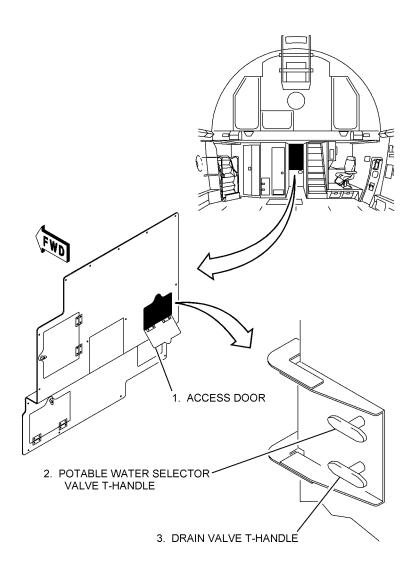
ICN-88277-G1238007-005-01

- 5. Open **POTABLE WATER HEATER POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **8**, and attach warning tag.
- 6. Open **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**, and attach warning tag.
- 7. Open **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **6**, and attach warning tag.



02-2. TANK DRAINING.

- 1. Unlatch and open access door (237RZD).
- 2. Pull potable water selector valve T-handle.
- 3. Pull drain valve T-handle.



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NOTE

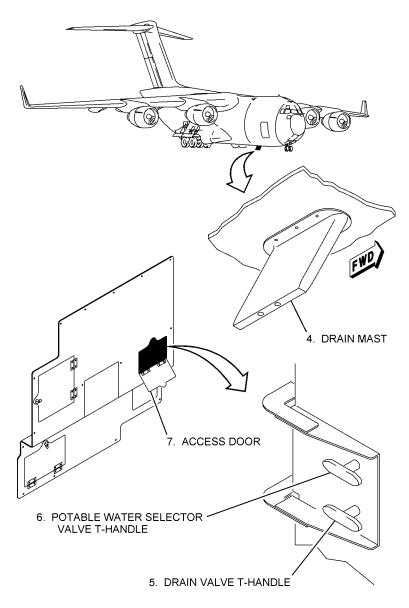
Drain time is approximately 5 minutes when potable water tank is full.

4. Check drain mast to ensure that water is completely drained.



Drain valve T-handle must be closed (pushed in) for flight operations. Failure to comply may cause damage to aircraft.

- 5. Push drain valve T-handle in.
- 6. Push potable water selector valve T-handle in.
- 7. Close and latch access door (237RZD).



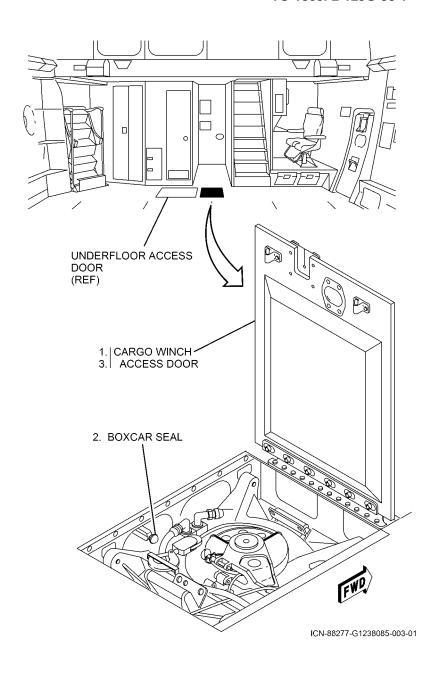
ICN-88277-G1238011-003-01

02-3. SYSTEM DRAINING - COLD WEATHER PROTECTION.

NOTE

Perform steps 1 thru 3 when AFTO Form 781 records indicate a boxcar seal for the underfloor access door, otherwise continue with step 4.

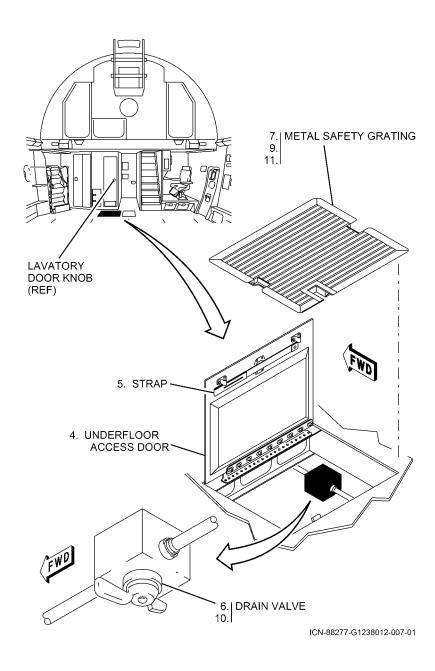
- 1. Unlatch and open cargo winch access door (237JZD).
- 2. Remove boxcar seal from underfloor access door (237HZD).
- 3. Close and latch cargo winch access door (237JZD).



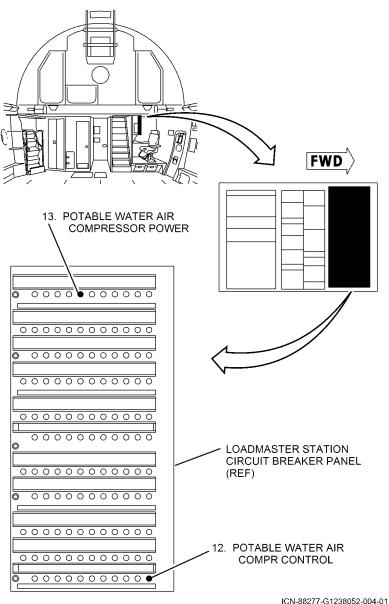


No personnel shall be in lavatory while underfloor access door is open. Failure to comply may cause damage to aircraft.

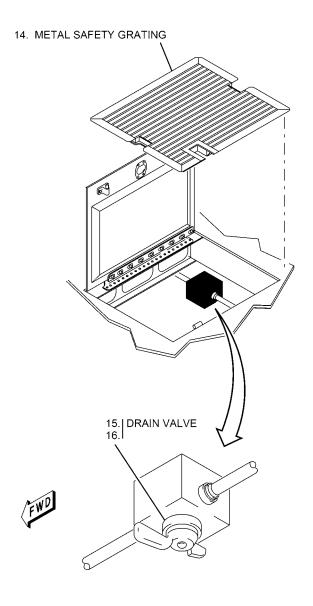
- 4. Unlatch and open underfloor access door (237HZD).
- 5. Attach hold open strap to lavatory door knob.
- 6. Open drain valve.
- 7. Install metal safety grating.
- 8. Drain potable water (tasks 02-1 and 02-2).
- 9. Remove metal safety grating.
- 10. Close drain valve.
- 11. Install metal safety grating.



- 12. Remove warning tag and close **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**.
- 13. Remove warning tag and close **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker, on loadmaster station circuit breaker panel, row **A**, column **6**.

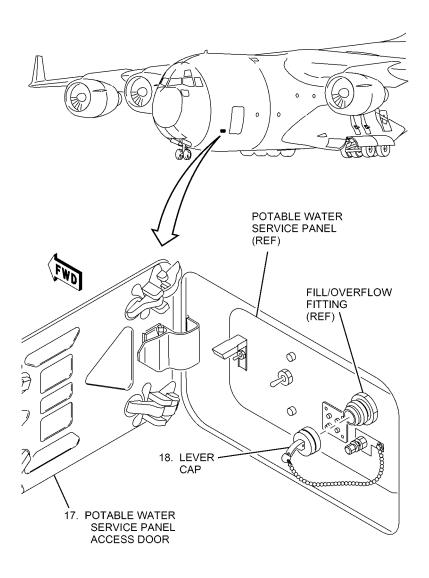


- 14. Remove metal safety grating.
- 15. Open drain valve for 1 minute; trapped water drains.
- 16. Close drain valve.



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- 17. Unlatch and open potable water service panel access door (235ALD).
- 18. Pull lever and remove cap from **FILL/OVERFLOW** fitting on **POTABLE WATER SERVICE PANEL**.

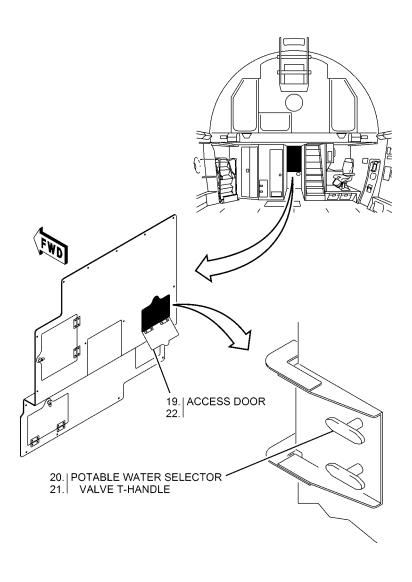


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WARNING

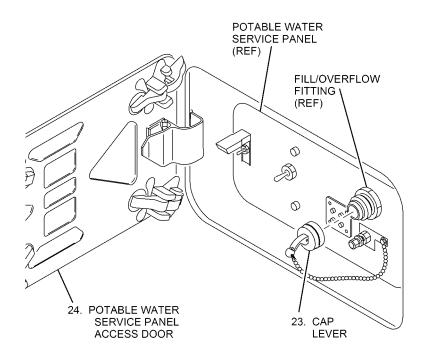
Clear all personnel from the area around the potable water service panel access door and crew door. Failure to comply may cause injury to personnel.

- 19. Unlatch and open access door (237RZD).
- 20. Pull potable water selector valve T-handle; drain trapped water for one minute.
- 21. Push potable water selector valve T-handle.
- 22. Close and latch access door (237RZD).



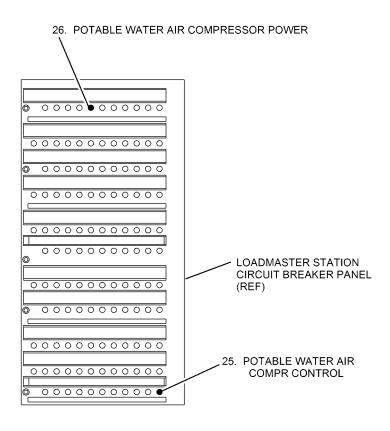
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- 23. Replace cap and close lever on **FILL/OVERFLOW** fitting on **POTABLE WATER SERVICE PANEL**.
- 24. Close and latch potable water service panel access door (235ALD).



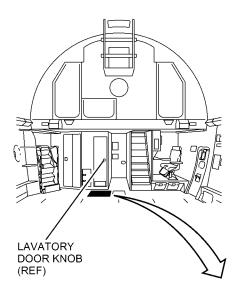
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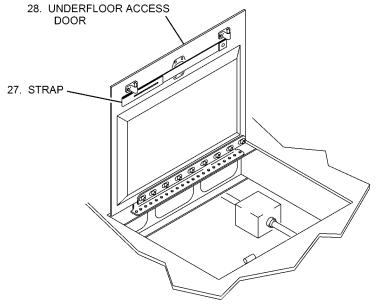
- 25. Open **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**, and attach warning tag.
- 26. Open **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker, on loadmaster station circuit breaker panel, row **A**, column **6**, and attach warning tag.



ICN-88277-G1238054-004-01

- 27. Remove hold open strap from lavatory door knob and secure to underfloor access door.
- 28. Close and latch underfloor access door (237HZD).





ICN-88277-G1238055-005-01

NOTE

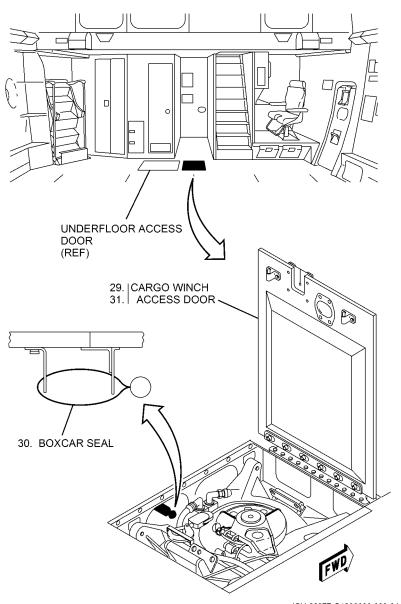
Perform steps 29 thru 31 when a boxcar seal is required on the underfloor access door.

29. Unlatch and open cargo winch access door (237JZD).

NOTE

Document aircraft forms that boxcar seal has been installed. Ensure "seal control number" is included in entry.

- 30. Install boxcar seal to underfloor access door.
- 31. Close and latch cargo winch access door (237JZD).



ICN-88277-G1238086-003-01

12-38-02-3 2-67/(2-68 blank)

POTABLE WATER PURGING (12-38-03)

GENERAL MAINTENANCE INPUT CONDITIONS:

Applicability:

Task

All

A11

Additional information:

This procedure consists of the following tasks:

- 03-1. Preparation.
- 03-2. Purging.
- 03-3. Follow-on maintenance.

Additional data:

Task

TO 1300i-2-10JG-60-1

03-3

Personnel recommended:

Task

One

A11

Safety conditions:

Task

WARNING

The use of personal protective equipment is mandatory to perform this procedure. The applicable Material Safety Data Sheet (MSDS) will identify special protection information. Failure to comply may cause injury to personnel.

03-2

Support equipment:

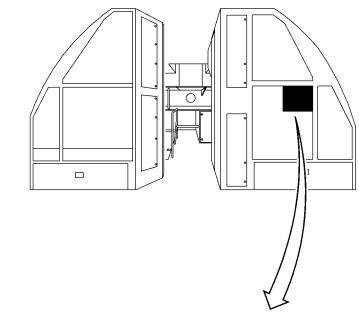
ဝ္သ	<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
	Grating, Metal Safety	17G110013-1		1	03-1, 03-2
	Truck, Tank		MIL-T-83018	1	03-2

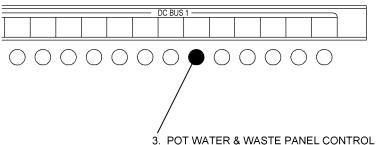
Supplies:

<u>Nomenclature</u>	<u>PN</u>	Specification	Qty	<u>Task</u>
Filter	150G		1	03-3
Gasket	0344-01		1	03-3
Sodium Hypochlorite Solution		A-A-1427 Grade B (12.5% wt Sodium Hypochlorite Solution)	1 gallon	03-2
Tag, Warning			4	03-1

03-1. PREPARATION.

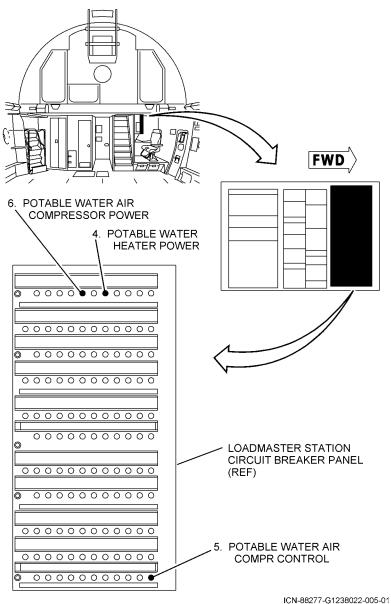
- 1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
- 2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
- 3. Open **POT WATER & WASTE PANEL CONTROL** circuit breaker on electrical power center, row **L**, column **61**, and attach warning tag.





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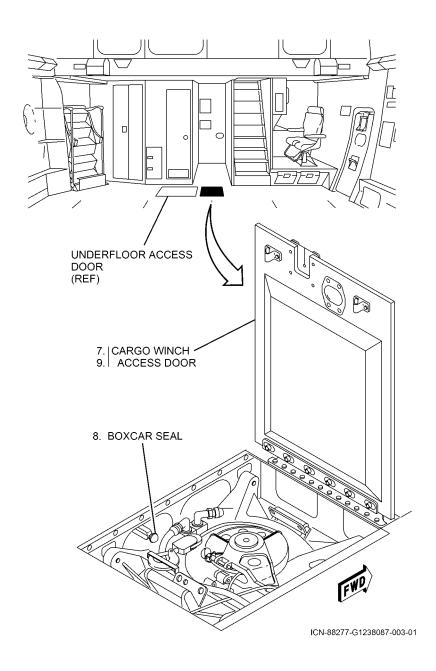
- 4. Open **POTABLE WATER HEATER POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **8**, and attach warning tag.
- 5. Open **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**, and attach warning tag.
- 6. Open **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **6**, and attach warning tag.



NOTE

Perform steps 7 thru 9 when AFTO Form 781 records indicate a boxcar seal for the underfloor access door, otherwise continue with step 10.

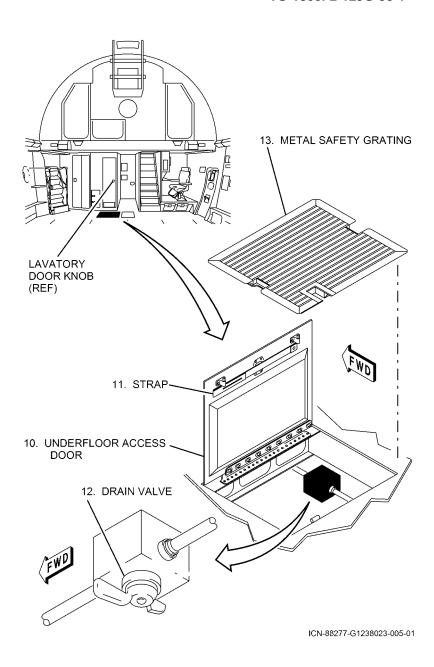
- 7. Unlatch and open cargo winch access door (237JZD).
- 8. Remove boxcar seal from underfloor access door (237HZD).
- 9. Close and latch cargo winch access door (237JZD).



CAUTION

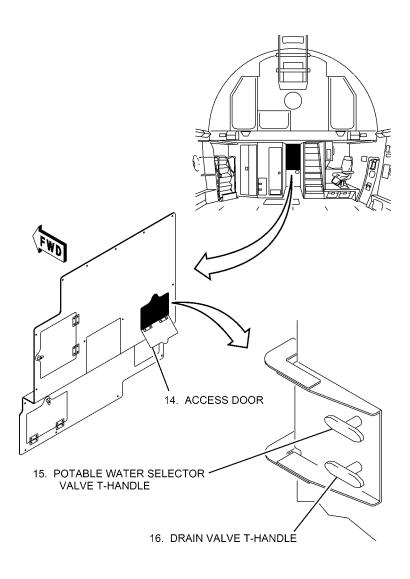
No personnel shall be in lavatory while underfloor access door is open. Failure to comply may cause damage to aircraft.

- 10. Unlatch and open underfloor access door (237HZD).
- 11. Attach hold open strap to lavatory door knob.
- 12. Open drain valve.
- 13. Install metal safety grating.



12-38-03-1 2-79

- 14. Unlatch and open access door (237RZD).
- 15. Pull potable water selector valve T-handle.
- 16. Pull drain valve T-handle.

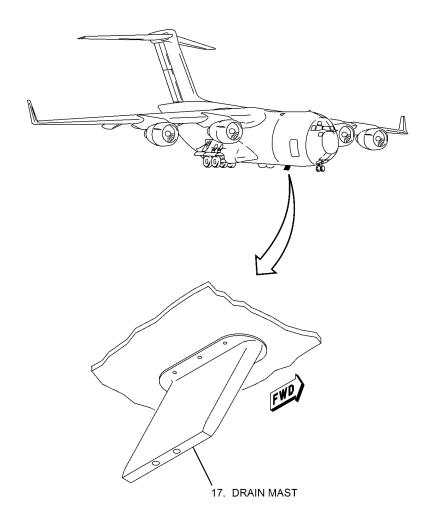


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NOTE

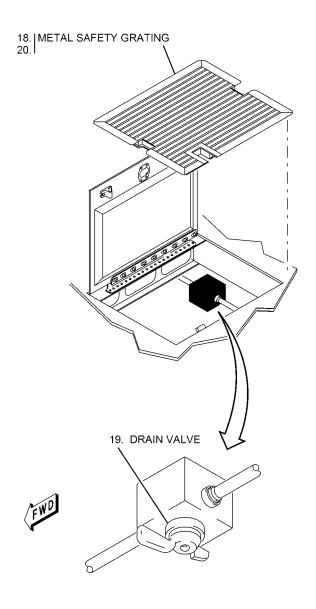
Drain time is approximately 5 minutes when potable water tank is full.

17. Check drain mast to ensure that water has stopped flowing.



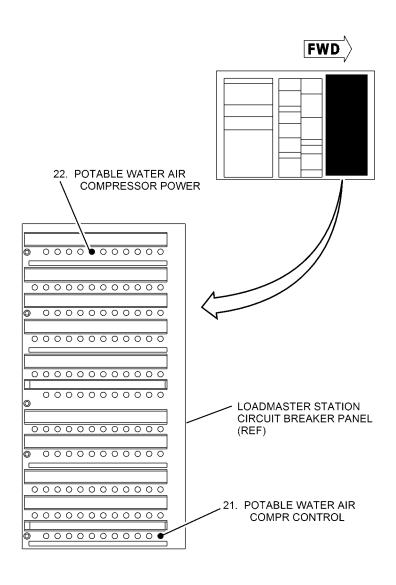
ICN-88277-G1238025-004-01

- 18. Remove metal safety grating.
- 19. Close drain valve.
- 20. Install metal safety grating.



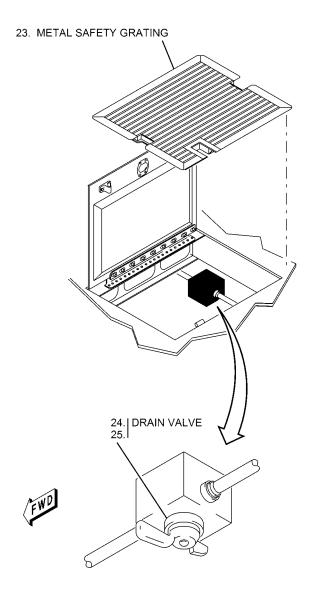
ICN-88277-G1238026-005-01

- 21. Remove warning tag and close **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**.
- 22. Remove warning tag and close **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **6**.



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- 23. Remove metal safety grating.
- 24. Open drain valve for 1 minute; trapped water drains.
- 25. Close drain valve.



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- 26. Open **POTABLE WATER AIR COMPR CONTROL** circuit breaker on loadmaster station circuit breaker panel, row **L**, column **12**, and attach warning tag.
- 27. Open **POTABLE WATER AIR COMPRESSOR POWER** circuit breaker on loadmaster station circuit breaker panel, row **A**, column **6**, and attach warning tag.