FPU[®] SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED LATRINES BOH FPU Field Pack-up Units

CHAPTER 2

OPERATOR INSTRUCTIONS

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FPU[®] SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) BOH CONTAINERIZED LATRINES BOH FPU Field Pack-up Units

PREPARATION FOR MOVEMENT

INITIAL SETUP: Unloading Maintenance Level Operator/Crew

Personnel Required Two (plus one supervisor)

SETUP

Site Requirements



The Latrine must be operated on level ground. To maintain control, consider the ground surface conditions for adequate traction, such as mud, snow, ice, sand.

CAUTION

Flood plain conditions should be considered for the Containerized Latrine. If in doubt, consult the operations supervisor or commander.

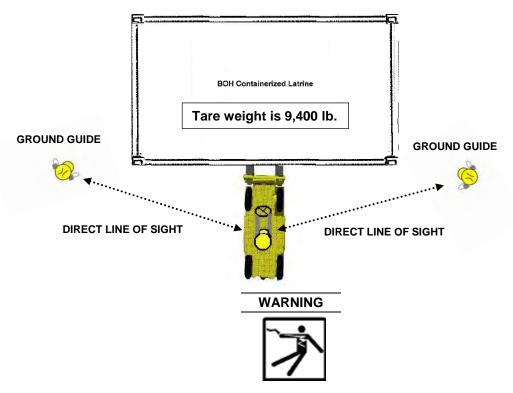
Positioning from the transport vehicle to the site

WARNING



Ground guides and the MHE operators must maintain direct line of sight and ensure that personnel are clear of the containers during this operation.

NOTE



The following ground guide safety instructions apply: two ground guides directing, always in the line of sight of the MHE operator.

Overhead power lines and obstructions can cause serious injury or damage to property. Forklift operators, truck drivers and ground guides should always ensure a clear overhead when loading, unloading the BOH Containerized Latrine.

CAUTION

The Containerized Latrine most be placed on a level surface of a platform, pillars or ground surface to operate properly and prevent waste water backups.



The electrical ground must be established first to prevent electrical shock to personnel. Consult DOD 60055.9-STD Chapter 7 Grounding.

CAUTION

Do not store unsecured, loose materials in the Latrine during transport or movement.



Ensure all circuit breakers and the power source are switched off before making electrical connections. Ensure the proper 120 VAC electrical cable connectors are installed by a certified electrician (Army MOS 21R).

Setup Procedures

- 1. Set latrine unit on a level surface. Unit must be level for plumbing discharge to operate properly.
- 2. Ensure all sink, urinal and toilet water valves are in the full off position.
- 3. Connect sewage discharge line to local sewage system.
- 4. Remove grounding rod from its storage location (See Chapter 2 page 0006 00-1) and connect to grounding lug located below the unit's load center. (See Chapter 2 page 0006 00-2) Rod should be inserted fully into the ground. Install the check valve and shutoff valve and connect city water line to local water source. (See chapter 2 page 0006 00-2)
- 5. Ensure all breakers located in the unit's load center are in their off position.
- 6. Open load center door and remove breaker cover to provide access to main breaker.
- 7. Connect electrical power from local power source (ensure electrical lines from the power source is in its off position).

CAUTION

This system is a 120/240 volt, 1 phase, 60 HZ system. Ensure 120 volt only is connected to line one and 120 volt only to line two (see label attached to the load center for connection instructions). Connection of incorrect voltage may cause damage to the unit's electrical system.

- 8. Turn power on from local power source.
- 9. Once electrical power is connected, it is recommended that the unit be tested for proper voltage.
- 10. Re-install breaker cover.
- 11. Turn on main breaker.
- 12. Turn on remaining breakers.
- 13. Turn on all sink, urinal and toilet water valves.
- 14. Inspect sinks, urinals and toilets for proper function.
- 15. Run water until all air is removed from the water lines.
- 16. Remove all toilet tank covers from their storage bags and install over the toilet tanks.

WARNING

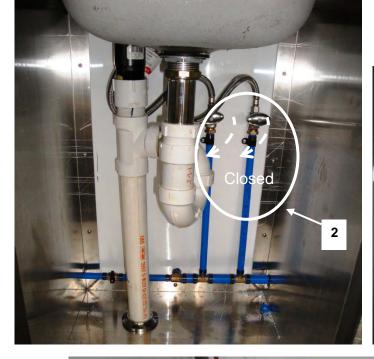


Always establish a safe footing operational site. The interior floor should be kept dry and clean.

Shut Off Valves

- 1. City Water shutoff valve and check valve (1)
- 2. Left and right sink shut off valve (2)
- 3. Urinal shut off valve (3)
- 4. Toilet shut off valve (4)









Preparation for Shipment

WARNING

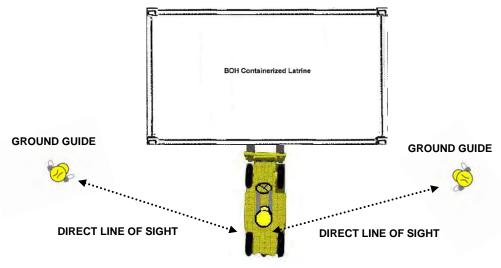


Ensure that there are no personnel in the latrine prior to any movement. **The containerized latrine is <u>not</u> ISO-certified or CSC Safety-Approved**. When transporting or storing the latrine, never stack the containerized latrine. The structure is not designed to support additional containers. Failure to comply could cause damage to the container and equipment or death or injury.

- 1. Turn on all sinks and flush all toilets and urinals to evacuate all black water from sewage discharge line. To drain the system, open sink faucets until step 3 is completed.
- 2. Disconnect city water line from local water source, remove and store the check valve and water shutoff valve in its storage location (See page 0006 00-1).
- 3. Flush all toilets and urinals and allow the sink faucets to completely empty to evacuate remaining water trapped in the water lines.
- 4. Disconnect sewage discharge line from local sewage system.
- 5. Turn off all sink faucets, close all sink water valves, close urinal water valves and close all Latrine water valves. See WP 0005 00-4
- 6. Remove toilet back cover and place in toilet top storage bag, on the wall next to the toilets.
- 7. Turn off incoming electrical power from its power source.
- 8. Open load center door and set all breakers to their off position.
- 9. Remove load center cover and test for any incoming electrical power.
- 10. Disconnect local power lines from breakers and bus bars.
- 11. Re-install load center cover and close load center door.
- 12. Disconnect grounding bar and remove from the ground.
- 13. Place ground rod with strap in its storage location, (See chapter 2 page 0006 00-1 and 00-2) being careful to ensure it is securely fastened.
- 14. Close and securely lock all doors.

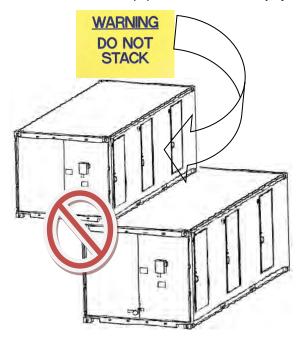
NOTE

The following ground guide safety instructions apply: two ground guides directing, always in the line of sight of the MHE operator.





The containerized latrine is <u>not</u> ISO-certified or CSC Safety-Approved. When transporting or storing, never stack the containerized latrine units. The container structure is not designed to support additional containers. Failure to comply could damage to the container and equipment or death or injury.



END OF WORK PACKAGE

OPERATOR INSTRUCTIONS

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Operation of the Containerized Latrine

INITIAL SETUP:	Reference
Initial set-up	None
Maintenance Level	Personnel Required
Operator/Crew	One (plus one supervisor)

Latrine Operation

NOTE

The ground rod and strap is stored next to the toilet and the city water shutoff valve is stored in the vanity of the first compartment (1) electrical connection end of the container.



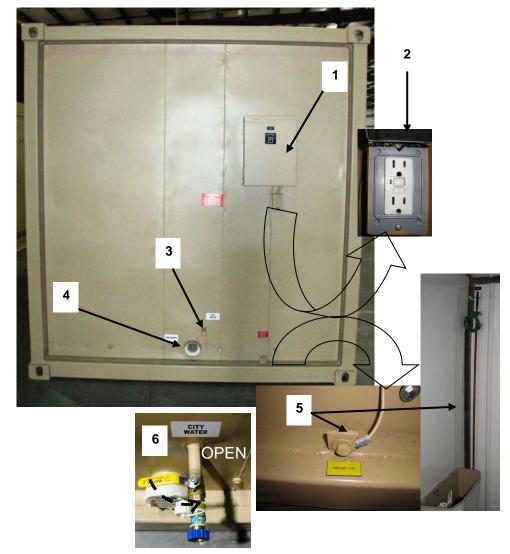
WARNING



The electrical ground must be established first to prevent electrical shock to personnel.



Always establish a safe footing operational site. The interior floor should be kept clean and dry.



Containerized Latrine Exterior Water and Electrical hook-ups

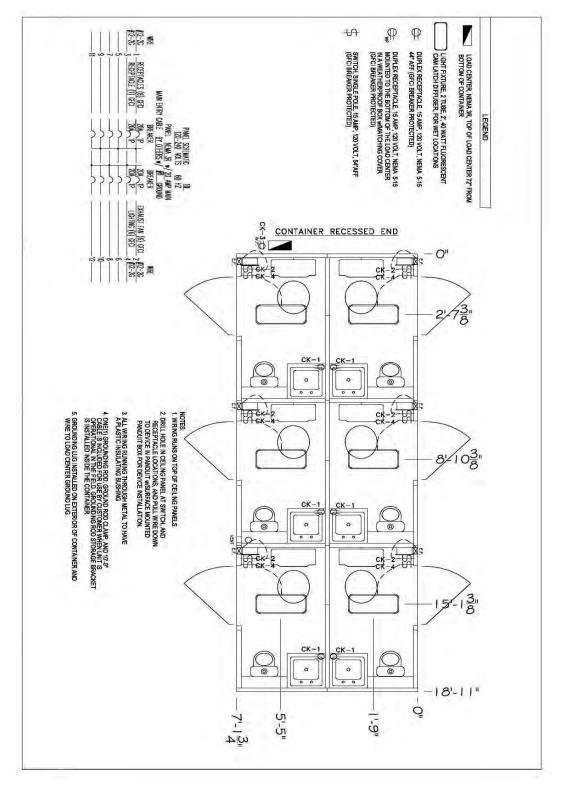
- 1. Ensure electrical ground has been established and is complete with ground lug and rod (5) that is stored in the first compartment (5) (See page 0006 00-1).
- 2. Ensure the electrical supply is still connected and operational (1).
- 3. Check the external GFCI outlet and GFCB breakers are reset (1 and 2).
- 4. Check fresh water connection (3); open shutoff valve (6).5. Check black water connection (4) for leaks.
- 6. Check interior lighting, vent fans for operation.
- 7. Ensure faucets and toilets operate.
- 8. Ensure sanitation of the latrine.
- 9. Ensure hand soap, toilet paper and paper towels are available.

CAUTION

The Containerized Latrine must be placed on a level surface of a platform, pillars or ground surface to operate properly and prevent waste water backups. Black Water is discharged by gravity.



Containerized Latrine Electrical Layout



Containerized Latrine Electrical Components Locations

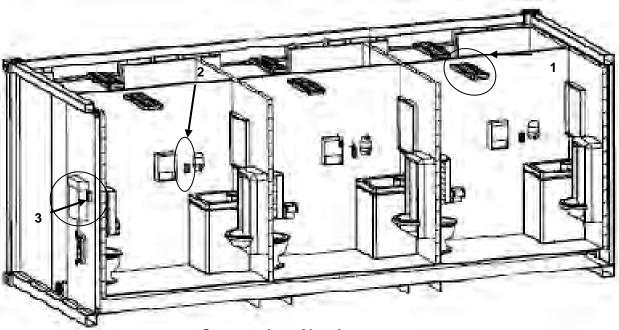


Only a certified electrician should be permitted to remove and repair the electrical components of the system.

- Two Tube Fluorescent Light Fixtures (1)
- GFCI Protected Interior Electrical Outlets (2)
- Weather Proof Exterior Receptacles (3)



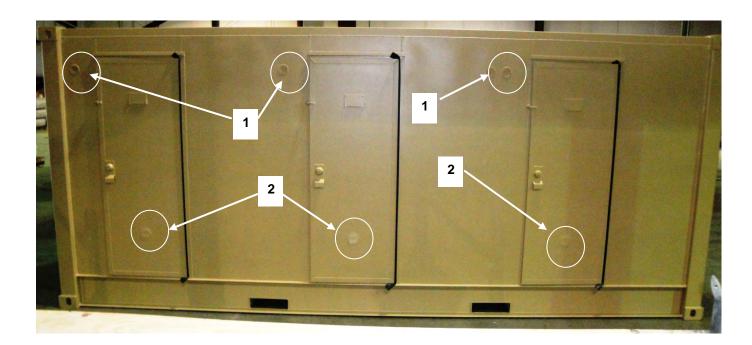
Fluorescent tubes may contain hazardous material.

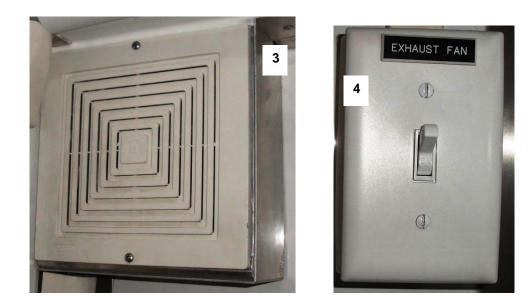


Cutaway view of Interior

Air Ventilation System

- Air Exhaust Vents (1)
- Fresh Air Intake (2)
- Interior Fan (3)
- Interior Exhaust Fan switch (4)





END OF WORK PACKAGE

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OPERATION UNDER UNUSUAL CONDITIONS

This work package provides instructions for the operation of the FPU modules under unusual conditions. These include adverse weather, nuclear, biological and chemical attack, and emergency blackout conditions.

Operation in Rain and/or Mud

- 1. Provide an adequate drainage ditch to prevent standing water around the FPU modules.
- 2. Secure all accessories and container during extremely harsh rain.

Operation in Extreme Heat



Protective gloves should be worn when handling metal parts in high temperatures. Failure to wear gloves may result in burning or blistering of the skin upon contact.

Operation in Snow, Ice, or Extreme Cold



In extreme cold, do not touch metal parts with bare hands. Severe skin damage may result.



Fording

The Containerized Latrines are not watertight. They should never be submerged in any depth of water, as material damage may result. When mounted on a trailer or truck, hard-bottom water crossings should be no deeper than approximately two feet. When in doubt, refer to Unit Standard Operating Procedures.

END OF WORK PACKAGE

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