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



**BOH CONTAINERIZED LATRINE
BOH FPU® Systems
BOH ENVIRONMENTAL LLC
14520 Avion Parkway, Suite 220
Chantilly, VA 20151
POC Doug Cresap (985) 674-0725
<http://www.bohfpusystems.com>**

This page was intentionally left blank

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to persons using equipment.

WARNING



Do not allow the system to swing if using an overhead lift. Always ensure an appropriate sling and lifting points are used in lifting a Containerized Latrine. Always use properly sized forklift, crane, or lifting device. Failure to follow proper connection procedures may result in damage to the equipment injury or death.

WARNING



Use caution when moving BOH Containerized Latrine onto a transport vehicle or system. Make sure all BOH Containerized Latrine door locks and vanity doors are properly seated and locked before movement of the BOH Containerized Latrine. Ensure there are no personnel in the latrine. Failure to comply could cause serious injury or death.



Standard forklift principles apply when working on the BOH Containerized Latrine. When working with ground guides during the loading or unloading of the BOH Containerized Latrine onto the selected site, do not allow the ground guide between the forks and BOH Containerized Latrine. Serious injury could occur if the ground guide pinned between the forklift and the Containerized Latrine. Forklift operators must maintain visual contact with their ground guides at all times.



Always follow standard forklift procedures. A tilt hazard exists when forklift operators try to lift a container from the wrong side. Always lift with the forklift tines in the fork pockets provided in the base. A tilt situation exists when the heaviest part of the load is out on the tips of the tines or on uneven ground while traveling. Operators should always keep loads low and close to the forklift carriage. Operators should never travel when the load is in the fork's extended position.

WARNING



The BOH Containerized Latrine and their components are heavy and could cause injury if they fall onto or strike personnel. A hazard exists when the doors have not been secured when moving the Latrine Container.

WARNING



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

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to persons using equipment.

WARNING



When using a crane to lift the CONTAINERIZED LATRINE, ensure there are no personnel in the latrine. Ensure the proper sling and sling point are used. Do not allow the system to swing if using an overhead lift. Always use properly sized forklift, crane, or lifting device. Failure to comply could cause injury, death or damage to the equipment.

WARNING



Always inspect the working areas and ensure that the front, rear and sides are free of oils, lubricants, and other potentially slippery substances. Ensure the toilets are flushed and have no standing water before any movement. The Latrine may be used to store various forms of cleaning supplies, and other potentially slippery substances. Keeping the surfaces clean and the floor around the work area dry is important to prevent spillage and slippery surfaces. Spills from the toilet or sink must be cleaned up immediately. Failure to comply could cause injury from a fall.

WARNING



The Latrine components can be heavy and awkward to handle by a single person. This is especially true of the larger components. The movement of these items is a two-person operation. Assistance is required from one or more personnel to remove components from the Containerized Latrine.

WARNING



Protective gloves should be worn when handling metal parts in below freezing temperatures. Failure to wear gloves may result in skin freezing to the metal upon contact and cause tearing of the flesh when attempting to pull away from the metal.

WARNING



Never blend or mix cleaning supplies. Toxic vapors may develop causing injury or death. Follow proper storage and use instructions on the cleaning product labels.

WARNING



The containerized latrine is not ISO-certified or CSC Safety-Approved. When transporting or storing, 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.

WARNING



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.

GENERAL WARNINGS



HEAVY PARTS - heavy object on human figure shows that heavy parts present a danger to life or limb.



HEAVY PARTS - heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.



HEAVY PARTS - hand with heavy object on top shows that heavy parts can crush and harm.



HEAVY PARTS - foot with heavy object on top shows that heavy parts can crush and harm.



SLICK FLOOR - wavy line on floor with legs prone shows that slick floor presents a danger for slipping or falling.



HEAVY OBJECT - human figure stooping over heavy object shows physical injury potential from improper lifting technique.



CRYOGENIC - hand in block of ice shows that the material is extremely cold and can injure human skin or tissue.



HOT METAL SURFACES- Metal surfaces may become hot in extreme heat areas; prolonged contact may cause burning or blistering of the skin.

This page was intentionally left blank

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

REPORTING ERRORS & IMPROVEMENTS

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. Please let us know if you find any mistakes or if you know of a way to improve the procedures. You may send in your recommended changes by E-mail directly to: dcresap@bohfpusystems.com. A reply will be furnished directly to you.

Approved for public release; distribution is unlimited.

TABLE OF CONTENTS

	<u>WP Sequence No.</u>
WARNING SUMMARY	a
HOW TO USE THIS MANUAL	iii
CHAPTER 1 – INTRODUCTORY INFORMATION WITH THEORY OF OPERATION	
General Information.....	0001 00
Theory of Operation.....	0002 00
Equipment Characteristics, Components and Features.....	0003 00
Equipment Data Labels, Identifications, Markings	0004 00
<hr/>	
CHAPTER 2 – OPERATOR INSTRUCTIONS	
Preparation for Movement	0005 00
Operation of Containerized Latrine	0006 00
Operation under Unusual Conditions.....	0007 00
<hr/>	
CHAPTER 3 - TROUBLESHOOTING PROCEDURES	
Introduction.....	0008 00
Troubleshooting Indexes	0009 00
Troubleshooting Procedures.....	0010 00
<hr/>	
CHAPTER 4 – OPERATOR MAINTENANCE INSTRUCTIONS	
Service upon Receipt	0011 00
Introduction to Preventative Maintenance Checks and Services (PMCS).....	0012 00
PMCS Table	0013 00
Cleaning and Lubricating	0014 00
Inspection of Interior and Exterior.....	0015 00
Inspection of Electrical Service.....	0016 00
Inspection of Vent Fan Cover	0017 00
Inspection of Light Fixture	0018 00
Inspection Toilet and Urinal	0019 00
Inspection Door	0020 00
Inspection Sink and Faucet	0021 00
Inspection Floor Drain, Clean Out Plug and City water Shutoff Valve.....	0022 00

CHAPTER 5 – UNIT MAINTENANCE INSTRUCTIONS

Door Assembly and rivet replacement	0023 00
Latrine Magnetic Door Latch.....	0024 00
Vent Fan.....	0025 00
Light Fixture.....	0026 00
Toilet	0027 00
Urinal.....	0028 00
Electrical System.....	0029 00

CHAPTER 6 – PARTS SUPPORTING INFORMATION

Introduction to Maintenance Allocation Chart (MAC)	0030 00
Maintenance Allocation Chart (MAC).....	0031 00
Introduction to Repair Parts & Special Tools List.....	0032 00
BOH Containerized Latrine Repair Parts List.....	0033 00
Group Numbers	
00 Containerized Latrine System	
01 Containerized Latrine	
0101 Latrine Door Assembly	
0102 External Water and Waste Caps	
02 Containerized Latrine External Electrical	
0201 Containerized Latrine Internal Electrical	
03 Containerized Latrine Interior Components	
0301 Vanity and mirror	
NSN Index.....	0034 00
Part Number Index	0035 00

REAR MATTER

BOH Product Warranty
Metric Conversion Chart

Appendices – Appendix: A, B, C, D and E contain Manufacturer Specification for repair and operation.

- Appendix A.... PASCO URINAL FLUSH VALVE
- Appendix B.... BROAN VENT FAN
- Appendix C....TRUEX LIGHT FIXTURE
- Appendix DOLYMPIA FAUCET
- Appendix EVANITY SS SINK

HOW TO USE THIS MANUAL

This manual contains general information, operating instructions, Preventative Maintenance Checks and Services (PMCS), and maintenance/repair instructions for the BOH Containerized Latrine Units.

Front matter consists of front cover, warning summary, title block, table of contents, "how to use this manual" pages, and provides information on the BOH Containerized Latrine Units and their associated equipment. Chapter 1 provides equipment description and data as well as the theory of operation. Chapter 2 provides instructions for operating under usual and unusual conditions. Chapter 3 contains troubleshooting procedures authorized at the Operator and Unit level. Chapter 4 contains Preventative Maintenance Checks and Services (PMCS) and Operator Maintenance Instructions. Chapter 5 contains Unit Maintenance Instructions. Chapter 6 contains the Maintenance Allocation Chart (MAC); it also includes the Repair Parts & Special Tools List (RPSTL) that identifies parts or tools unique to the operation and maintenance of the latrines.

Manual Organization and Page Numbering

This manual is divided into six major chapters that detail the topics mentioned above. Within each chapter are work packages covering a wide range of topics. Each work package is numbered sequentially at page 1, and has its own page numbering scheme that is independent of the page numbering used by other work packages. Each page of a work package has a page number of the form "XXXX YY-ZZ", where "XXXX YY" is the work package number (e.g. 0010 00 is work package 10) and "ZZ" represents the number of the page within that work package. Blank pages will be labeled "This page was intentionally left blank".

Finding Information

The Table of Contents permits the reader to quickly find information in the manual. The reader should start here first when looking for a specific topic. The Table of Contents lists the topics contained within each chapter and the work package sequence number where it can be found.

Types of notations

Warnings - Warnings are posted immediately prior to text covering any area that would present a situation that may result in injury or death. Compliance is mandatory.

Cautions - Cautions will be found on the same page and preceding the text covering any area that would present a situation that may result in damage to equipment.

Notes - Notes will precede text covering an area with the intent to alter normal procedures for unique situations or equipment, or point out areas of special concern.

This page was intentionally left blank

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

CHAPTER 1

**INTRODUCTORY INFORMATION
WITH
THEORY OF OPERATION**

This page was intentionally left blank

INTRODUCTORY INFORMATION

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

GENERAL INFORMATION

SCOPE

Equipment Covered

This technical manual contains instructions for the operation, preventative maintenance, and recommended Unit/Direct Support corrective maintenance for the BOH Containerized Latrine System and the associated equipment.

Type of Manual

This is an Operator, Unit and Direct Support, Operation and Maintenance Manual. There is Manufacturer's detailed data in the Appendices.

Equipment Name, Part Number and NSN

CONTAINERIZED LATRINE	PART NUMBER	NSN
CONTAINERIZED LATRINE GREEN	99000455-UG	8415-01-606-2837
CONTAINERIZED LATRINE TAN	99000455-UT	8415-01-606-2687
END of TABLE		

Note

The Container Tare weight is 9,400 lbs.

CAUTION

The Containerized Latrine must be placed on a level surface of a platform, pillars or ground surface to operate properly and prevent sewage discharge backups.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your FPU Latrine needs improvement, let us know. Send a description of the recommended change to dcresap@bohfpusystems.com. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. We will send you a reply.

END OF WORK PACKAGE

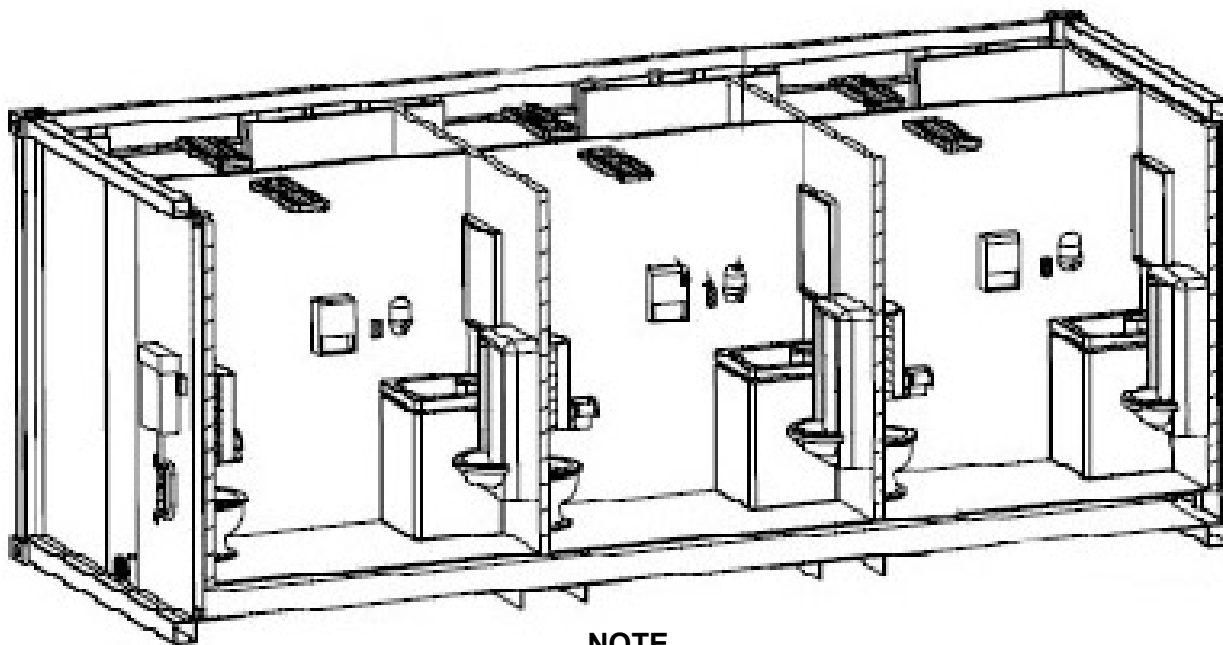
This page was intentionally left blank

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

Theory of Operation

Containerized Latrine System Description

The Containerized Latrine consists of an 8' wide x 20' long x 8.5' high sturdy metal container with a pallet-like base. It has six individual compartments with doors with security and privacy locks, toilets, urinals, florescent lighting, sink, exhaust fan, and vanity cabinet with mirror. The Latrine system can be easily transported and quickly maneuvered on site with MHE. The electrical, water supply and refuse discharge connections are easily accessible for quick setup or takedown. All electrical outlets are Ground Fault Interrupted (GFCI). Forklift pockets are provided in the front and rear for easy loading/unloading and maneuvering to the selected site. The Containerized Latrine comes in two color variations: Forest Green and Desert Sand.

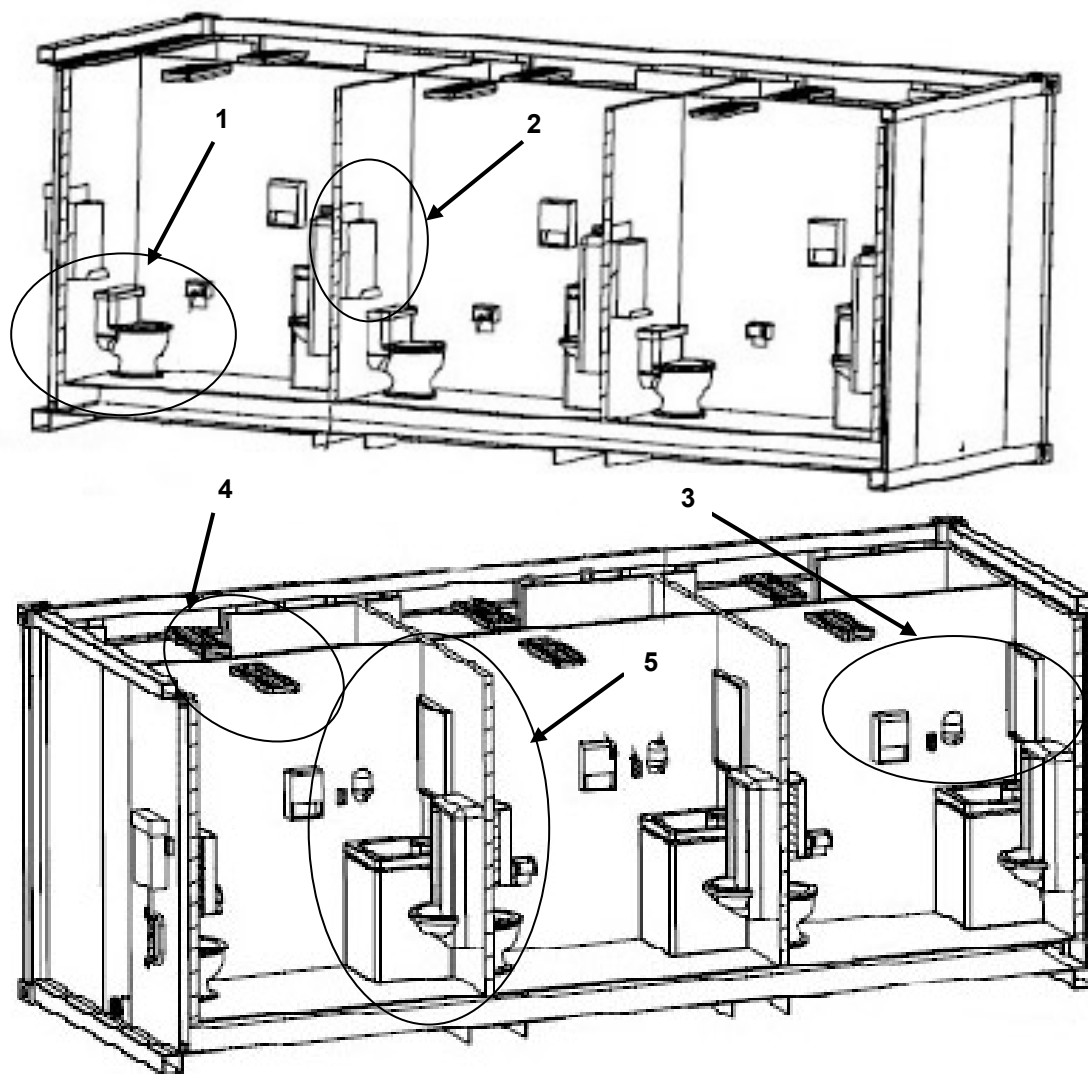


NOTE

Tare Weight is 9,400 lb.

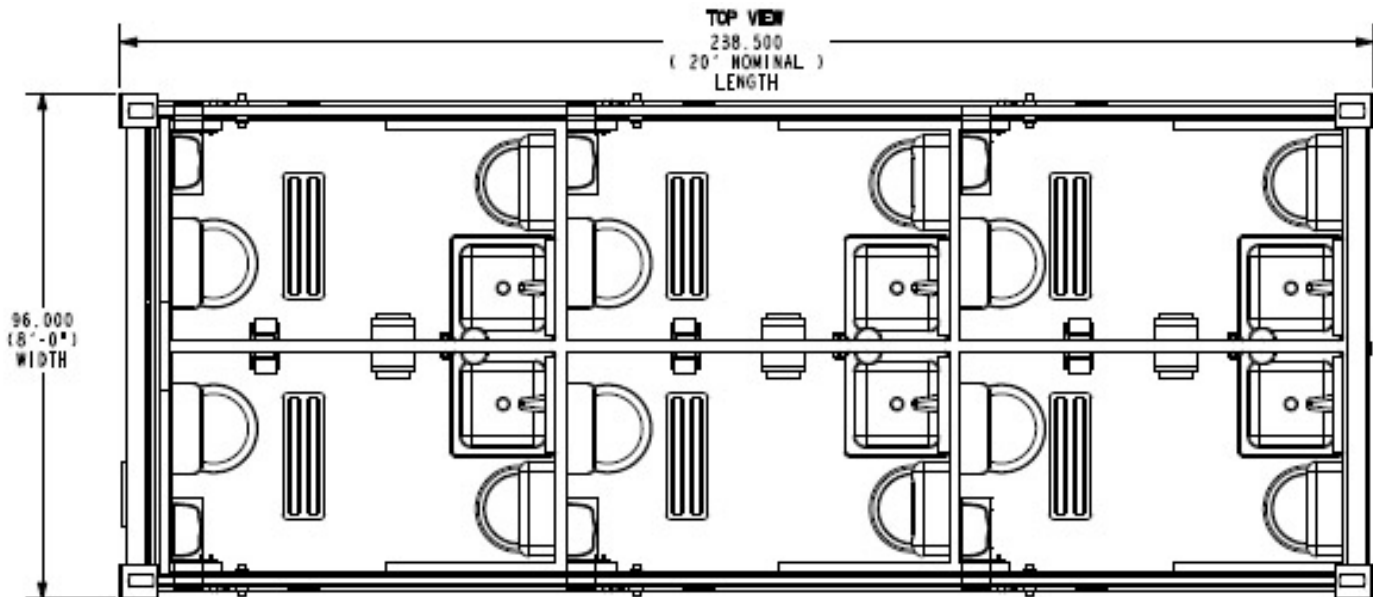
END OF WORK PACKAGE

This page was intentionally left blank

INTRODUCTORY INFORMATION**FPU® SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
BOH CONTAINERIZED LATRINES
BOH FPU Field Pack-up Units****Equipment Characteristics, Components and Features****CONTAINERIZED LATRINE LAYOUT**

Low Volume Toilet and Paper Dispenser (1), Heavy Duty Vinyl Pocket (2) Paper Towel Dispenser, Electrical Outlet and Soap Dispenser (3) Fluorescent Lighting (4) Vanity, Mirror and Urinal (5)

Latrine Top View Layout and Dimensions



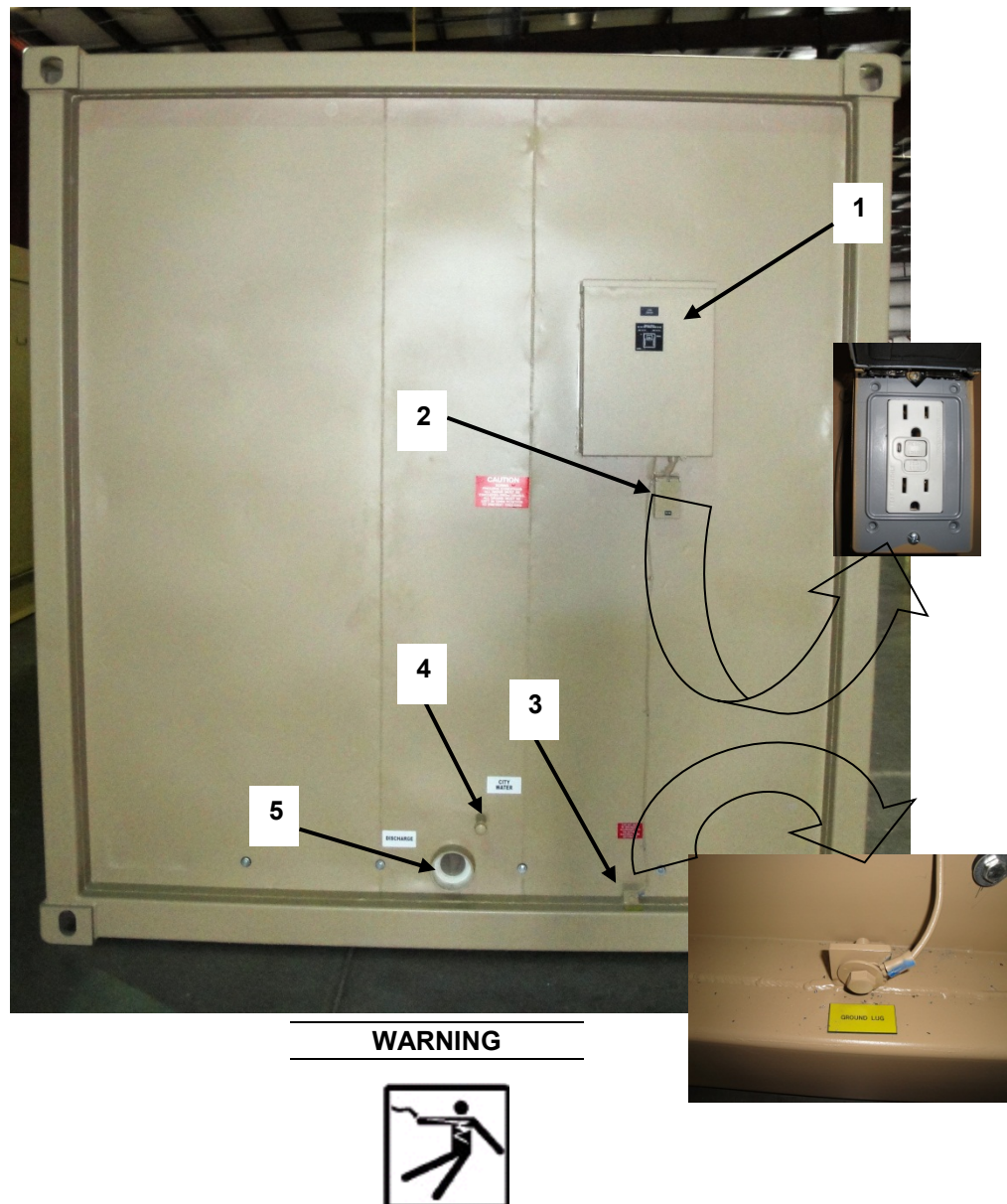
NOTE

The electrical and water connection end is recessed 3" to keep within the container profile.



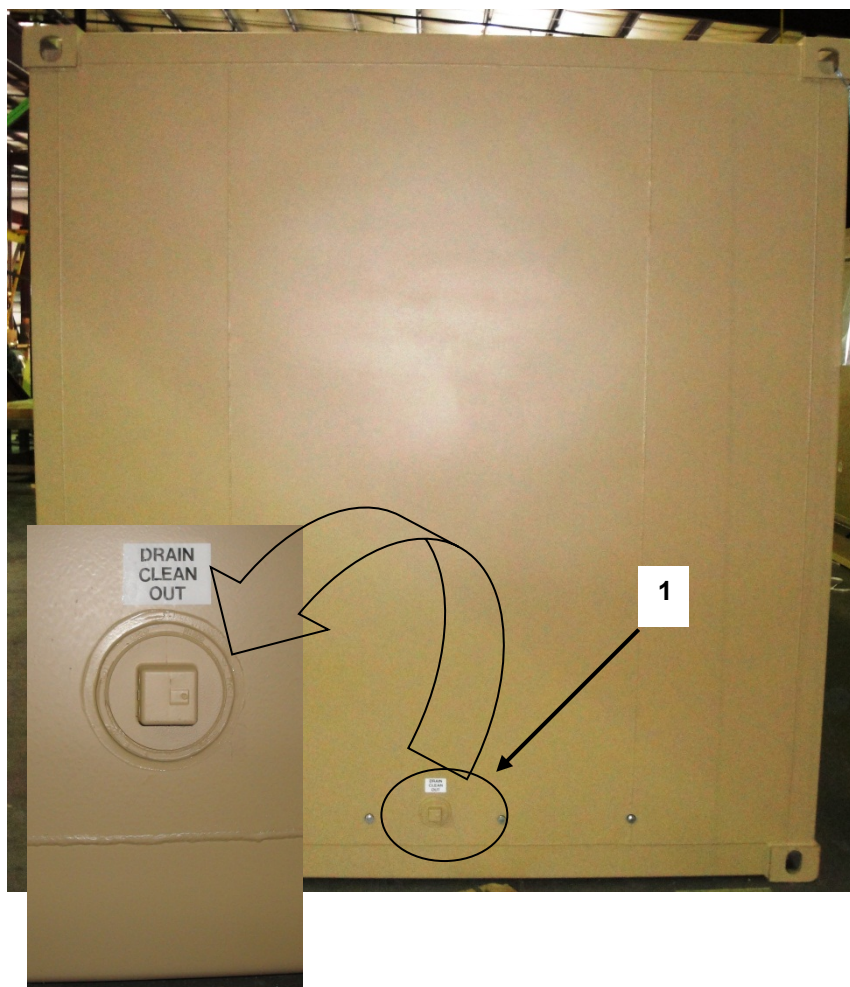
Containerized Latrine Exterior Water and Electrical hook-ups

- Circuit Panel Box, 120/240 Volt 1 Phase 40 AMP, NEMA 3R (1)
- Weather Proof Exterior Receptacle (2)
- Ground Lug, ground rod stored in a compartment next to a toilet (3)
- 1" Cold Water Inlet (4)
- 4" PVC Black Water Drain (5)



The electrical ground must be established first to prevent electrical shock to personnel.
Consult National Electrical Code Section 250.

Black Water Cleanout



NOTE

The Black Water Cleanout (1) is located on the opposite end of the container from the Electrical Load Center and Water Hookups.

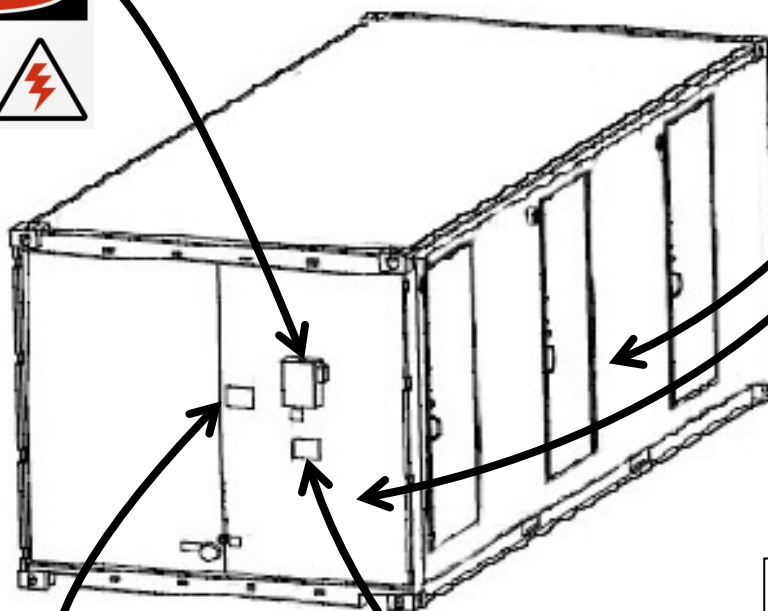
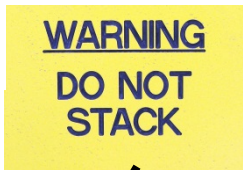
END OF WORK PACKAGE

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

Equipment Data Labels, Identifications, Markings

Manufacturers Data Plates Location

(All 4 Sides)



Example

BOH CONTAINERIZED MISSION SYSTEM	
MANUFACTURER ADVANCED CONTAINMENT SYSTEMS INC. 8720 LAMBRIGHT HOUSTON, TX 77075 TEL. (713) 987-0336 FAX. (713) 987-0355	PATENT HOLDER / PRIME CONTRACTOR BOH FPU SYSTEMS® BOH ENVIRONMENTAL, L.L.C. 149 TERRA BELLA BLVD. COVINGTON, LA 70433 TEL. (985) 874-0725
NSN	
MODEL NO.	
MANUFACTURER'S PIN	
PATENT NUMBER	BOHFPU SYSTEMS.COM/PATENTS
SERIAL NUMBER	
DATE MANUFACTURED	
CONTRACT NUMBER	
DO NO.	
MAXIMUM GROSS WEIGHT	
GROUND	KG LB
AIR	KG LB

Other Identifications and Markings



REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your Containerized Latrine needs improvements in design and/or performance, let us know. Send a description of the recommended change to dcesap@bohfpusystems.com.

CORROSION PREVENTION AND CONTROL (CPC)

It is our understanding that Corrosion Prevention and Control (CPC) is a continuing concern for the military. While corrosion is typically associated with rusting of metals, it can also include deterioration of other material, such as rubber and plastic. Unusual cracking, softening, swelling or breaking of these materials may be a corrosion problem.

All units must adhere to their specific corrosion maintenance plan. At a minimum, equipment should be inspected for corrosion on a quarterly basis (monthly if equipment is operated/stored in a high salt air environment). If corrosion is discovered, consult your unit/installation corrosion control manager to schedule repair. It is important that any corrosion problem with the FPU be reported so that the problem can be corrected and improvements can be made to prevent the problem in the future.

PREPARATION FOR STORAGE OR SHIPMENT

All preventative maintenance checks and services in (WP 0013 00) should be performed on the Containerized Latrine and its components prior to any storage or shipment.

RECEIVING THE FPU INVENTORY

Unpacking and Inventory of Containerized Latrine Components upon Initial Receipt

With the Containerized Latrine downloaded, check the equipment against the packing list. Report any discrepancy to your supervisor.

END OF WORK PACKAGE

BOH-PM-01-1
Chapter 1 Rev. 1.06