

**FPU® SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
STANDARD AND SPECIALIZED FPU MODULES
BOH FPU Field Pack-up Units**

**CHAPTER 4
OPERATOR MAINTENANCE INSTRUCTIONS**

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

INTRODUCTION TO PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

References

None

Equipment Condition

FPU SYSTEMS Set-up

INTRODUCTION

Preventative Maintenance Checks and Services (PMCS) are performed to keep the FPU System containers in good operating condition. These checks aid in finding, correcting, or reporting problems. Operator personnel are to perform the PMCS tasks as shown in the PMCS table.

Perform PMCS procedures each day the BOH PDM MODULE is in operation, using the PMCS table in WP 0016 00. There are different intervals to perform PMCS procedures: before, during and after using the equipment, as well as weekly and monthly. Look at the table carefully to identify the required PMCS interval.

Perform all checks and services keeping in mind the following guidelines:

- Before you begin using the BOH PDM MODULE , do **Before Operation PMCS**
- While the BOH PDM MODULE is in use, do **During Operation PMCS**
- After using the BOH PDM MODULE , do **After Operation PMCS**

If you find something wrong when performing PMCS, fix it using troubleshooting and/or maintenance procedures. Pay attention to WARNING and CAUTION statements. A **WARNING** means someone could be injured or killed. A **CAUTION** means equipment could be damaged.

If tools that are required to perform PMCS are not listed in the procedures, notify your supervisor.

Inspection

Look for signs of trouble. Use your senses to feel, smell, hear, or see problems that may exist. Inspect to see if items are in good condition. Are components correctly installed and secured? Is any damage to the frame or components visible? Correct any faults or notify Unit Maintenance.

Service

Proper service of the FPU SYSTEM and components is an integral part of maintenance. Regular cleaning prevents possible problems in the future, so make it a habit to clean the FPU SYSTEM MODULES and components whenever necessary.

END OF WORK PACKAGE

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

PMCS TABLE

INITIAL SETUP:
Materiel/Parts

Rags, Water

Personnel Required

One

References

None

Equipment Condition

FPU SYSTEMS Set-up

**Table 1 Preventative Maintenance Checks and Services for the FPU SYSTEMS
PMCS B (Before), D (During), A (After), W (Weekly), M (Monthly)**

	B	D	A	W	M	Inspection Item and Procedure	Equipment Not Ready/Available If
1	*	*	*			Weapons Vault and Flammable/Corrosive Module Doors, Walls Check all doors and walls for cracks, dents, holes, or loose/missing hardware.	Missing doors, punctures, damage that would cause hazard, injury or damage to stored material.
					*	Lubricate hinges, locks, drawer slides and latches as required. NOTE: the FPU Bulk Module tray and bin guides do not require lubrication.	Hinges, locks, drawer slides, bins, trays and latches do no move freely.
2			*	*		Exterior Check all exterior surfaces for cracks, dents that effect the operation of the FPU SYSTEM MODULES. Check for accumulations of dirt, debris, ice, snow, or salt. Clean as required. Check Module for broken or missing spark prevention side bumper strips.	Flammable/Corrosive module damaged door vent valve can cause hazard, injury or damage to stored material. Missing module spark prevention bumper strips can cause spark hazard or injury.
3			*	*		Interior Check FPU Module drawer slides for dirt and debris. Clean with rags and lubricate as required. Check FPU Bulk Module base cradles for cracks or damage. Schedule cracked base cradles for repair. Check FPU Bulk Module hull for cracks or missing items. Check all module drawer latches for missing or loose hardware. Replace or tighten as necessary.	Module drawer slides do not roll smoothly. Drawer latches, and securing devices are missing or damaged. FPU Bulk Module base cradle is damaged so that module does not seat properly.
4			*		*	Data Plates Check data plates and weight signage, for legibility, damage and/or missing information. Clean with water and rag. Replace as needed.	All Module ID plates and Weight limit signage on FPU Bulk Module trays and bins, not legible.
End of Inspection Table							

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

CLEANING AND LUBRICATING TABLES

INITIAL SETUP:
Materiel/Parts

Rags, Water, Detergent

Personnel Required

One

References

None

Equipment Condition

FPU SYSTEMS Set-up

CLEANING AND LUBRICATING

Cleaning and Lubricating of the FPU module is performed to keep the FPU module and its associated equipment in good operating condition. The cleaning and lubrication of the FPU module can be conducted along with the Preventative Maintenance Checks and Services (PMCS) procedures described in (WP 0017 00). Specific areas described below need to be cleaned after an operational event or periodically if stored/staged outside of a fixed facility to keep the container, modules, and accessories performing as designed. Cleaning also assists in maintaining the condition of the materiel stored within the system. Any damage discovered when cleaning and/or lubricating that cannot be corrected using the troubleshooting procedures described in (WP 0018 00) should be reported for corrective maintenance.

Table 1 Cleaning

SURFACE	OIL/GREASE	SALT/MUD/DIRT DEBRIS	RUST/CORROSION
Exterior and Interior Walls (All)	Detergent, Water, Rags	Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rag, Coat with Lube Oil or Spot Paint
Door Seals	Damp and Dry Rags	Damp and Dry Rags	N/A
Module Base Cradles	Detergent, Water, Rags	Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rags, Coat with Lube Oil or Spot Paint
Module Door Hinges	N/A	Brush, Rag and lubricate as needed to ensure door hinges travel freely	Corrosion Removal Compound and Wire Brush, Dry Rags and Lubricate as needed
Module Side Spark Prevention Bumper strips	Detergent, Water, Rags	Soapy Water, Brush, Rags	Do Not Paint
Module Weather Covers	Detergent, Water, Rags	Soapy Water, Brush, Rags	Do Not Paint
End of Cleaning Table 1			

Table 2 Lubrication

USAGE	FLUID or LUBRICANT	CAPACITIES	EXPECTED TEMPERATURES	INTERVAL
Door Hinges	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
Door Cam Locks	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
Door Seals	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
Door Lock Shaft Pivot Bearing	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
drawer latches	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
Non-Metallic Snap Hook Straps for Nets	N/A	As Required	All Temperatures	Monthly or as required if under adverse conditions
FPU SYSTEM Module Drawer Slides	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Bi-annually or as required if under adverse conditions

Table 2 Lubrication (cont'd)

USAGE	FLUID or LUBRICANT	CAPACITIES	EXPECTED TEMPERATURES	INTERVAL
FPU SYSTEM Module Drawer Slam Locks	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
Floor Adapter Plate Twist Lock	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
Floor Adapter Plate Locking Rod Pivot	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
End of Lubrication Table 2				

END OF WORK PACKAGE

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

STANDARD and SHORT HELO MODULES

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

Tools

None

References

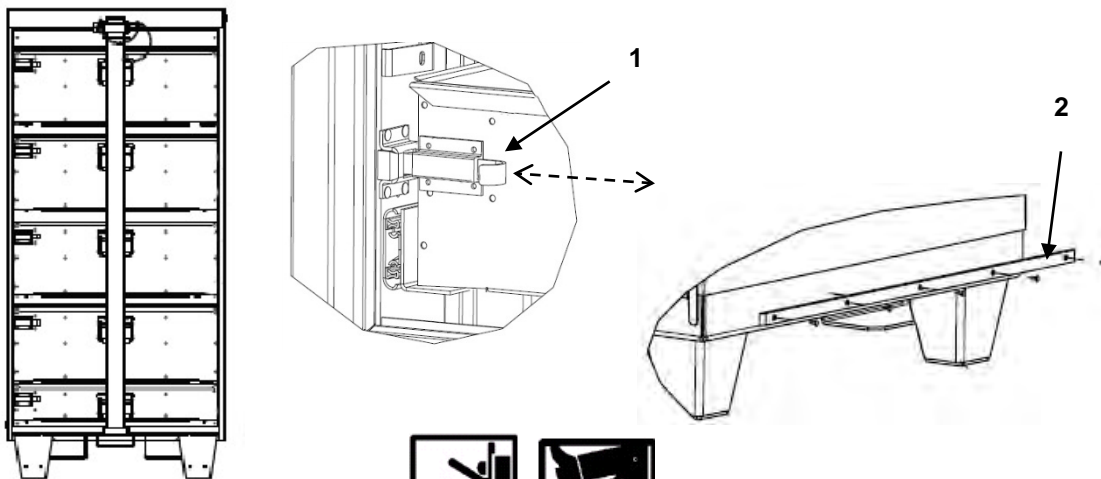
WP 0006 00

Equipment Condition

FPU MODULE Set-up

INSPECT

1. Open and close drawer assemblies. Follow steps outlined in WP 0006 00-5 to ensure proper operation and alignment. Lubricate, repair or replace as needed.
2. Inspect slam latches (1) for smooth movement, spring tension and retention of the drawer in the fully closed position. Notify unit maintenance of any missing or damaged slam latches.
3. Inspect for missing or damaged side bumper strips (2). Notify unit maintenance of any missing or damaged spark suppression bumper strips.



WARNING

The modules must be operated on level ground and periodically checked for shifting from a level position in or out of the containers. To maintain control, consider the ground surface conditions for adequate traction, such as mud, snow, ice and sand.

END OF WORK PACKAGE

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

SPECIALIZED WEAPONS VAULT MODULE

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

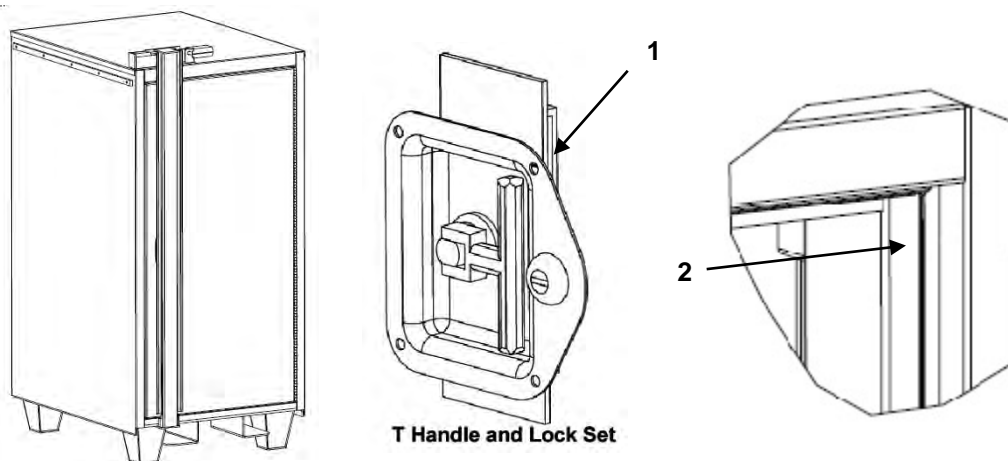
References

Chapter 2 WP 0007 00

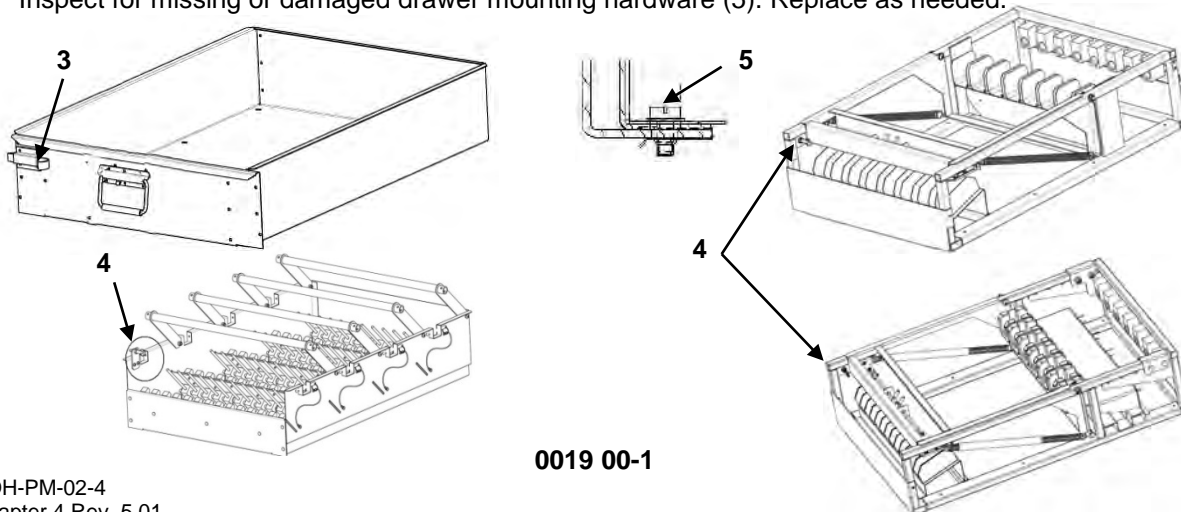
Equipment Condition

FPU SYSTEMS Set-up

INSPECT

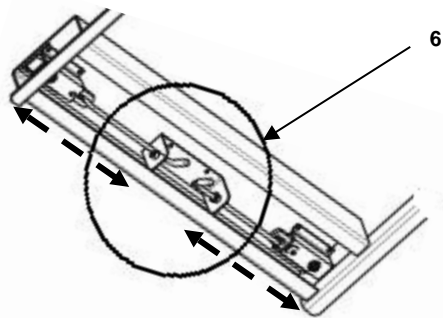


1. Inspect T-handle and lock set (1) for smooth operation. Notify unit maintenance of missing, cracked, broken or poorly operating T-handle and lock set.
2. Inspect door seals (2) for cut, cracked or missing seals. Replace as needed.
3. Inspect slam latches (3) and pin latches (4) for smooth movement, spring tension and retention of the drawer in the fully closed position. Notify unit maintenance of any missing or damaged drawer latches.
4. Open and close drawer assembly (review all steps outlined in chapter 2 WP 0007 00) to ensure proper operation and alignment. Lubricate, repair or replace as needed.
5. Inspect for missing or damaged drawer mounting hardware (5). Replace as needed.

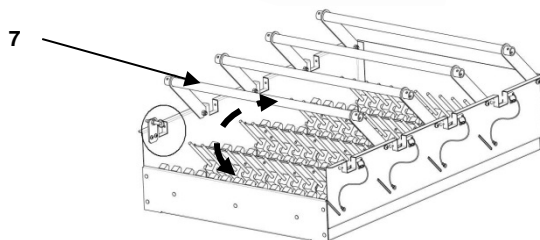


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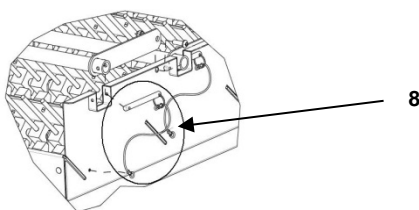
6. Inspect rifle retaining bar for smooth spring and latch operation (6). (See page 0008 00-6) Replace as needed.



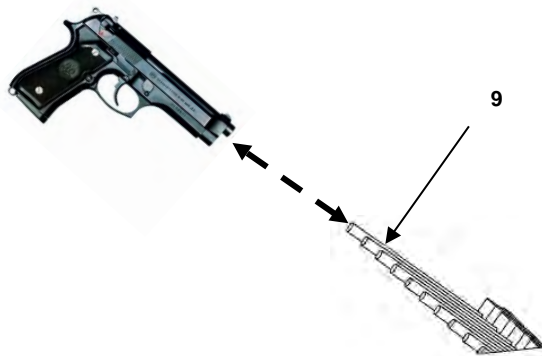
7. Inspect pistol retaining bar for smooth operation (7). (See page 0008 00-10) Replace as needed.



8. Inspect pistol drawer for missing bar retaining pins and lanyards (8). (See page 0008 00-10) Replace as needed.



9. Inspect pistol drawer for missing or broken pistol barrel rods (9). (See page 0008 00-10) Replace as needed.



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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

SPECIALIZED FLAMMABLE/CORROSIVE MODULE

INITIAL SETUP:

Material/Parts

None

Personnel Required

One

References

Chapter 2 WP 0008 00

Equipment Condition

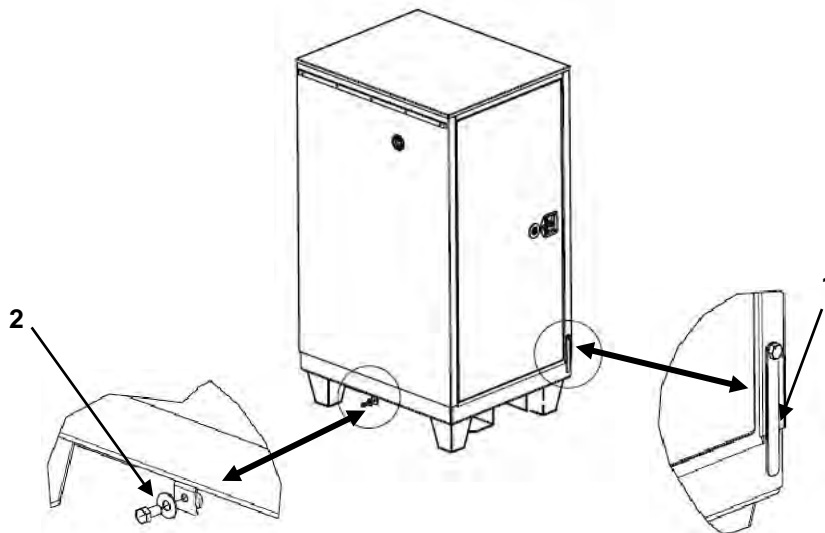
FPU SYSTEM Set-up

INSPECT

WARNING

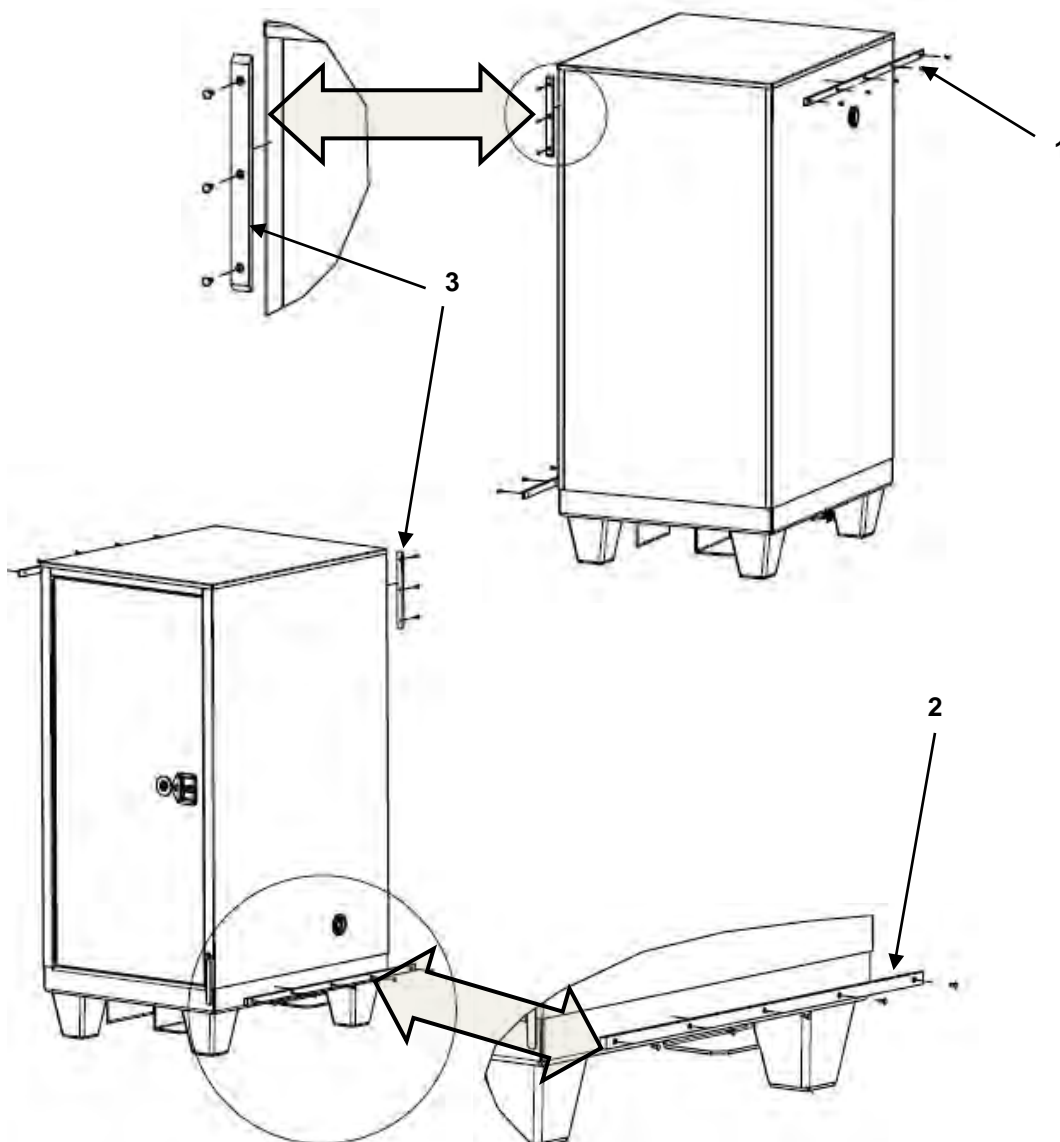


The Flammable/Corrosive module is designed to store and transport flammable and corrosive materials. Consult DOD 60055.9-STD Chapter 7 Grounding Procedures and DOD 4145.19-R-1 Storage and Handling Material Hazardous Commodities, prior to storage or transportation of materials. Flammable/corrosive Module ground connections (1 and 2) are required for safe operation.



1. Inspect for a ½" flat braided copper ground strap (1) bolted to the frame located on the front of the module locker and a connection bolt washer and nut (2) located on the left side at the bottom of the module locker.

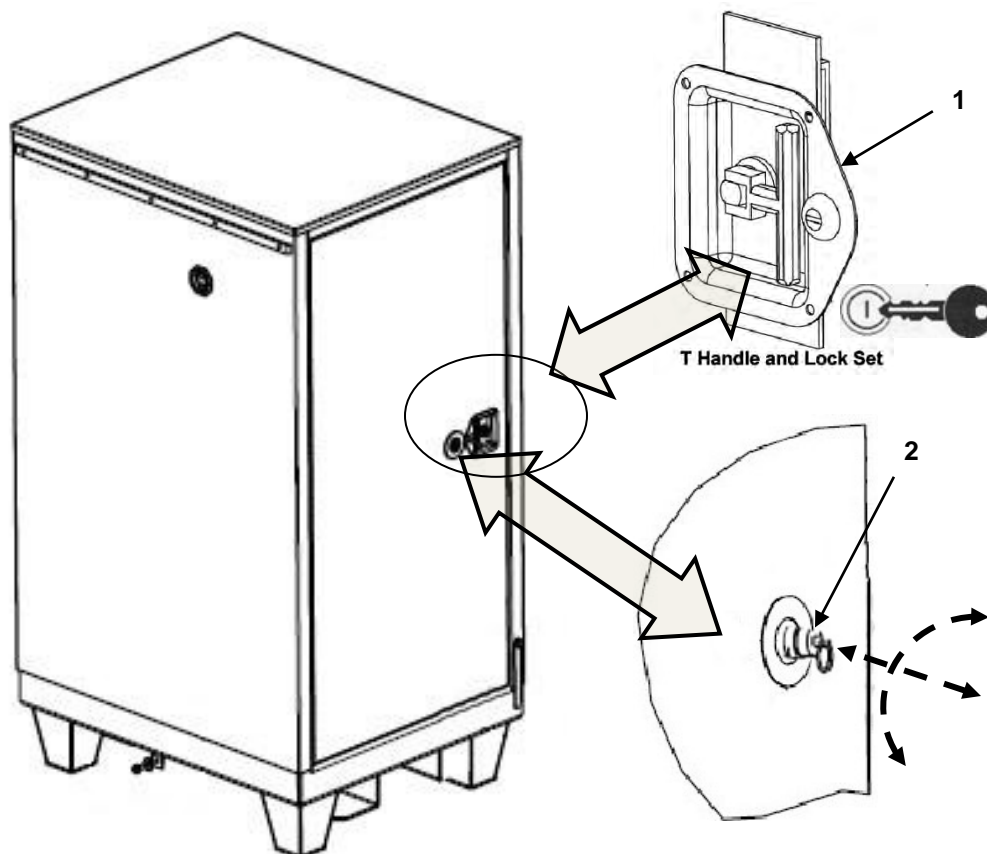
2. Inspect for bumper strips on the top side and rear of the locker.



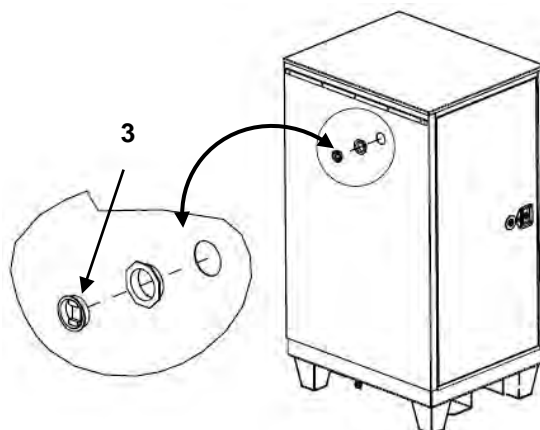
Note

Non-metallic rub strips are provided on the top left edge (1), lower right edge (2) and the back (3) to prevent metal to metal contact when loading or unloading the Flammable/Corrosive module.

- Inspect spring tension of the barometric pressure vent type valve (2) that permits the venting and equalization of internal air pressure when the Flammable/Corrosive Module has been stored in a hot, cold or aircraft pressure environment. Replace as needed.



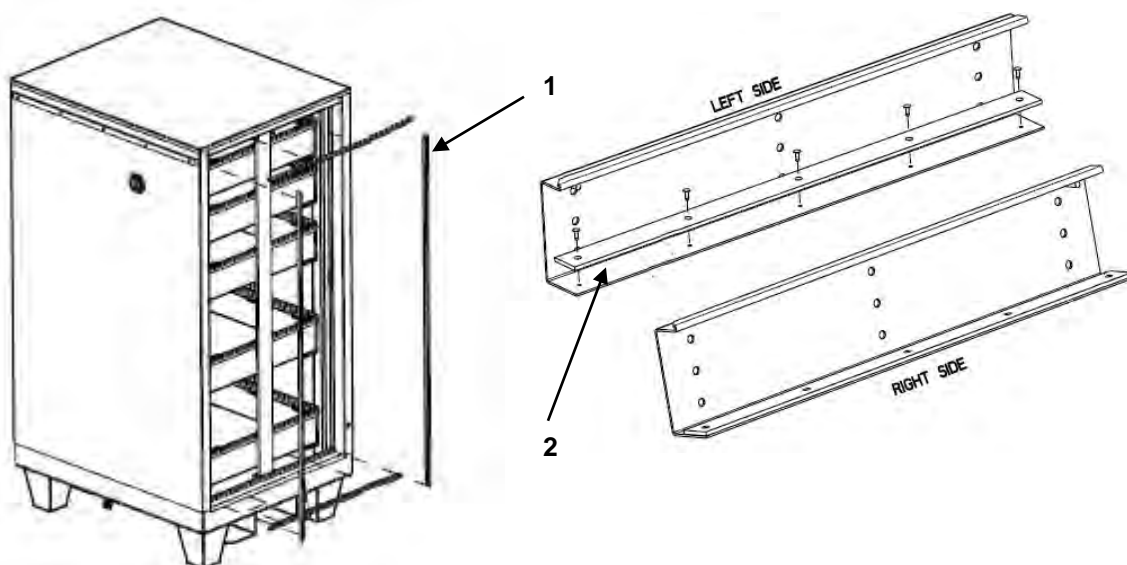
- Inspect T-handle and lock set (1) for smooth operation. Notify unit maintenance of missing, cracked, broken or poorly operating T-handle and lock set.
- Inspect for missing gas ventilation system plugs (3) at top left and bottom right sides.



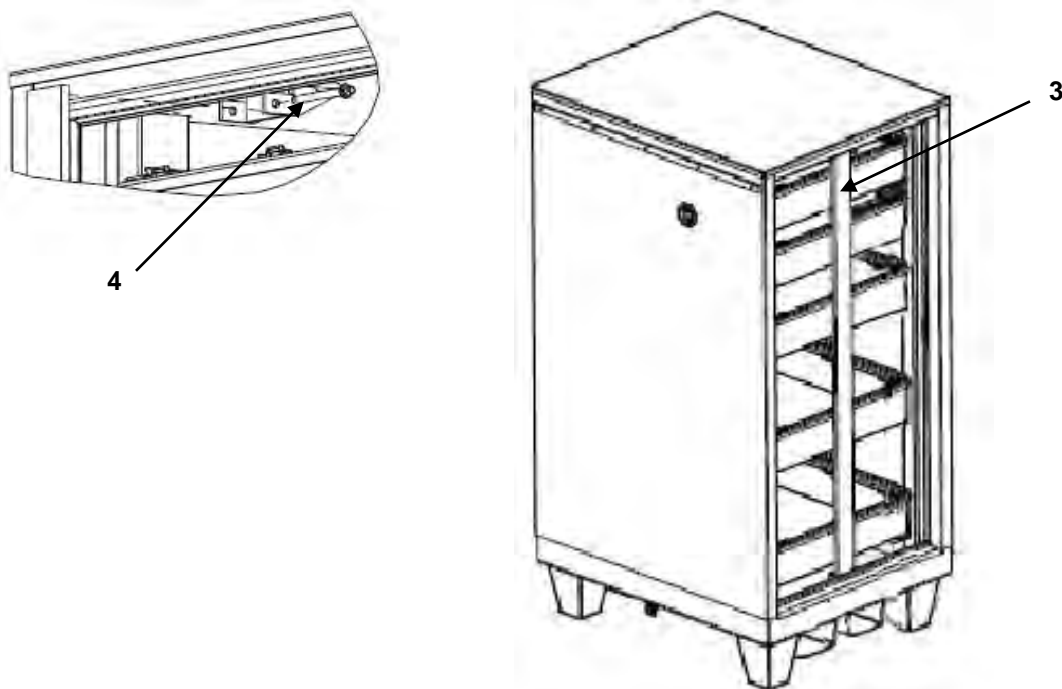
- Inspect the four interior door seals (1) for cuts or missing seals. Replace as needed.

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7. Inspect drawer for missing or damaged non-metallic bearing strips (2). Replace as needed.



8. Inspect for missing containment bar (3) and securing pin and lanyard (4).
9. Inspect door piano hinge on the left side for rust and ease of operation. Lube as needed.



END OF WORK PACKAGE

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

FPU BULK STORAGE/SHIPPING MODULE

INITIAL SETUP:

Material/Parts

Rags, light lube oil

Personnel Required

Two

Tools

$\frac{3}{4}$ " Open End and $\frac{3}{4}$ " Socket Wrench

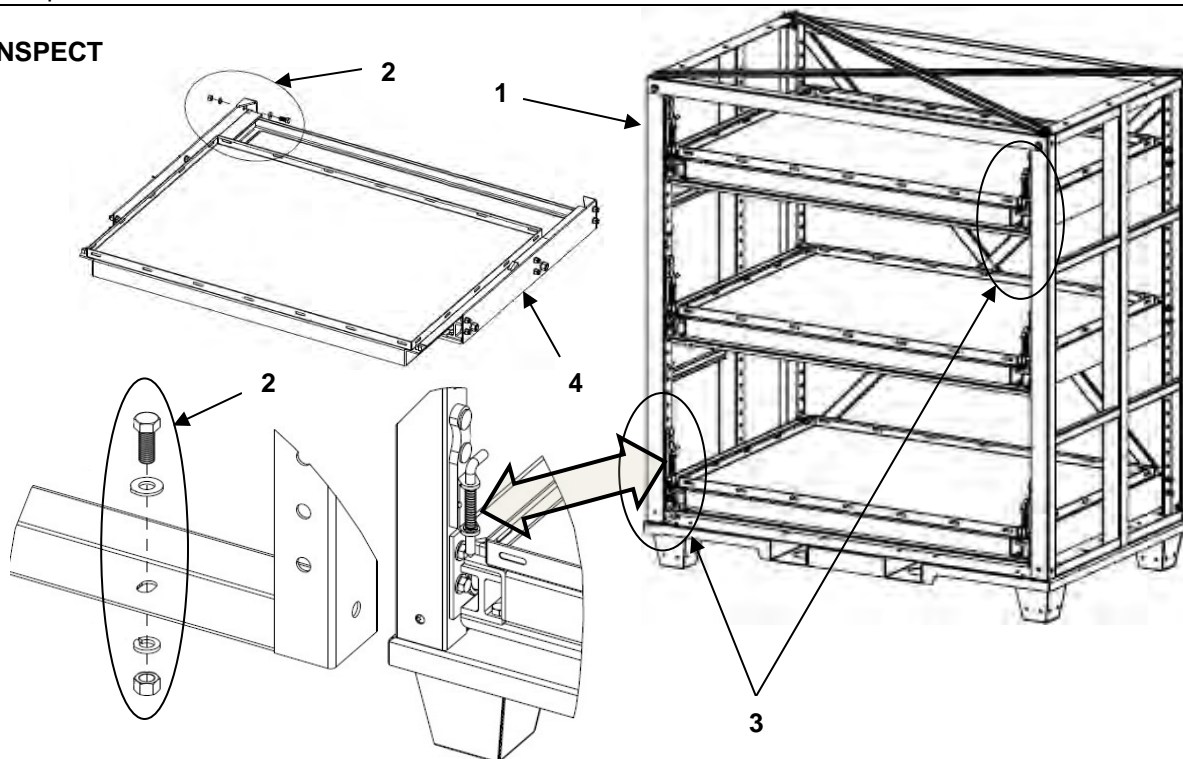
References

Chapter 2 WP 0009

Equipment Condition

FPU Set-up and Safety Check

INSPECT



1. Inspect hull (1) for loose or missing hardware.
2. Tighten loose hardware (2) with a $\frac{3}{4}$ " open end wrench and $\frac{3}{4}$ " socket wrench.
3. Replace missing hardware.
4. Inspect each left and right locking latch bolts and springs for smooth operation (3), see chapter 2 WP 0009 00-4.
5. Inspect the roller shelves (4) for ease of operation. Review WP 0010 00 for operation.
6. Inspect inside surface of roller shelf tracks (4) for dirt or rust. Clean and apply light oil and wipe off excess.
7. Test locking latch bolts and springs for proper operation, see chapter WP 0009 00-4. Clean and lubricate as needed.

NOTE

Tray and frame hardware (2) are common throughout the module.

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NOTE

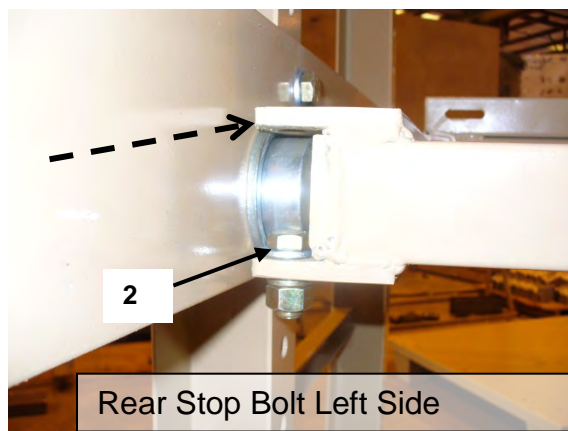
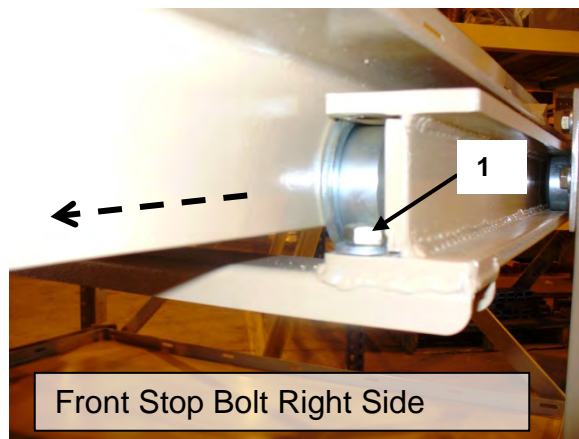
Shelf roller bearings do not require lubrication. Lubrication will only attract dirt and sand.

Shelf Stop Bolts (Safety Check)

8. Check shelves for all four Stop Bolts front and rear (1) and (2).

**WARNING**

Always ensure that all four of the front (1) and rear (2) stop bolts are in place that prevent the shelves from rolling out of the hull. Failure will result in damage, injury or death.

**Note**

Only remove the stop bolts when a shelf is empty or removing a shelf to reposition a shelf.

END OF WORK PACKAGE

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OPERATOR MAINTENANCE INSTRUCTIONS

FPU SYSTEMS OPERATION MANUAL (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST) STANDARD AND SPECIALIZED FPU MODULES BOH FPU Field Pack-up Units

FPU TRICON Adapter

INITIAL SETUP:

Material/Parts

None

Personnel Required

Two

Tools

$\frac{3}{4}$ " open end/box end wrench, ratchet and $\frac{3}{4}$ " socket, 3" extension

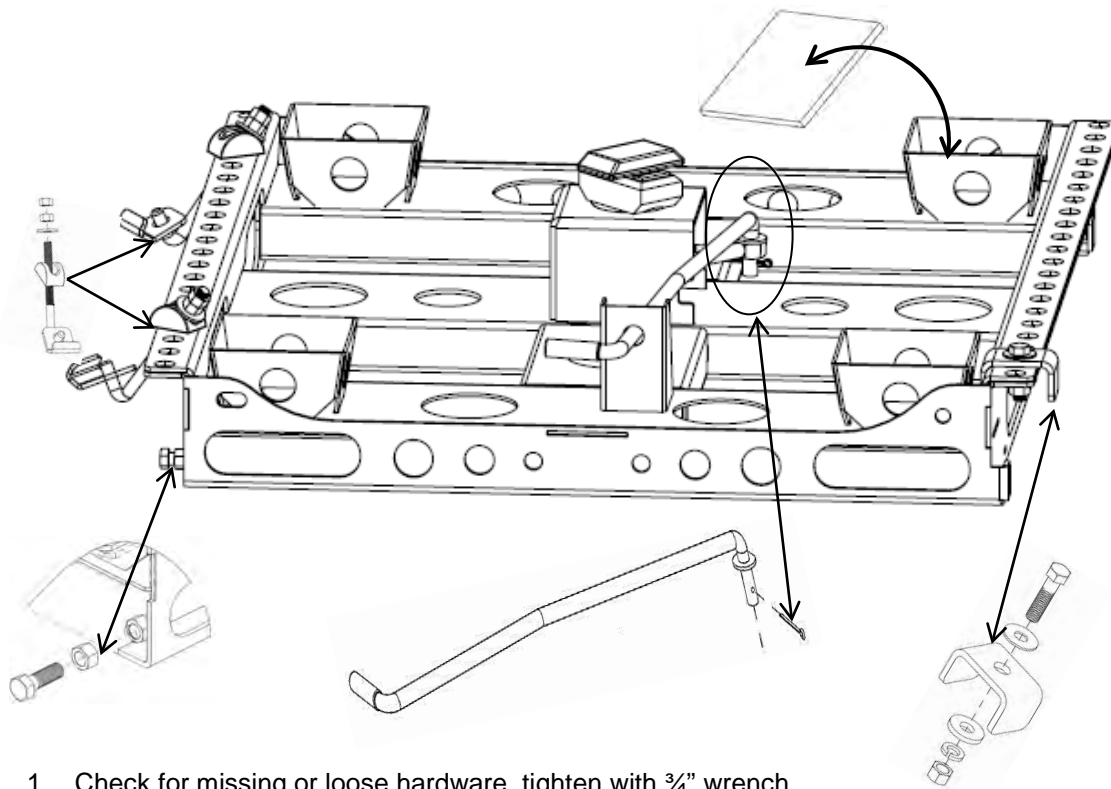
References

Chapter 2 WP 0010

Equipment Condition

FPU Set-up

INSPECT



1. Check for missing or loose hardware, tighten with $\frac{3}{4}$ " wrench.
2. Check for cracks in weld, bent or damaged brackets.
3. Check lock arm for free movement.
4. Check for missing or damaged module pads.

END OF WORK PACKAGE

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