

CHAPTER 4
OPERATOR MAINTENANCE INSTRUCTIONS

This page was intentionally left blank

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

INTRODUCTION TO PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

References

None

Equipment Condition

FPU SYSTEMS Set-up

INTRODUCTION TO PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

Preventive 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 FPU SYSTEM is in operation, using the PMCS table in (WP 0012 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 FPU SYSTEM, perform **Before Operation PMCS** checks and services.
- While the FPU SYSTEM is in use, perform **During Operation PMCS** checks and services.
- After using the FPU SYSTEM, perform **After Operation PMCS** checks and services.

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 hurt. A **CAUTION** means equipment could be damaged.

The far right-hand column of the PMCS table lists conditions that make the FPU SYSTEM not fully mission capable. Write down the problem that cannot be repaired at your level on DA Form 2404 and forward for unit maintenance. For further information on how to use this form, see DA PAM 738-750.

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 and components whenever necessary.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

PMCS TABLE

INITIAL SETUP:**Materiel/Parts**

Rags, Water

Personnel Required

One

References

None

Equipment Condition

FPU SYSTEMS Set-up

**Table 1 Preventive 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	*	*	*			Doors, Walls Check all doors and walls for cracks, dents, holes, or loose/missing hardware.	Missing doors, punctures, damage that would cause hazard or injury.
					*	Lubricate hinges, locks, as required.	
2			*	*		Exterior Check all exterior surfaces for cracks, dents that effect the operation of the FPU SYSTEM or its modules. Check for accumulations of dirt, debris, ice, snow, or salt. Clean as required. Check Horizontal Interconnectors for proper function, tightness and debris. Clean as required and replace if not functioning properly.	Damage or malfunction that would cause the FPU SYSTEM from operating properly such as Horizontal Interconnectors not tightening properly which can cause hazard or injury.
3			*	*		Interior Check floor for dirt and debris. Clean with broom or rags as required. Check module cradles in FPU SYSTEM floor for cracks or missing\rubber pads. Schedule cracked cradles for repair. Check center ISO locks for cracks or missing items. Check module-locking levers for missing or loose cotter pins. Replace or tighten as necessary. Check roof access steps for cracks or missing components. Replace as necessary.	Module cradles missing or damaged so that module does not seat properly, center ISO twist locks are broken or missing or roof access steps cracked or missing which can cause hazard or injury.
4			*		*	Data Plates Check plates for legibility, damage and/or missing. Clean with water and rag. Replace as needed.	ISO/CSC Safety Data plates must be replaced if missing or system will be non-deployable.

END OF WORK PACKAGE

This page was intentionally left blank

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

CLEANING AND LUBRICATING

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 is performed to keep the FPU and its associated equipment in good operating condition. The cleaning and lubrication of the FPU can be conducted along with the Preventive Maintenance Checks and Services (PMCS) procedures described in (WP 0012 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 0010 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 Cradles, FPU Floor	Detergent, Water, Rags (Remove, clean, and replace rubber pad into footing)	Soapy Water, Brush, Rags (Remove, clean and replace rubber pad into footing)	Corrosion Removal Compound and Wire Brush, Dry Rags, Coat with Lube Oil or Spot Paint (Remove, clean, and replace rubber pad into module cradle footing)
Container 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 s needed

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
Folding Steps	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
Horizontal Inter-connectors FPU-8-4/BOH-CARGO-12-3 (only)	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
Bridge Locks	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Annually or as required if under adverse conditions

Table 2 Lubrication (cont'd)

USAGE	FLUID or LUBRICANT	CAPACITIES	EXPECTED TEMPERATURES	INTERVAL
Transverse Stabilizer Tensioning Blocks FPU-8-4/BOH-CARGO-12-3 (only)	Dry Film Lubricate P/N 26040123	As Required	All Temperatures	Bi-annually or as required if under adverse conditions
Transverse Stabilizer Tensioning Bolts FPU-8-4/BOH-CARGO-12-3 (only)	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Bi-annually or as required if under adverse conditions
Loading Rail Connectors FPU-8-4/BOH-CARGO-12-3 (only)	Dry Film Lubricate P/N 26040123	As Required	All Temperatures	Each instance that the rails are removed and are to be re-installed
Open Ends of Loading Rails FPU-8-4/BOH-CARGO-12-3 (only)	Dry Film Lubricate P/N 26040123	As Required	All Temperatures	Monthly or as Required if Under adverse conditions
Vertical Rack Stanchion Recessed Rings FPU-8-4/BOH-CARGO-12-3 (only)	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
Pallet Ledge Rear Cam Lock	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
Pallet Ledge Locking Rod	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
Snap Hooks Safety Device on Ratchet Straps and Floor Nets	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as required if under adverse conditions
FPU SYSTEM Module Drawer Slides and FPU-12 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-12 Drawer Locking Mechanism shafts	General Purpose Lubricating Oil 10W	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
FPU-12 Drawer Locking Mechanism Tabs	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as Required if under Adverse Conditions
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 WORK PACKAGE

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3
DOOR ASSEMBLIES FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

INSPECT

INITIAL SETUP:**Materiel/Parts**

None

Personnel Required

One

Tools

Ladder

References

WP 0005 00

Equipment Condition

FPU SYSTEMS Set-up

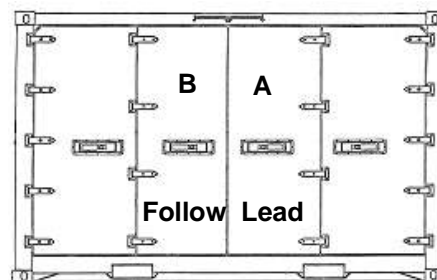
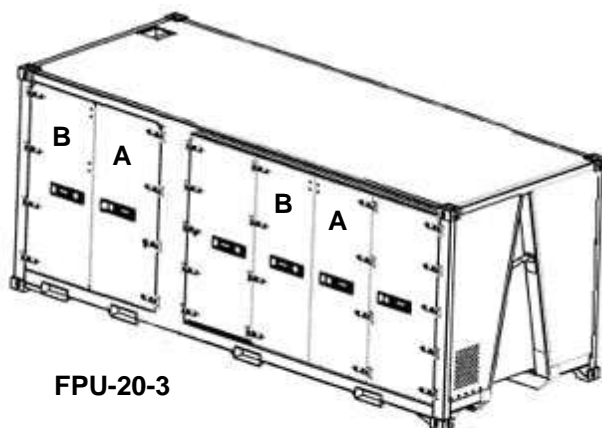
INSPECT

1. Open and close right door (A) left door (B) (Follow steps outlined in (WP 0005 00.) to ensure proper operation and alignment.



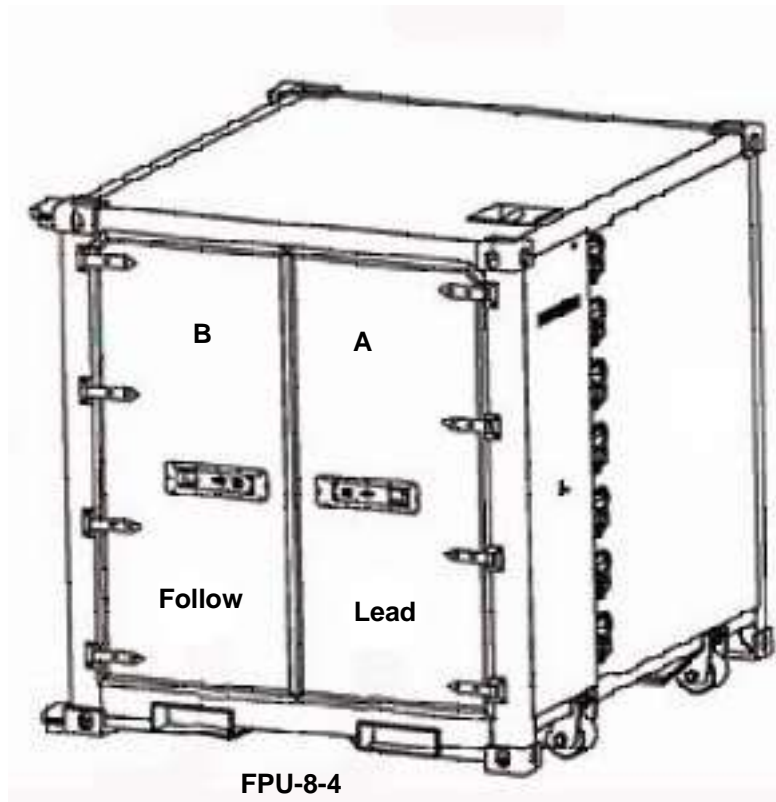
WARNING

The containers must be operated on level ground and periodically be checked for shifting from a level position. Use care when opening doors or draws, physical injury may occur. To maintain control, consider the ground surface conditions for adequate traction, such as mud, snow, ice, sand.



CAUTION

The right door (A) must lead the left door (B) slightly when closed to prevent damage to the door edge seals.



2. Notify unit maintenance of any missing or damaged seals and any problems with operation of latch, handle, or hinges for service.
3. Notify unit maintenance of any problems with door alignment.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

FPU 8-4 FOLDING STEPS

INSPECT

INITIAL SETUP:

Materiel/Parts

References

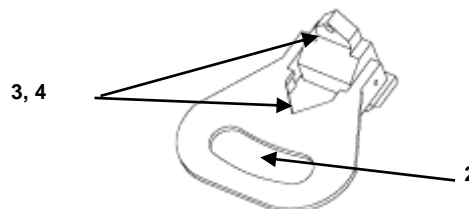
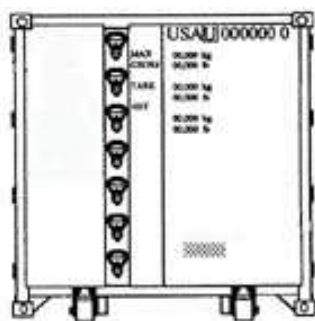
Personnel Required

One

Equipment Condition

FPU SYSTEMS Set-up

INSPECT



1. Raise and lower each of the steps (2) to ensure they stow and operate properly.
2. Notify unit maintenance of missing, cracked, broken or poorly operating steps (2).
3. Notify unit maintenance of any cracked, broken or missing hardware (3, 4).

END OF WORK PACKAGE

This page was intentionally left blank

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

VERTICAL RACK FRAME

INSPECT

INITIAL SETUP:

Materiel/Parts

References

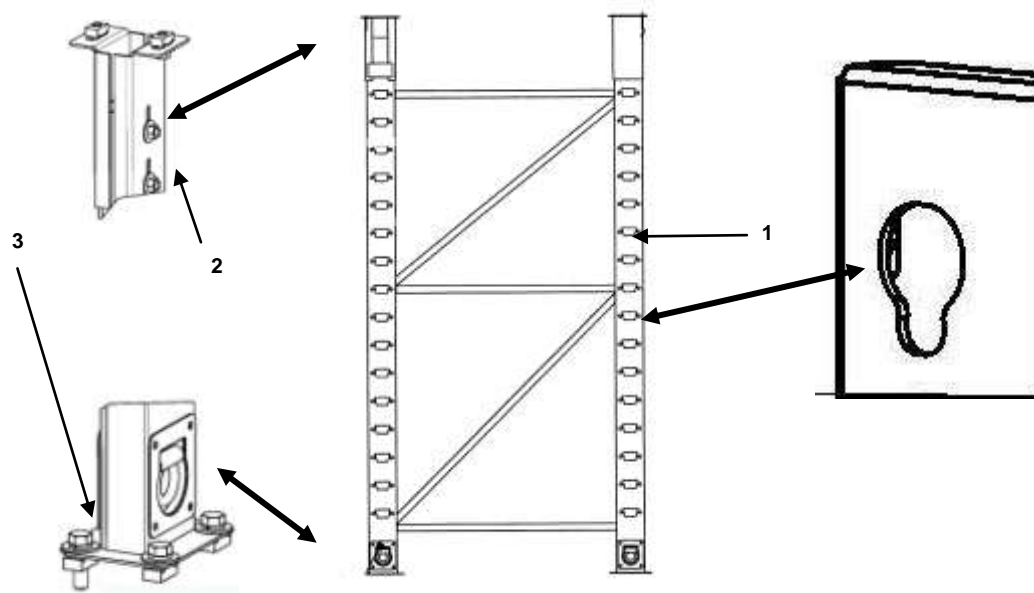
Personnel Required

One

Equipment Condition

FPU SYSTEM Set-up

INSPECT



1. Inspect the vertical rack frame (1) for cracks, excessive dents or bending. Report to unit maintenance for repair or replacement.
2. Inspect vertical Rack upper attachment (2) and lower attachment assemblies (3) for cracks, excessive dents or bending. Report to unit maintenance for repair or replacement.
3. Inspect vertical rack frame for damaged or missing bolts (2) & (3). Report to unit maintenance for repair or replacement.

END OF WORK PACKAGE

This page was intentionally left blank

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

CONSTRAINT BAR

INSPECT

INITIAL SETUP:

Materiel/Parts

Personnel Required

One

Tools

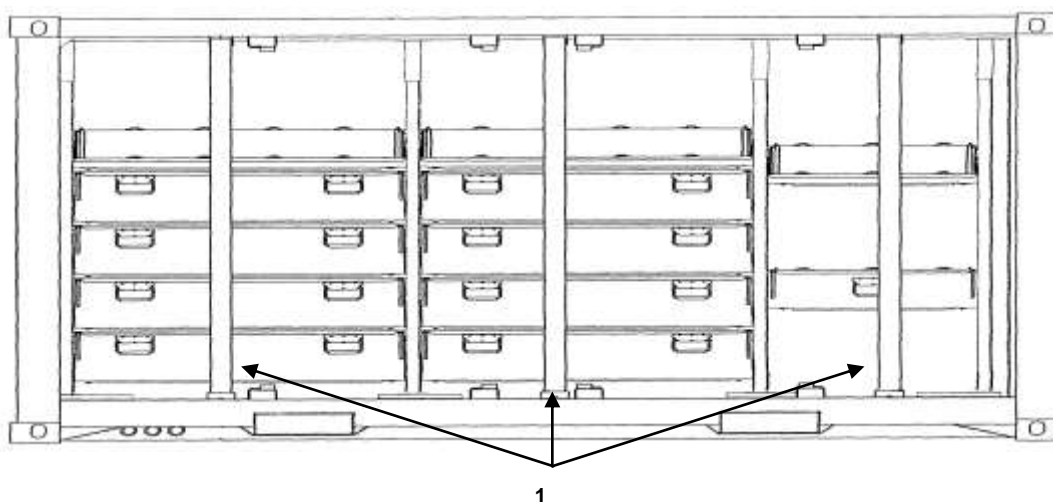
Ladder

References

Equipment Condition

FPU Set-up

INSPECT



1. Inspect the Load Constraint Bars (1) for presence and proper fit.
2. Notify unit maintenance of missing bars and hardware.

END OF WORK PACKAGE

This page was intentionally left blank

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

PALLET

INSPECT

INITIAL SETUP:

Materiel/Parts

Personnel Required

One

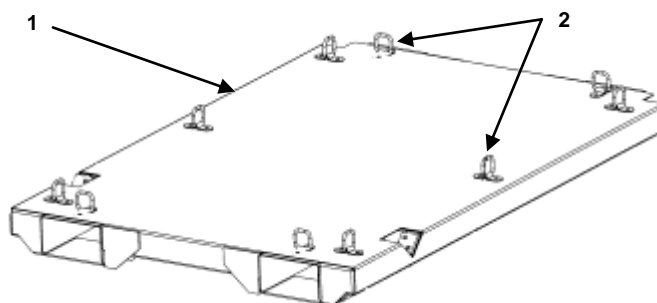
References

WP 0005 00

Equipment Condition

FPU SYSTEMS Set-up

INSPECT



1. Inspect pallet (1) for cracks, excessive dents or sagging. Report to unit maintenance for repair or replacement.
2. Inspect pallet for missing or damage D-rings (2). Report to unit maintenance for repair or replacement.

END OF WORK PACKAGE

This page was intentionally left blank

**OPERATOR MAINTENANCE INSTRUCTIONS
FPU SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)
FOR
MODELS FPU-8-4/BOH-CARGO-12-3 & FPU-20-3**

PALLET LEDGE

INSPECT

INITIAL SETUP:

Materiel/Parts

None

Personnel Required

One

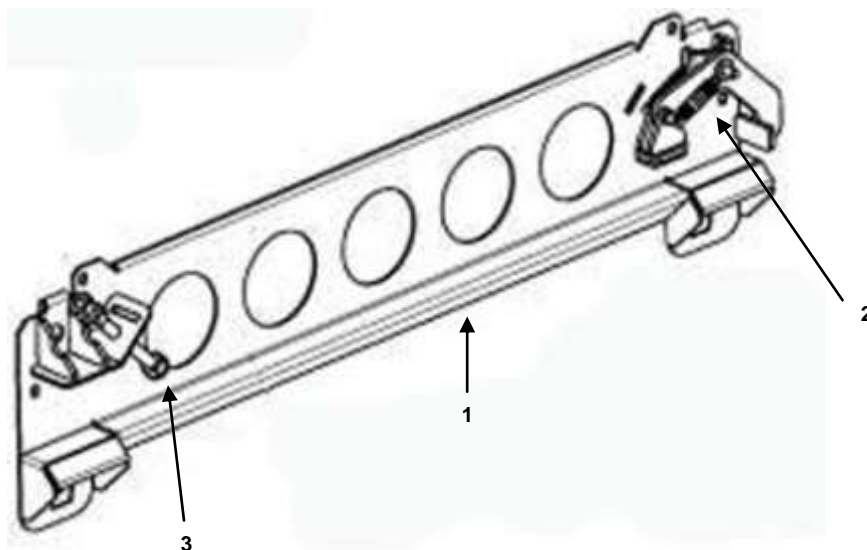
References

WP 0005 00

Equipment Condition

FPU SYSTEMS Set-up

INSPECT



1. Remove pallet from container using a forklift.
2. Inspect pallet ledges (1) for operation of Cam Locks (2) Lock Rods (3), and missing hardware per (WP 0005).
3. Inspect pallet ledges for dirt/debris that would affect performance.

END OF WORK PACKAGE

This page was intentionally left blank