

**FPU® SYSTEMS OPERATION MANUAL
(INCLUDING REPAIR PARTS)
EXPEDITIONARY BULK STORAGE SYSTEM (EBSS)**

CHAPTER 5

UNIT MAINTENANCE INSTRUCTIONS

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UNIT MAINTENANCE INSTRUCTIONS
FPU® SYSTEMS OPERATION MANUAL
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EXPEDITIONARY BULK STORAGE SYSTEM (EBSS)

DOOR ASSEMBLIES

INSPECT, SERVICE

INITIAL SETUP:

Materiel/Parts

Lubricant (see Table 2 Lubrication in WP 0013)

Personnel Required

One

Tools

Rags, General Mechanic's Tool Kit, Ladder with hand rail, putty knife

References

Chapter 5 WP 0017 00-2

Equipment Condition

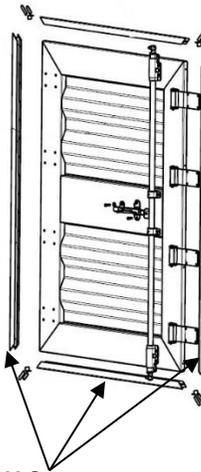
EBSS Inspect and Repair

INSPECT

With doors open, inspect seal surfaces, and report problems with door seal to maintenance.

SERVICE

1. Wipe seal surfaces clean and apply a light coat of lubrication (refer to Table 2 Lubrication in WP 0013) to seal mating surfaces.
2. Report gouges, cracks, rips, tears, etc. in door seal to maintenance.



EBSS DOOR SEALS

WARNING



Ensure the container is out of the wind before attempting repair of the doors. Review door strap arrangements chapter 2 WP 0006 00-4.

REPLACE**Replacement of Door Hinge****NOTE**

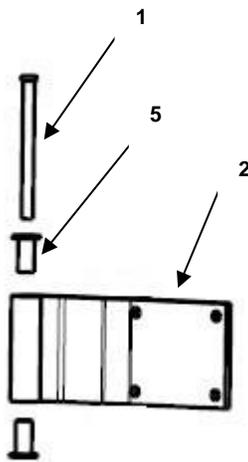
Only replace one hinge at a time to avoid alignment problems.

1. On the bottom of the hinge pin (1) to be removed, grind off the tack weld in order to allow the pin to slide through the hinge leaf (2).
2. Remove hinge bolts (3), nuts and washers (4) of hinge to be replaced.
3. Scrape off existing Sikaflex from the hinge bracket inside the door.
4. Tap upward on the hinge pin bottom until the pin clears the hinge leaf, remove bushings (5) and discard existing hinge assembly.
5. Insert the two new bushings inside the new hinge leaf and align the leaf end within the hinge butt opening.
6. Insert new hinge pin from the top of the hinge leaf and slide fully into place. Insert new cotter pin through the hole on the bottom of the hinge pin to secure.
7. Lay the new hinge leaf against the door aligning the holes. Secure with new bolts, washers and nuts.

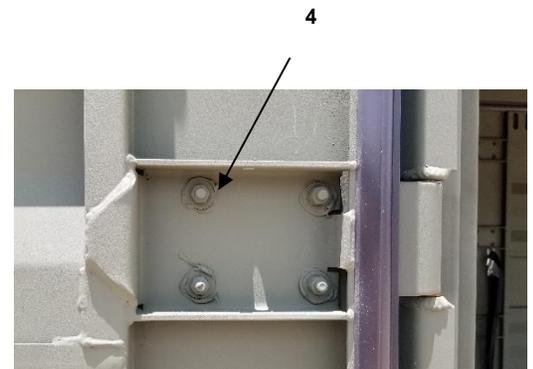
NOTE

Apply sikaflex between hinge bracket and washer (4) to properly seal this connection.

8. Check door operation and alignment.
9. Apply touchup paint to inside and outside of door hinge area as needed.



DOOR HINGE

VIEW OF DOOR HINGE
(FROM OUTSIDE)VIEW OF DOOR HINGE
(FROM INSIDE)

Replacement of Door Assembly

Refer to door diagram WP 0017 00-1 for door arrangements. The primary components are the door, lockrod handle assembly, hinges (4), and door seals.

REPAIR**NOTE**

Each hinge butt is welded to the container frame.

Repairs Requiring Welding

Welding repairs are required when the EBSS container is pierced, punctured, or cracked or the door hinge butt is damaged. Standard welding principles and materials apply to EBSS repairs. Welding procedures will not be discussed in this tech manual, refer to TC 9-237.

END OF WORK PACKAGE

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DOOR SEALS

REPAIR, REPLACE

INITIAL SETUP:

Materiel/Parts

Prescribed Door Seal Kit

Personnel Required

One

Tools

Ladder, Pocket Knife, ½ hp drill, 3/16" drill bit, pop rivet tool, needle nose pliers

References

Chapter 6 WP 0023

Equipment Condition

EBSS Repair

REPLACE

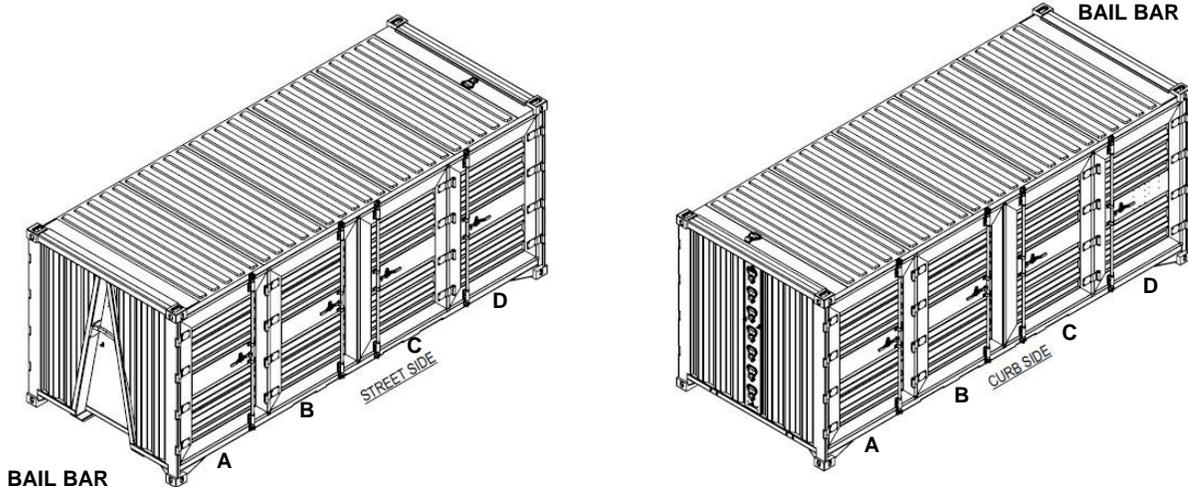
The door perimeter seals are secured with 3/16" x ¼" pop rivets, the corner tab gaskets are secured with adhesive provided with the door seal kit.

WARNING



Ensure the container is out of the wind before attempting repair of the doors.

EBSS Door Location Diagram



Door Seal types and Profiles

The seals and gaskets have been specifically designed for each door.

CAUTION

Ensure the proper seal kit for each door is available before starting. See chapter 6 WP 0023 for door seal kits to the specific door.

1. Apply a ¼" wide bead of sealant to the inside of the perimeter seal before installing the seal.
2. Align the rivet holes and install the pop rivets (See page 0017 00-4)
3. Gaskets are used to cover mating seal segments and make the seal integrity continuous.

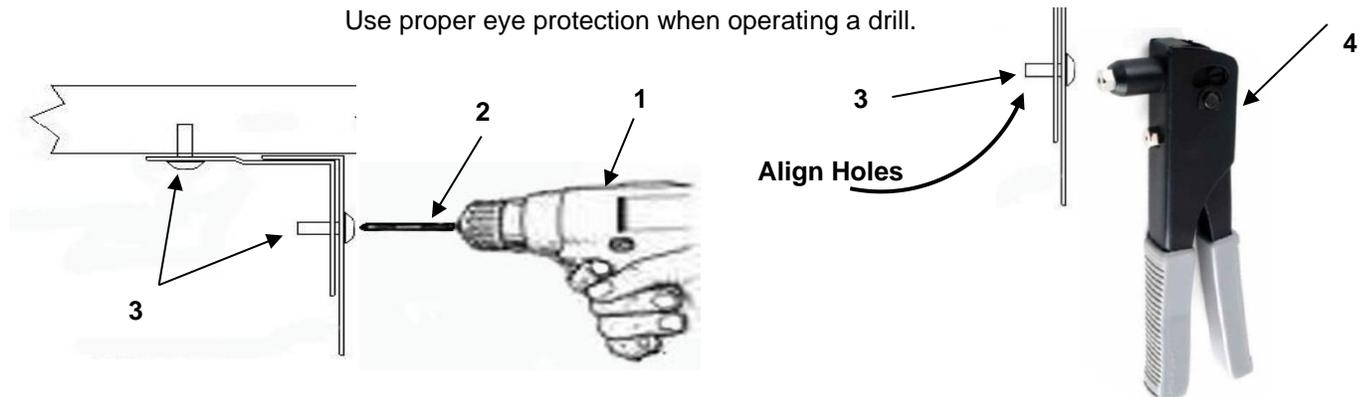
Remove and Replace Rivets

1. Wipe the rivet surfaces clean, use a 1/2 hp electric drill (1) with a 3/16" drill bit (2), and drill through the center core of the rivet (3).



WARNING

Use proper eye protection when operating a drill.



2. Remove the remainder of any pop rivet debris with needle nose pliers and wipe the hole clean with a rag.
3. Remove the seal and install the new seal.
4. Insure the holes are properly aligned.
5. Insert a new 3/16" DIA pop rivet (3), through the holes of seal and door to be installed (aligning top and bottom).
6. Use the pop rivet tool (4) to secure each pop rivet and seal in place.
7. Check for proper alignment and tight attachment of the seal.
8. Ensure the seal surfaces are dry and clean before applying adhesive.
9. Install new gaskets with sealant and adhesive to cover the mating edges of the seals.
10. Close the door and inspect the seal for proper fit.

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FOLDING STEPS

INSPECT, SERVICE, REPLACE

INITIAL SETUP:

Materiel/Parts

Lubricant

Personnel Required

One

Tools

General Mechanic's Tool Kit/Ladder

References

WP 005 00-2

Equipment Condition

EBSS Set-up

INSPECT

Raise and lower each of the steps (1) to ensure they stow and operate properly.

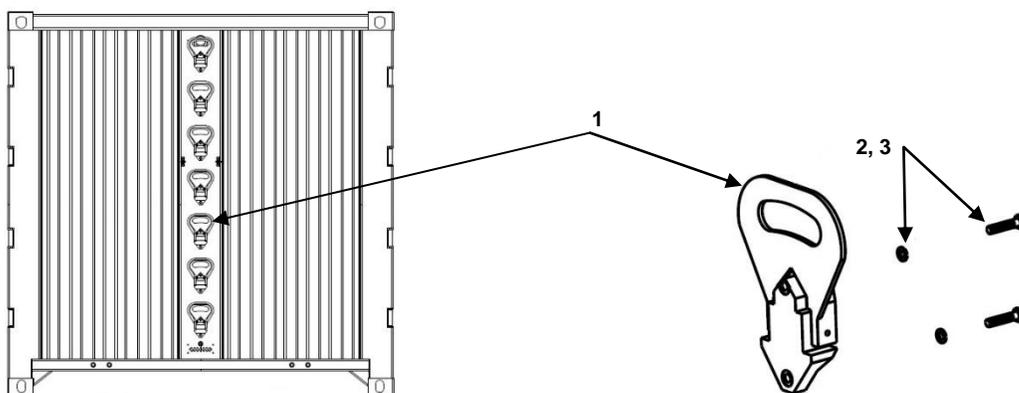
SERVICE

Apply 10W40 lube oil between the moving parts.

REPLACE

1. Remove the mounting bolts and washers (2, 3) with a 9/16 inch socket and ratchet.
2. Install replacement step (1), apply Loctite 262 to the bolt threads, replace bolts and washers (2, 3) with the 9/16" socket and ratchet.

EBSS FOLDING STEPS



END OF WORK PACKAGE

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UNIT MAINTENANCE INSTRUCTIONS

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REAR ROLLER ASSEMBLY

INSPECT, SERVICE, REPLACE, REPAIR

INITIAL SETUP:**Materiel/Parts**

Rags, Water

Personnel Required

Two plus Supervisor

Tools

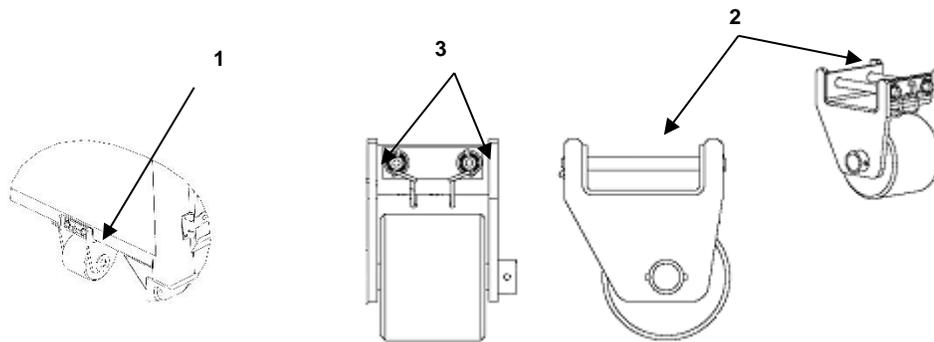
General Mechanic's Tool Kit, MHE Support

References

WP 0005 00-4 and 00-5

Equipment Condition

EBSS Set-up (Rollers attached)

INSPECT

1. Inspect the rear roller assembly (1) for dirt/debris that would affect performance. Clean as required.
2. Inspect the rear roller assembly for the presence of connector pins (2) and Lynch pin retaining clips (3).

SERVICE

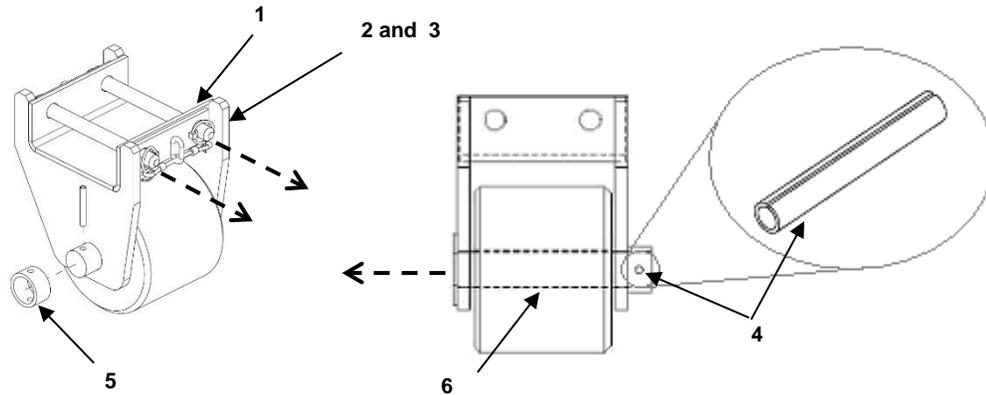
Remove debris from the roller assembly and clean with a wet rag.

REPLACE

1. Raise container by lifting with the HEMTT-LHS or properly rated MHE.
2. Remove the two 1/4-inch lynch pins from the rear of the rear roller assembly attaching pins.
3. While supporting the roller assembly, remove the 3/4-inch rear roller attaching pins, then remove the roller assembly.
4. Attach new rollers by aligning the holes in the rollers with the holes in the container and inserting 3/4-inch retention pins.

5. Reattach the 1/4-inch lynch pins to the rear of the 3/4-inch rear roller attaching pins

REPAIR



1. Elevate the container enough to remove with MHE support.
2. Remove the roller assembly (1) from the EBSS, see chapter 2 WP 0005 00-4 thru 00-6.
3. Remove the Lynch Pins (2) and Frame Pins (3).
4. Drive the roller pin (3) with a 5/16-inch flat punch, holding retaining collar to roller pin assembly.
5. Remove retaining collar (4).
6. Slide roller pin (4) from roller frame (1).
7. Replace worn/broken or damaged parts.
8. Apply lubrication, refer to chapter 4 WP 0013 Table 2.
9. Reinsert roller pin (6).
10. Reinsert the retaining collar (5) and secure with 5/16-inch rolled pin (4) with the hammer and flat punch.
11. Position the roller assembly (1), insert the frame pins (3) and insert the lynch pins (2).

END OF WORK PACKAGE