

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

Appendix B

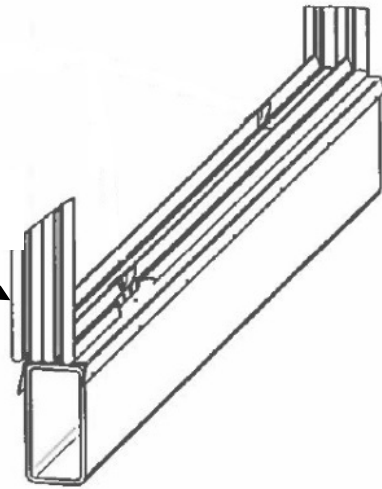
EXPANDO SEAL REPLACEMENT PROCEDURES

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**EXPANDO SEAL REPLACEMENT PROCEDURES
EXPANDABLE WALL COMMAND CENTER (EWCC)**



**PROCEDURE 2
(INTERNAL)**



PROCEDURE 1
EXPANDO EXTERIOR SEALS

PROCEDURE 2
EXPANDO WIPER SEALS

EWCC EXPANDO SEALS

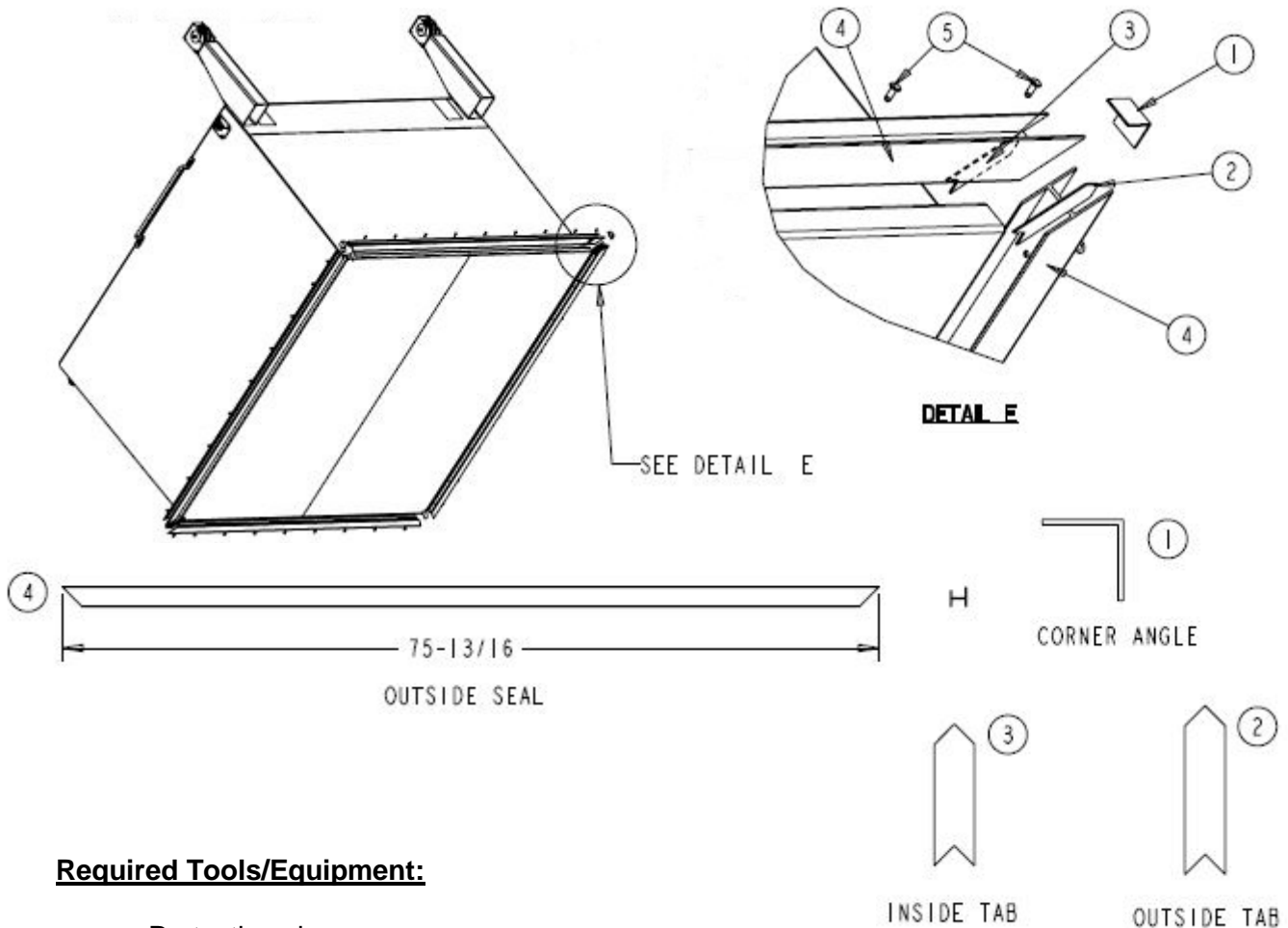
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PROCEDURE 1: EXPANDO EXTERIOR SEALS

Parts List:

ITEM	PART NO.	DESCRIPTION	QTY
NA	15988472	EXPANDO OUTSIDE SEAL KIT W/ HDW. & ADH.	4
1	NA	DOOR SEAL CORNER ANGLE	4
2	NA	DOOR SEAL OUTSIDE TAB	4
3	NA	DOOR SEAL INSIDE TAB	4
4	NA	EXPANDO OUTSIDE SEAL	4
5	NA	RIVET-POP 3/16 X 1/2	36
NA	NA	SEA-LOK #58S-1 SEALANT	1
NA	NA	SEA-LOK #58-1 TAB ADHESIVE	1

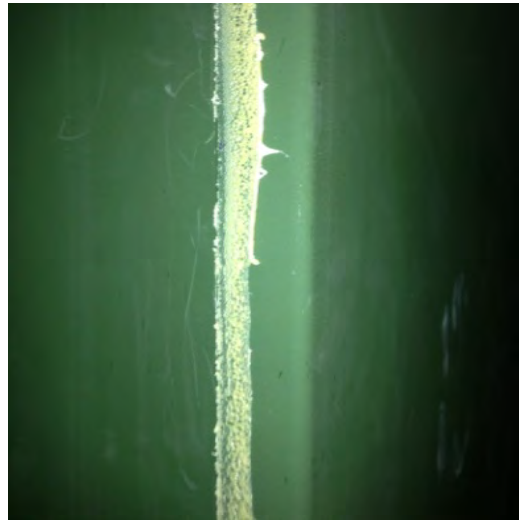


Required Tools/Equipment:

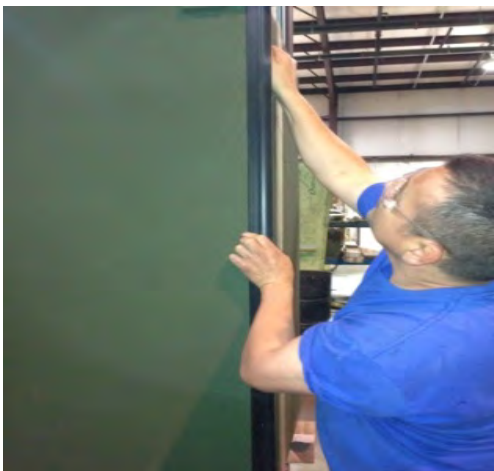
- Protective gloves
- Drill (#11 drill bit)
- Rivet Gun
- Scraper
- Caulking gun

PROCEDURE 1: EXPANDO EXTERIOR SEALS

1. Affected expando should be deployed completely. See Chapter 2 pages 0010 00-2 (old expando design) or pages 0010 00-5 and 00-6 (new expando design) for deployment instructions.
2. Drill out rivets holding gasket in place.
3. Remove old gasket.
4. Scrape off old Sea-Lok sealant and ensure surface is clean.



5. Place new pieces of gasket around the expando to ensure correct positioning.
6. Remove one piece of gasket and apply a bead of Sea-Lok sealant to inside of it. Fill existing rivet holes in expando with sealant.



7. Place this piece of gasket back onto the expando firmly pressing into place.



8. Drill new holes through gasket and expando.
9. Rivet gasket into place.

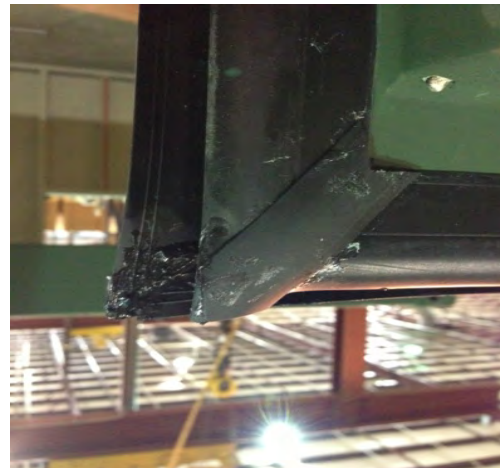


10. Repeat steps 6-9 for remaining pieces of gasket.

11. Using Sea-Lok Corner Tab Adhesive, glue the corner pieces into place. Ensure the surfaces are clean before applying.

NOTE

The longer flat pieces go on the exterior while the shorter pieces go on the interior of the expando. The corner pieces are glued over the corner joints of the mating gaskets.



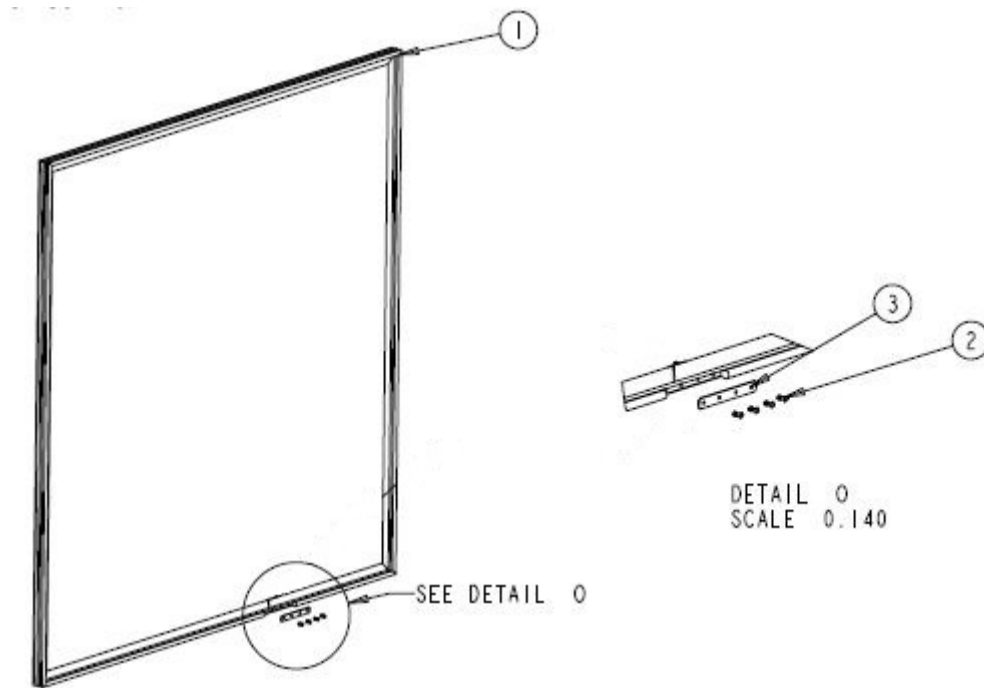
END OF EXPANDO EXTERIOR SEAL REPLACEMENT PROCEDURE

PROCEDURE 2: EXPANDO WIPER SEALS

Parts List:

ITEM	PART NO.	DESCRIPTION	QTY
NA	15988492	EWCC SINGLE WIPER SEAL KIT	2
1	NA	EXPANDO WIPER SEAL	25
2	NA	RIVET-POP AB68CLD	4
3	NA	GASKET SPLICE RETAINER	1
NA	NA	SIK-A-FLEX BLACK	1

Note: This single wiper seal kit for replacement on EWCC serial number E-3317 double side opening wall only and all openings on subsequent serial numbers. E-3317 single opening and all previous EWCC serial numbers use kit #15988490.



Required Tools/Equipment:

- Protective gloves
- Rivet Gun
- Drill (#11 and ¼" drill bit sizes)
- Vice Grip
- 5/8" wrench, 9/16" wrench
- Four 4x4 wooden blocks
- Knife, metal sheers
- Alcohol, rags
- Forklift or crane w/ straps (3,500 lb basket minimum rating)

PROCEDURE 2: EXPANDO WIPER SEALS

EXPANDO REMOVAL

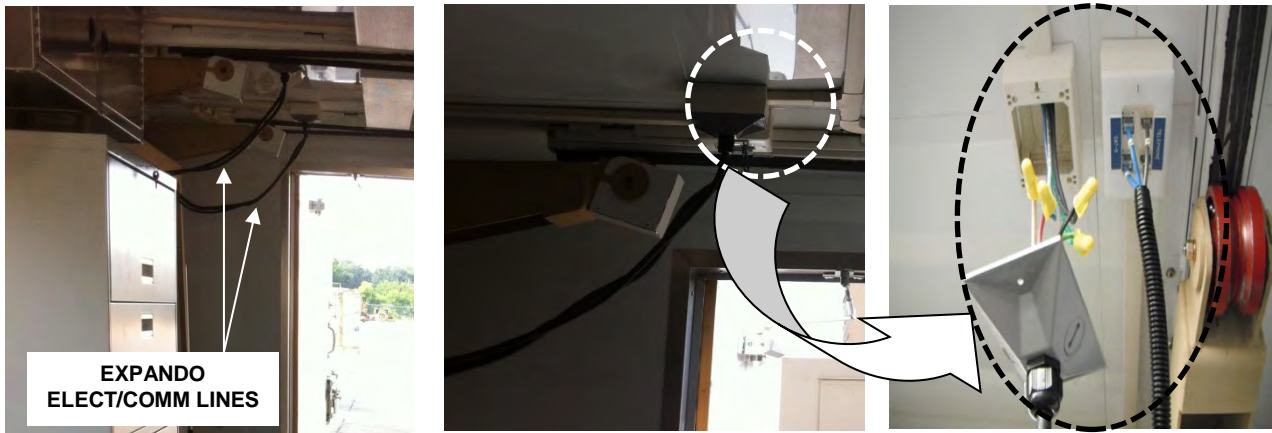
1. Affected expando should be deployed completely. See Chapter 2 pages 0010 00-2 (old expando design) or pages 0010 00-5 and 00-6 (new expando design) for deployment instructions.



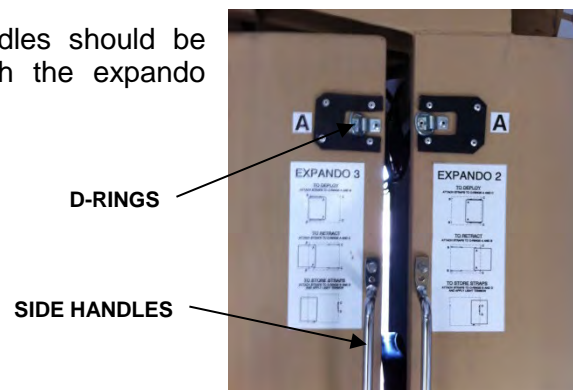
WARNING

Ensure the source shore power electrical connections are disconnected prior to proceeding. Failure to comply could cause serious injury or possibly death.

2. All electrical and communication connections should be disconnected.



3. D-rings for deployment kit and side handles should be removed so the expando can fit through the expando opening.



NOTE

To remove the d-rings, a ¼" drill bit will be used to drill out the rivets holding the D-ring on each side of the expando. To remove the side handles, you will need a pair of vice grips to hold the carriage bolt from the inside of the expando and a 5/8" wrench to remove the nylon nuts on the outside.

4. Expando should be supported overhead by a strap (minimum rating of 3,500 lbs basket) with a crane or forklift.

WARNING

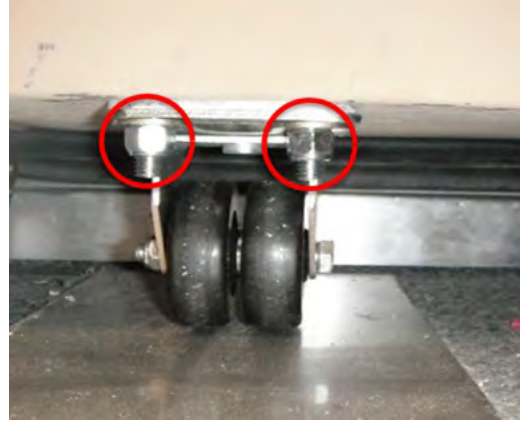
Use extreme caution when removing or installing the expando unit. Ground guides and the MHE operators must maintain direct line of sight and insure that personnel and surrounding hazards such as power lines are clear of the containers during this operation. Failure to comply could cause damage to the equipment, serious injury or possibly death.



5. The bottom casters are now ready to be removed.

NOTE

To remove the caster, you will need a pair of vice grips to hold the carriage bolt from the top side and a 9/16" wrench to loosen the nylon nut.



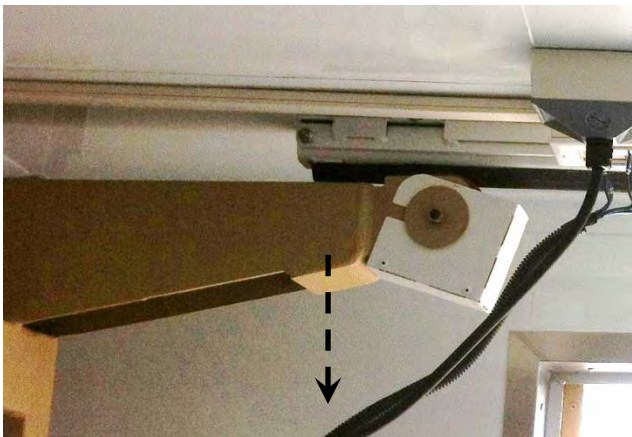
WARNING

The expando should be pushed to the full open position and support blocks should be added in the center, under the expando in between casters, to avoid any injuries.

6. Once the casters are removed, the expando should be lifted slightly to relieve the pressure from the bottom wiper seal.
7. After the pressure is relieved, the bottom of the expando should be pushed out of the container.

NOTE

In order to push the bottom out of the container, the top roller arms must be pulled down manually.



8. Once the bottom of the expando is out of the container, the expando shall be lowered slightly until the top roller arms will clear the opening.

9. When the expando is out of the container, it should be placed on supports (4 x 4 blocks). This will protect the exterior seals from being damaged.

WARNING

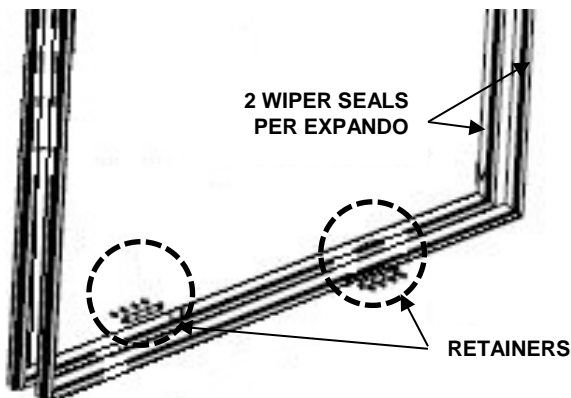
Ensure the blocks are placed on firm, level ground and space the blocks out appropriately to properly support the expando unit and prevent a tip hazard. Failure to comply could cause damage to the equipment, serious injury or possibly death.

WIPER SEAL REMOVAL

10. The gasket splice retainer should first be removed. This is held in place by four rivets on the bottom of the expando opening.

NOTE

Notice that there are two retainers (one on each side of each seal) and there are two wiper seals per expando opening. Also notice that the splice locations are offset. Aluminum retainer should be removed with a 11 size drill bit, drilling out the rivets and removing both retainers (two retainers per wiper seal, one on each side)



11. With the splice retainer removed, the seal can be pulled off the trim.

WIPER SEAL INSTALLATION

12. To install the wiper seal, you should be able to push the seal on to the trim by hand starting at the center of the bottom of the opening, then working your way around the opening. Overlap the ends of the seal by 2 ½". Be sure to push the wiper seal tightly in the corners.



13. At each corner, you must slice the wiper portion of the seal at a 45-degree angle outward from the bubble part of the seal.

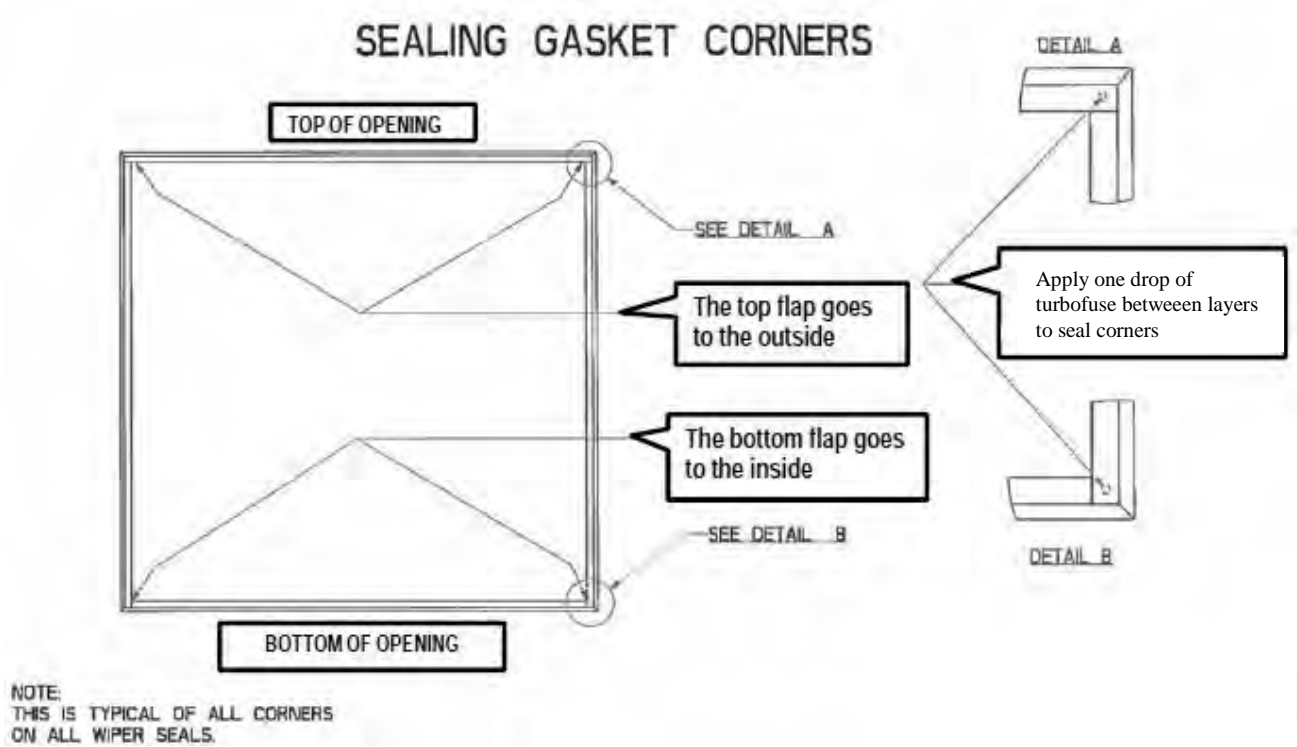


14. Overlap the two cut wiper pieces and glue together to achieve the correct seal. Before gluing, clean the areas with alcohol to ensure the seal is clean.



NOTE

When standing on the outside of the EWCC unit, the wiper seal at the top of the opening should overlap the wiper seal on the sides of the opening. At the bottom of the opening, the wiper seal on the sides should overlap the wiper seal at the bottom.



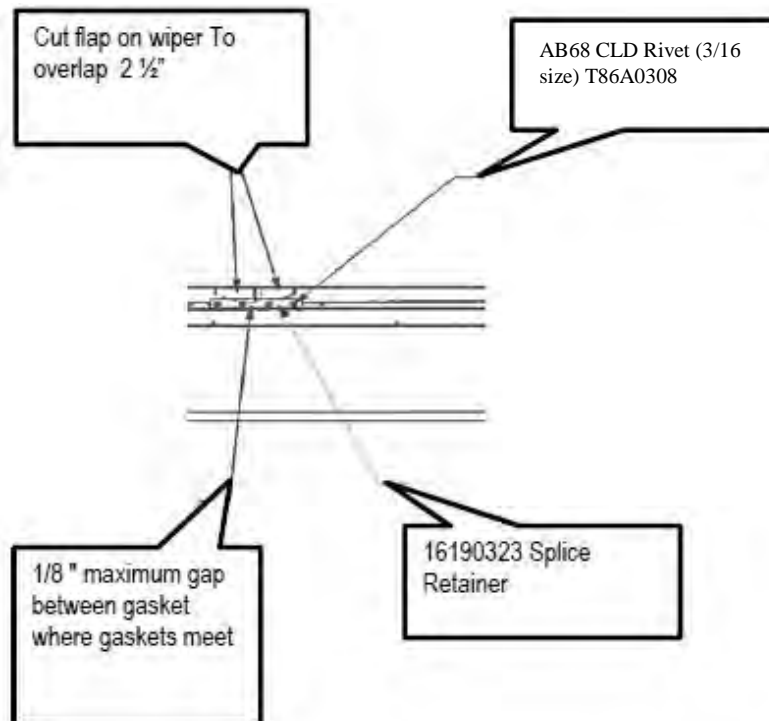
15. Once the wiper seal is installed around the complete opening, one end of the seal shall overlap the other end by 2 ½". Cut the bubble part of the seal back on both ends so that the ends meet, but allowing the wiper part of the seal to overlap 2 ½".



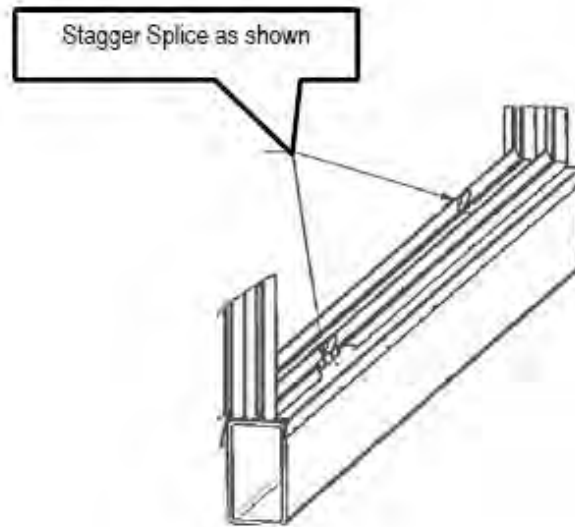
16. Add a generous amount of black sika flex to the ends of the bubble part of the seal which meet. Immediately after applying sika flex, the retainers can then be installed over the bubble part of the seal and the aluminum trim.
17. By holding the seal and the retainers tightly with a vice grip, you can drill 4 holes with a 11 size drill bit, and install new 3/16" rivets through the retainers, seal, and trim, making one bond.

CAUTION

Do not install new retainer in previous retainer position.



18. Now follow steps 12-17 to install the second seal and be sure to offset the starting location on the bottom trim so that the first and second seal joints will be offset.



19. The overlapped part of each wiper seal shall then be glued together with Turbo Fuse. First clean these areas with alcohol to ensure the seal is clean. Use a generous amount of Turbo Fuse on both sides of the seal and hold splice together until dry.
20. Sika flex should then be applied to all edges of the splice and entire retainer to make the connection water resistant. Allow splices to dry for a minimum of 4 hours before installing expando back into the container.



EXPANDO INSTALLATION

21. Expando should be supported overhead by a strap (minimum rating of 3,500 lbs basket) with a crane or forklift.

WARNING

Use extreme caution when removing or installing the expando unit. Ground guides and the MHE operators must maintain direct line of sight and insure that personnel and surrounding hazards such as power lines are clear of the containers during this operation. Failure to comply could cause damage to the equipment, serious injury or possibly death.



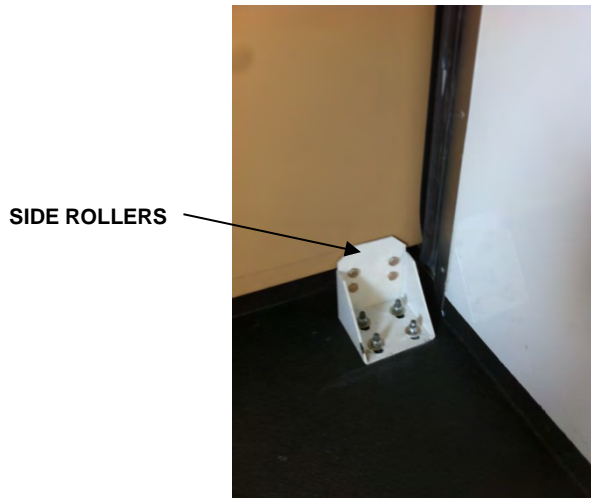
22. Expando should be lifted off the ground far enough to tilt the expando forward so the roller arms can clear the top of the expando opening, allowing you to push the arms into the unit.
23. Once the arms are pushed inside the unit, the expando should be lifted far enough so that the bottom of the expando clears the expando opening.
24. Once the bottom of the expando has cleared the bottom of the opening, the expando should be pushed in from the bottom of the expando with enough force until the expando is inside the unit.

NOTE

As the expando is being lifted, the roller arms should line up with the roller tracks on the ceiling.

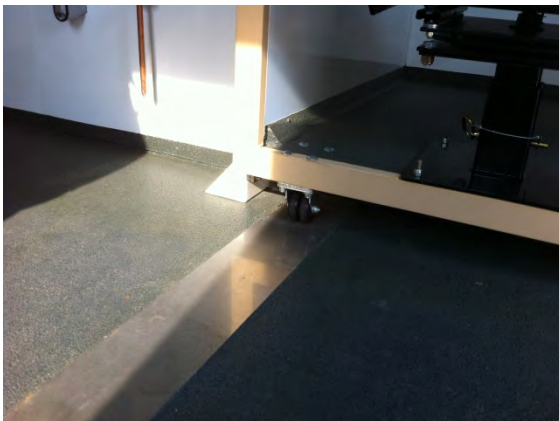


25. After getting the expando inside the unit, the expando should be lowered so it sits on the side rollers.



26. At this point you can proceed to remove the strap.

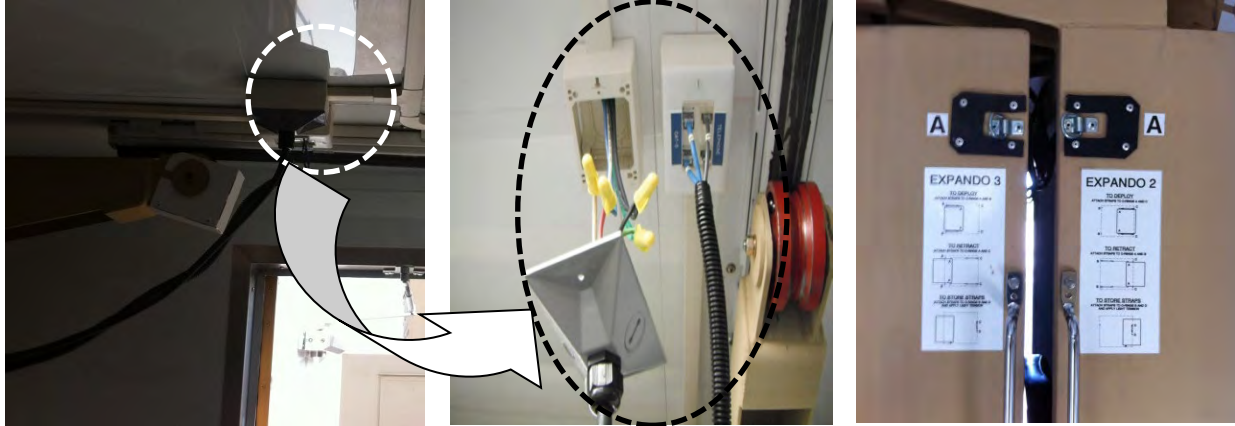
27. While the expando is still in the deployed position, you can install the bottom casters using a 9/16" wrench to tighten the nylon nut.



28. After the expando is set in place and the casters are installed, the expando can be pushed in far enough so you can install the side handles, deployment “D” rings, electrical, and communications connections.

NOTE

A rivet gun will be required to install the d-rings while a 5/8” wrench will be required to install the side handles by tightening the nylon nuts.



END OF EXPANDO WIPER SEAL REPLACEMENT PROCEDURE

