

Field Service Instructions: Replacement of Cover Gasket for Padmount Switchgear Side-Hinge-2 Models



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Safety for life



Eaton meets or exceeds all applicable industry standards relating to product safety in its Cooper Power™ series products. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Eaton employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally-approved safety procedures and safety instructions when working around high-voltage lines and equipment, and support our “Safety For Life” mission.

Safety information

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians who are familiar with this equipment should install, operate, and service it.

A competent technician has these qualifications:

- Is thoroughly familiar with these instructions.
- Is trained in industry-accepted high- and low-voltage safe operating practices and procedures.
- Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment.
- Is trained in the care and use of protective equipment such as arc flash clothing, safety glasses, face shield, hard hat, rubber gloves, clampstick, hotstick, etc.

Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

Hazard Statement Definitions

This manual may contain four types of hazard statements:

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

Indicates a potentially hazardous situation which, if not avoided, may result in equipment damage only.

Safety instructions

Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

DANGER

Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally-approved safety procedures when working around high- and low-voltage lines and equipment.

G103.3

WARNING

Before installing, operating, maintaining, or testing this equipment, carefully read and understand the contents of this manual. Improper operation, handling, or maintenance can result in death, severe personal injury, and equipment damage.

G101.0

WARNING

This equipment is not intended to protect human life. Follow all locally-approved procedures and safety practices when installing or operating this equipment. Failure to comply can result in death, severe personal injury, and equipment damage.

G102.1

WARNING

Power distribution and transmission equipment must be properly selected for the intended application. It must be installed and serviced by competent personnel who have been trained and understand proper safety procedures. These instructions are written for such personnel and are not a substitute for adequate training and experience in safety procedures. Failure to properly select, install, or maintain power distribution and transmission equipment can result in death, severe personal injury, and equipment damage.

G122.2

Replacement of Cover Gasket for Padmount Switchgear Side-Hinge-2 Models

Required parts & materials

Table 1. Items included in the Gasket Replacement Kit

Description	Qty	Image
Aron Alpha Cyanoacrylate Adhesive: AA-490 Type	1	
Dow-Corning RTV 732 Multi-Purpose Sealant	1	
Gaskets, long	2	n/a
Gaskets, short	2	n/a
Plastic bags (quart size)	2	n/a
Removable blue masking tape (roll)	1	
Cover carriage-bolt with gasket	66	
SS Belleville washers	66	
Silicon-bronze cover bolt nuts	66	
NPT pipe plug, 1/4-inch	1	
New Bell Green enamel paint (aerosol)	1	

Suggested tools & supplies

Table 2. List of tools & supplies

Item	Image
Makita BFL300FZ pre-set torque nut runner at 25 ft-lb setting	Figure 1
Electric nut driver, cordless-drill type	Figure 2
Caulk Gun - Half Barrel Frame	Figure 3
Proto MC10568000 9/16-inch impact socket	Figure 4
10-inch flat screwdriver	Figure 5
Small aluminum-bronze hammer	Figure 6
3-inch putty knife/flexible scraper	Figure 7
12- to 18-inch extra-long taper single-end alignment pin with 5/16-inch point size (Proto J2120 aligning bar)	Figure 8
Hand wire brush brass-bristle low-scratch, 3/4-inch wide	Figure 9
Shop rags or Kimberly-Clark WypAll X60 or equivalent	n/a
Containers/buckets for hardware removed (Qty 2)	Figure 10
Isopropyl alcohol	Figure 11
Workstand ("sawhorse") (Qty 2)	Figure 12
Compressed air or nitrogen, regulated to 7.25 psig	n/a
Portable air compressor with desiccant air dryers	Figure 13
Leak-test assembly consisting of a ball valve, pressure regulator, pressure gauge, and pressure-relief-valve assembly with 1/4-inch NPT pipe connections	Figure 14
50-foot air hose with fitting to connect to leak-test assembly	n/a
EFI Microsonic Detector Model EI-701 leak detector	Figure 15



Figure 1. Makita BFL300FZ pre-set torque nut runner



Figure 2. Electric nut driver, cordless-drill type

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Figure 3. Caulk Gun - Half Barrel Frame



Figure 4. Proto MC10568000 9/16-inch impact socket



Figure 5. 10-inch flat screwdriver



Figure 6. Small aluminum-bronze hammer



Figure 7. 3-inch putty knife/flexible scraper



Figure 8. Proto J2120 aligning bar



Figure 9. Hand wire brush, brass-bristle, low-scratch, 3/4-inch wide



Figure 10. Containers/buckets for hardware removed (Qty 2)



Figure 11. Isopropyl alcohol (pre-moistened towels shown here)



Figure 12. Workstand ("sawhorse")

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Figure 13. Examples of typical desiccant air dryers



Figure 14. Leak-test assembly



Figure 15. EFI Microsonic Detector Model EI-701 leak detector

Pre-arrival tasks

Perform these tasks before arriving on site:

- Review the Installation, Operation, and Maintenance Manual applicable for the switchgear and familiarize yourself with the stated safety precautions.
- Ensure that the tools and supplies listed in Table 2 on page 1 are available.
- Check the ambient temperature conditions at the work site. Cover gasket installation should be performed only at temperatures above 32 °F (0 °C). Contact the factory if service is required at temperatures below 32 °F (0 °C).

Procedure

1. Prepare unit for service and verify parts

- 1.1 Verify that the Gasket Replacement Kit contains the items listed in Table 1 on page 1.
- 1.2 Verify that the Padmount switchgear is de-energized and that high voltage cables in the cabinet are grounded.

⚠ DANGER

Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment.

- 1.3 Once the unit is safe to access, open the cabinet doors on both sides (Figure 16).



Figure 16.

Replacement of Cover Gasket for Padmount Switchgear Side-Hinge-2 Models

- 1.4 Pull the pressure-relief valve to relieve pressure (Figure 17).

Record whether pressure was present or not.



Figure 17.

- 1.5 Verify that the Gasket Replacement Kit contains the correct gaskets:

- 1.5.1 Remove the flat gaskets from the Gasket Replacement Kit.
- 1.5.2 Before removing the cover, pre-position the gaskets on the cover. Verify that the gaskets are the correct length and that all gasket holes align with the cover bolts.

If the gasket length, hole spacing, or number of holes does not match the cover, STOP. Do not proceed any further with the repair. Consult factory service.

- 1.5.3 Assemble the four gaskets at the puzzle dove-tail corner joints (Figure 18) to ensure the correct positioning of gaskets.

Note: At the bolt holes, notice that the larger portion of the rubber is towards the interior of the tank.



Figure 18. Dove-tail joint

2. Perform the Switchgear Apparatus Functional Test

Note: Consult factory service if the apparatus does not perform as expected during the functional test.

- 2.1 Prepare the switchgear apparatus for the test:

- For units *without* an optional motor operator: Follow the procedure in step 2.1.1.
- For units *with* an optional motor operator: Follow the procedure in step 2.1.2.

2.1.1 For units *without* an optional motor operator:

Manually open and close each single or three-phase handle for all Source and Tap Ways.

Leave each handle in the Closed position.

2.1.2 For units *with* an optional motor operator:

- a. Electrically operate the handle to the Open position (Figure 19 - pre 2018 units; Figure 20 - 2018 & later units).
- b. Remove the drive pin connecting the motor operator to the handle drive lever assembly (Figure 21 & Figure 22); then allow the motor operator to drop away from the handle (Figure 23).
- c. Manually close, open, and then close each single or three-phase handle for all Source and Tap Ways.

Leave each handle in the Closed position.



Figure 19. Handle at Open position (pre 2018 units)

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Figure 20. Handle at Open Position (2018 & later)



Figure 21. Removing the drive pin (prior to 2018)



Figure 22. Pin removed (2018 and later)



Figure 23. Motor operator removed

2.2 Electrically trip each Tap Interrupter using either the installed control with battery power, a Tripper-Box (consult factory service), or a 9-volt dc battery with 18 to 20 AWG solid wires stripped 5/8 inch.

- **For the Tripper-Box option** (Figure 24): Insert the 14-pin connector to the apparatus control receptacle.
- **For a three-handle - single Ø way:** Push the momentary push buttons for each A, B, and C phase on the Tripper-Box to individually trip these phases.
- **For a single-handle 3Ø Way:** Push the BØ momentary push button to trip all three phases.
- **For the 9-volt dc battery option** (Figure 25): Momentarily connect battery leads to the receptacle pin per Table 3.



Figure 24. Tripper-Box



Figure 25. 9-volt dc battery

Table 3. Leads-to-pins connection table

Receptacle Pins	Single Ø Way	Three Ø Way
G (+) and H (-)	A	
J (+) and K (-)	B	All Øs
L (+) and M (-)	C	

- 2.3 For each tripped phase, perform a manual handle mechanism reset, and then manually return the handle to the Closed position.
- 2.4 Repeat this trip, reset, and close operation (step 2.2 and step 2.3) for each Way to verify proper trip functionality of the switchgear apparatus.

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2.5 **For units with an optional motor operator**, replace the motor operator:

- 2.5.1 Manually open each single or three-phase handle for all Source or Tap Ways.
- 2.5.2 Lift the motor operator and align it with the handle drive lever assembly.
- 2.5.3 Re-install the drive pin.
- 2.5.4 Electrically operate the handle to the Closed position.

3. If applicable: Remove the cable cabinets

Note: This section applies only to units that have covers with three-bolt corners (Figure 26). For units that have covers with two-bolt corners, leave the cable cabinets in place and continue to step 4 on page 7.



Figure 26. Three-bolt corner

3.1 Remove the base clips fastening the cabinet to the concrete pad (Figure 27).



Figure 27.

3.2 Remove all control cable connectors and braided ground leads (Figure 28).

Store the connectors and leads in a plastic bag to protect them for later replacement.



Figure 28.

3.3 **For each side corner:** With a second person holding the cabinet assembly, remove the three retaining clips connecting the cabinet assembly to the main unit. (See Figure 29.)

WARNING

Tipping Hazard. Cabinet assembly is heavy in front. Support the cabinet to guard against tipping while the retaining clips are being removed.



Figure 29.

3.4 Close the cabinet doors on both sides; then slide the cabinet assemblies forward on both sides (Figure 30).

Note: Pull the cabinet out far enough to allow for safe access to the main apparatus cover bolts. The distance required will vary depending on the installation site concrete pad and cable-pit or conduit style.



Figure 30.

4. Remove the side cover Nut-Guards

- 4.1 Remove the side cover Nut-Guard fasteners on both sides of the main unit (Figure 31).



Figure 31.

- 4.2 Remove the cover Nut-Guard fastener on both Face Plate upper corners (Figure 32).



Figure 32.

- 4.3 Remove the side cover Nut-Guards on both sides of the main unit (Figure 33).



Figure 33.

- 4.4 Return the fastener hardware to the Nut-Guard (Figure 34) for replacement later.



Figure 34.

5. Remove the cover fasteners

- 5.1 Using a 9/16-inch socket on a right-angle electric driver tool, remove the silicon-bronze nuts and Belleville washers from all cover bolts (Figure 35).

Save all hardware in containers/buckets for reuse.



Figure 35.

- 5.2 Remove all stainless steel cover bolts. Tap on the bolt to break the paint bond at the bolt-head (Figure 36).



Figure 36.

- 5.3 Remove all bolt gaskets that are stuck on the cover:
- 5.3.1 Use a putty-knife scraper and wire-brush to remove the loose paint peeled in these areas to provide a smooth transition between the painted and unpainted surface areas.
 - 5.3.2 Clean all bolt hole areas on the cover surface with isopropyl alcohol.

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Figure 37. Typical condition of bolt hole area before cleaning. On the left, the bolt hole shows the bolt gasket adhered to the cover; on the right, the bolt gasket lifted off with the bolt when the bolt was removed.

6. Remove the cover

- 6.1 Place removable blue masking tape on one side of the cover and the tank (Figure 38) so you can identify the original orientation later, during re-installation of cover.



Figure 38.

- 6.2 Measure the tank cover's front face width and depth; then refer to Table 4 on page 8 to determine the cover's weight.

Table 4. Reference: Cover Weight (lbs)

Face width (inches)	Depth (inches)		Mild or Stainless Steel Weight (lbs)	
	Min	Max	Min	Max
32	18	32	35	57
40	24	43	54	89
47	18	39	49	94
62	18	58	63	171
70	24	58	89	274
74	24	46	126	233
84	24	53	142	297
94	28	46	179	289
104	24	46	173	317

- 6.3 Prepare to remove the cover:

6.3.1 Make the necessary arrangements to handle the cover's weight (for example, enlist the help of another person).

6.3.2 Decide where to place the cover after it is removed and set up that area appropriately. For example, set up workstands to hold the cover, or identify a clean surface of adequate size.

6.3.3 Ensure that you have a clear path to carry the cover from the unit to the identified location.

- 6.4 Lift the cover off of the tank (Figure 39) and place it off to the side on workstands or upside-down on a clean surface.

WARNING

Heavy object. To avoid muscle strain or back injury, use lifting aids and proper lifting technique when lifting tank cover.

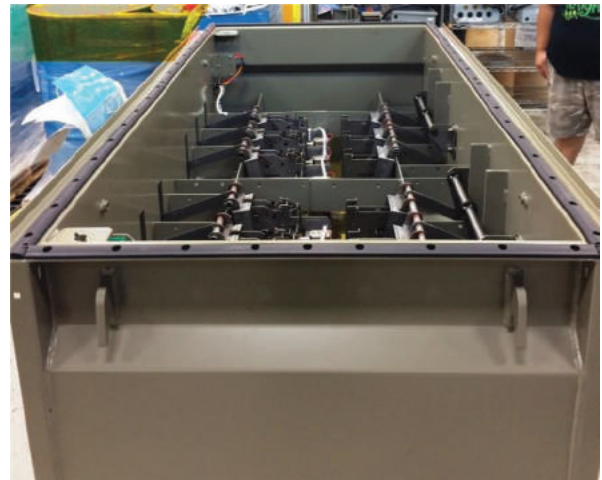


Figure 39.

7. Remove the cover gaskets

- 7.1 Starting at the corner of a tank flange, grasp the end of one gasket and lift it up (Figure 40).



Figure 40.

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- 7.2 Slowly peel up the cover gasket all the way along the flange (Figure 41).



Figure 41.

- 7.3 Repeat step 7.1 and step 7.2 for each tank flange.

8. Clean the flanges



Falling debris.

- 8.1 Using a 3-inch putty knife or scraper, lightly scrape the flange surface to remove residual gasket adhesive (Figure 42).



Figure 42.

- 8.2 Apply isopropyl alcohol to a clean cloth or obtain Kimberly-Clark WypAll X60 wipes or equivalent; then wipe all residual adhesive films off each tank-flange surface (Figure 43).



Figure 43.

- 8.3 Allow the tank-flange surfaces to dry.

9. Install new gaskets

Note: Read all the instructions in this section before beginning these steps.

Note: When applying adhesive, you can start from any side of the unit and proceed in either direction (clockwise or counterclockwise); however, you must work around the sides in contiguous order, always proceeding to the next adjacent side. Since the unit's shape is rectangular, you will alternate short and long gaskets (i.e., either short-long-short-long or long-short-long-short, depending on your starting point).

Note: Once you apply the adhesive to a flange, you have about one minute to place the gasket on the flange. Once you tamp down the gasket to spread the adhesive into a film, you have about 15 seconds to make any final adjustments to the gasket's position.

Note: Use the diagram in Figure 44 as a guide when applying the adhesive. As shown in the diagram, apply a 1/4-inch drop of adhesive between every other bolt hole on the tank flange, one tank side at a time.

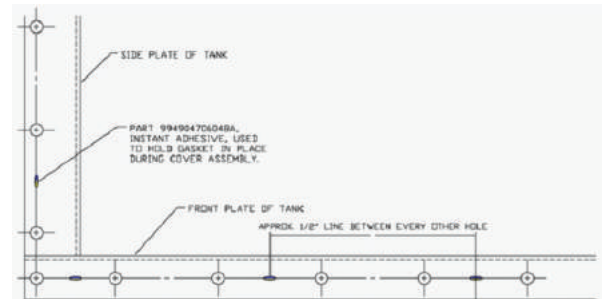


Figure 44. Adhesive-placement diagram

- 9.1 Prepare the new gaskets:
 - 9.1.1 Obtain the four gaskets (two long, two short) provided in the Gasket Replacement Kit (see Table 1 on page 1).
 - 9.1.2 Inspect the gaskets for dirt, oil or powder residue.
 - 9.1.3 If necessary, clean each gasket using isopropyl alcohol on a wipe or cloth; then allow the gasket to dry.
 - 9.1.4 Lay out the four cover gaskets on the clean tank flanges, joining the corner puzzle dove-tail joints to ensure the correct positioning of gaskets. (See Figure 48.) At the bolt holes, notice that the larger profile of the rubber is towards the interior of the tank.

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9.2 Obtain the Aron Alpha Cyanoacrylate Adhesive (AA-490 Type-201) provided in the Gasket Replacement Kit (see Table 1 on page 1).

9.3 Adhere a gasket to the **first tank flange**:

9.3.1 Start with the tank flange that has the female puzzle ends.

9.3.2 Apply adhesive to the first tank flange. (See Figure 45).

Note: The female puzzle ends have glue applied. Leave male puzzle ends unglued at this step. Apply a 1/4-inch drop of adhesive between every other bolt hole on the tank flange. Refer to the diagram in Figure 44 for guidance.



Figure 45.

9.3.3 **Within one minute after applying adhesive:**

- Starting at a corner, place the first gasket on the tank-flange surface with the profile side up (toward cover) and the hole closest to the exterior of the tank lip and raised profile towards the inside of the tank.
- Guide the gasket along the tank-flange surface with one hand while aligning the gasket bolt holes with the tank-flange bolt holes. (See Figure 46.)
- Verify that the bolt holes are aligned between the gasket and the tank flange.
- Tamp the entire length of the gasket by hand to allow the liquid adhesive to spread under the gasket surface. (See Figure 47.)



Figure 46.



Figure 47.

9.3.4 **Within 15 seconds after tamping:** Make any final adjustments to the gasket's position.

9.4 Adhere a gasket to the **second tank flange**:

9.4.1 Apply adhesive to the adjacent tank flange.

Note: Apply a 1/4-inch drop of adhesive between every other bolt hole on the tank flange. Refer to the diagram in Figure 44 for guidance.

9.4.2 **Within one minute after applying adhesive:**

- Obtain a gasket of the proper length for the adjacent tank flange.
- Connect the dove-tail joint of this gasket with the previous gasket (Figure 48).
- Guide this gasket along the tank-flange surface with one hand while aligning the gasket bolt holes with the tank-flange bolt holes (Figure 49).
- Verify that the bolt holes are aligned between the gasket and the tank flange.
- Tamp the entire length of the gasket.



Figure 48. Dove-tail joint



Figure 49.

9.4.3 **Within 15 seconds after tamping:** Make any final adjustments to the gasket's position.

9.5 Repeat step 9.4 to adhere a gasket to the **third tank flange**.

9.6 Adhere a gasket to the **fourth (final) tank flange**:

9.6.1 Apply adhesive to the fourth tank flange.

Note: Apply a 1/4-inch drop of adhesive between every other bolt hole on the tank flange. Refer to the diagram in Figure 44 for guidance.

9.6.2 **Within one minute after applying adhesive:**

- Connect the dove-tail joint (Figure 48) of the fourth gasket with the third gasket.
- Guide the fourth gasket along the tank-flange surface with one hand while aligning the gasket bolt holes with the tank-flange bolt holes.

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- c. Verify that the bolt holes are aligned between the gasket and the tank flange.
- d. Connect the dove-tail joint (Figure 48) of the fourth gasket with the first gasket.
- e. Tamp the entire length of the fourth gasket (Figure 50).



Figure 50. Tamping the fourth (final) gasket

- 9.6.3 **Within 15 seconds after tamping:** Make any final adjustments to the gasket's position.

10. Prepare the cover for reinstallation

- 10.1 Inspect the gasket mating area near the edges of the cover:

- 10.1.1 Wipe all residual oil off of the gasket mating area.
- 10.1.2 Clean the gasket mating area with isopropyl alcohol applied to shop rags or to disposable paper towels.

- 10.2 Using a caulk gun or equivalent, apply Dow Corning 732 Multi-Purpose Sealant (RTV). (See Figure 51).

- 10.2.1 Lift the male end of the dovetail joint and fill the female end with RTV (Figure 51).

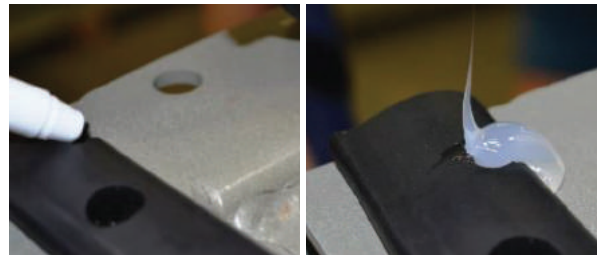


Figure 51.

- 10.2.2 Press the male end back in place (Figure 52). Do this to all (4) corners of the gasket.

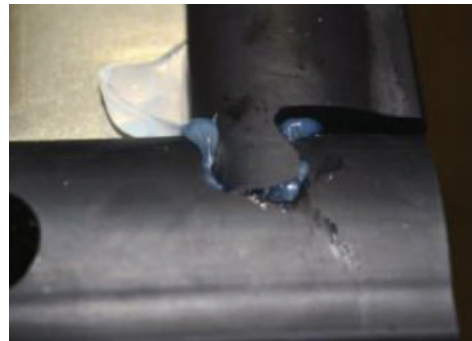


Figure 52.

- 10.3 Allow five minutes for the compound to form a skin.

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11. Reinstall the cover

11.1 While the RTV is forming a skin:

- 11.1.1 Gather the new Cover bolts, SS Belleville Washers, and Silicon Bronze nuts.



Figure 53.

11.2 After the RTV has formed a skin, lift the cover and position it over the main switchgear tank opening in its original orientation (identified by lining up the blue tape you applied to the cover and tank in step 6.1).

⚠ WARNING

Heavy object. To avoid muscle strain or back injury, use lifting aids and proper lifting technique when lifting tank cover.

⚠ WARNING

Pinch point. Fingers can be pinched between cover and tank flange when reinstalling cover. Use cover lifting tool when reinstalling cover.

11.3 Place the cover bolt and gasket assembly into each of the cover holes in the following order:

- First: the four corners
- Next: the center of each side
- Last: all remaining holes

Note: Use an IX-577 alignment bar (altered Proto J2120 aligning bar) or equivalent to align the holes, if needed.

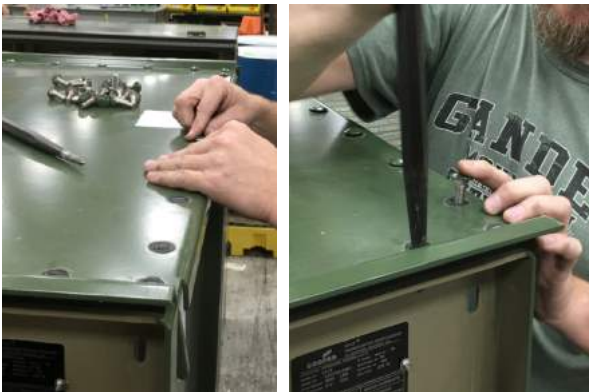


Figure 54.



Figure 55.



Figure 56.

Note: You have a maximum working time of **25 minutes to install all of the cover bolts before the RTV sets up.** Hand-assemble SS Belleville washers and Silicon Bronze nuts to all cover bolts finger-tight.

Note: The RTV should be wet during this process. Wipe excess RTV on the surfaces of the tank and cover off with a shop towel.

Note: The heads of the carriage bolts should be flush to the surface of the cover. If they are not flush, reposition the cover and/or remove all bolts, raise the cover, and reposition it (Figure 55 and Figure 56).

Note: The Belleville washers' concave surface must be facing up against the mating surface (Figure 57).



Figure 57.

11.4 Obtain a Makita BFL300FZ pre-set torque nut runner set to 18 ft-lbs and Proto MC10568000 9/16-inch impact socket (or equivalent tools).



Figure 58.

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11.5 Cover Bolt Torque Pattern

11.5.1 For the first round of torquing use the pattern shown below. Start by torquing down the middle bolt on one of the long sides and work your way to the end. Go to the opposite side starting at the middle and go the opposite direction from the other side. Follow the remaining pattern below.

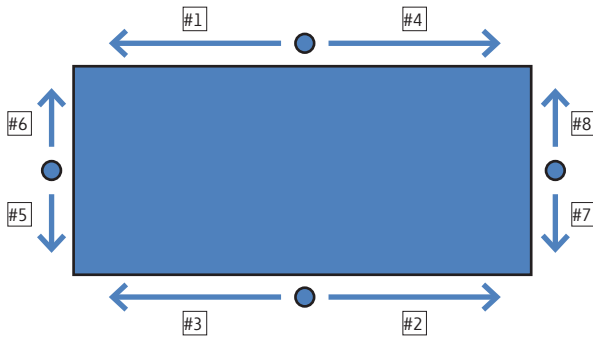


Figure 59.

11.5.2 Torque each set of hardware a second time using the pattern shown below:

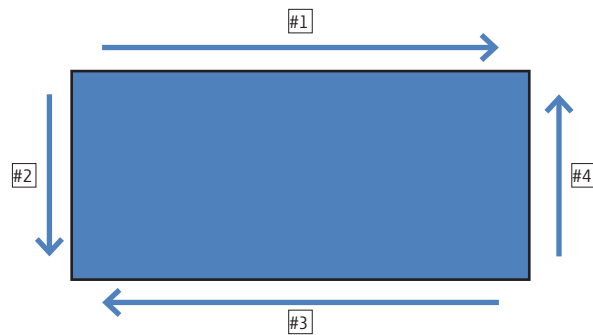


Figure 60.

12. Perform a leak test

12.1 Connect the leak-test assembly:

12.1.1 Using an adjustable wrench, remove the pressure-relief valve from the front face-plate (Figure 61).



Figure 61.

12.1.2 Install the leak-test assembly as shown in Figure 62.



Figure 62. Leak-test assembly installed



Figure 63. Close-up of pressure gauge

12.1.3 **For units with two pressure relief valves** (one per side): Remove the other pressure relief valve and replace it with a 1/4-inch NPT Pipe Plug during this test.

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- 12.2 Verify that the air-pressure supply/air compressor supply is equipped with a desiccant air dryer installed inline (Figure 64).

NOTICE

Equipment damage. Failure to use an air dryer while pressurizing the system may result in water contaminating the dielectric fluid in the switchgear.



Standard with polycarbonate bowl

Standard with aluminum bowl

Figure 64. Examples of typical desiccant air dryers

- 12.3 Pressurize the system:

- 12.3.1 With the ball valve turned off, attach the air-pressure supply to the end fitting of the leak-test assembly.
- 12.3.2 Slowly open the ball valve to pressurize the tank to 7.25 psig; then shut off the valve.
- 12.3.3 Wait five minutes for internal-to-external temperature equalization.
- 12.3.4 Check the pressure at the end of the five-minute temperature-equalization period.

If the pressure dropped below 7.25 psig while the temperature equalized, slowly re-open the ball valve to bring the pressure back to 7.25 psig. Then shut off the valve.

- 12.4 Let the tank sit for 30 minutes with the starting air pressure at 7.25 psig.
- 12.5 After waiting at least 30 minutes, check to see if the pressure was maintained:
 - **If the pressure dropped below 7.25 psig:** The tank is leaking. Find and stop the leaks as directed in step 12.6.
 - **If the tank maintained a pressure of 7.25 psig** for the 30-minute test period, the tank passed the leak test. In that case, continue to step 12.7.

- 12.6 *If necessary:* Find and stop leaks:

- 12.6.1 Obtain a Microsonic Detector Model EI-701 sonic leak detector (Figure 65) or equivalent.

Note: You can also use a soap solution such as “SNOOP” to help find air leaks.



Figure 65.

- 12.6.2 Verify the function of the sonic detector by opening the pressure-relief valve and pulling the trigger on the detector.

The needle should jump from 0 (Figure 66) to 100 (Figure 67) while the relief valve is open.



Figure 66. Detector at zero (relief valve closed)



Figure 67. Detector at 100 (relief valve open)

- 12.6.3 Set the sonic meter's sensitivity dial to 10 (Figure 68); then perform an initial pass to determine if the unit is leaking (Figure 69).

Replacement of Cover Gasket for Padmount Switchgear Side-Hinge-2 Models



Figure 68. Sensitivity dial at 10



Figure 69. Scanning for leaks

- 12.6.4 If the detector indicates a leak, decrease the sensitivity to 3 (Figure 70) to help pinpoint each location on the cover where a leak exists.



Figure 70. Sensitivity dial at 3

- 12.6.5 **When you find a leak:** Tighten three or four cover-bolts in the area of the leak 1/4-turn at a time, until the leak is no longer present.
- 12.6.6 Continue working your way around the unit as described in step 12.6.3 through step 12.6.5 until you have located and stopped all leaks.

After you have found and stopped all leaks, continue to 12.6.7

- 12.6.7 Repeat the leak test:

- a. Open the shut-off valve and repressurize the tank to 7.25 psig; then close the shut-off valve.
- b. Let the tank sit for 30 minutes with the air pressure at 7.25 psig; then check to see if the pressure was maintained:

- **If the pressure dropped below 7.25 psig:** The tank is still leaking. Repeat step 12.6 as needed until the tank passes the leak test.
- **If the tank maintained a pressure of 7.25 psig** for the 30-minute test period, the tank passed the leak test. In that case, continue to step 12.7.

12.7 After the unit has passed the leak test:

- 12.7.1 Release the pressure to the tank.
- 12.7.2 Use a Makita BFL300FZ pre-set torque nut runner set to 18 ft-lbs and Proto MC10568000 9/16-inch impact socket (or equivalent tools) to tighten all bolts using the pattern shown in Figure 71.

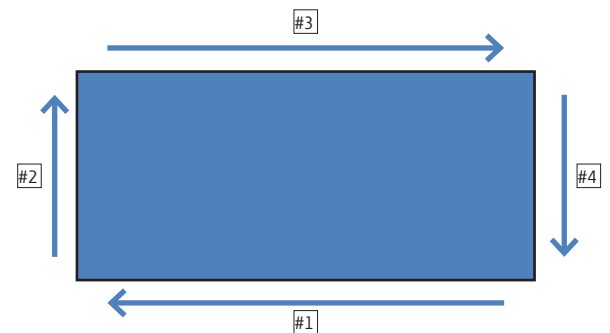


Figure 71. Final tightening sequence

- 12.7.3 Remove the leak-test assembly (Figure 62) from the tank and replace the pressure relief valve.
- 12.7.4 **For units with two pressure relief valves** (one per side): Remove the 1/4-inch NPT Pipe Plug you installed for the test and replace the second pressure relief valve.

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13. Apply touch-up paint to the cover bolts

- 13.1 Remove all items from the cover.
- 13.2 Clean the cover-bolt region all around the tank using isopropyl alcohol on wipes.
- 13.3 Using the Bell Green aerosol can of trim paint, spray a light coat to cover all cover bolt heads.
- 13.4 Allow enough time for the paint to be dry to the touch.
- 13.5 Spray a second thin coat of paint on all the cover bolt heads.
- 13.6 Allow the paint to dry completely.

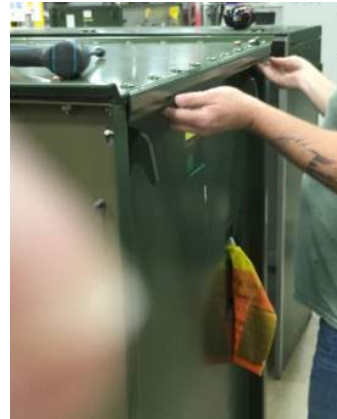


Figure 74.

14. Reinstall the side cover Nut-Guards

- 14.1 Place the side cover Nut-Guards into position on both sides of the main unit (Figure 72).



Figure 72.

- 14.2 Install fasteners on both upper corners of the face plate (Figure 73).



Figure 73.

- 14.3 Replace the side-cover Nut-Guard fasteners on both sides of main unit (Figure 74).

15. If applicable: Reinstall the cable cabinets

- 15.1 Remove all obstacles between the cabinet assembly and tank assembly.
- 15.2 Slide the cabinet assembly into position against the main unit (from where you removed it in step 3).
- 15.3 **For each side corner:** With a second person holding the cabinet assembly, reinstall the three retaining clips that connect the cabinet assembly to the main unit (Figure 75).

WARNING

Tipping Hazard. Cabinet assembly is heavy in front. Support the cabinet to guard against tipping while the retaining clips are being removed.



Figure 75.

Replacement of Cover Gasket for Padmount Switchgear Side-Hinge-2 Models

- 15.4 Reconnect all control cable connectors and braided ground leads (Figure 76).



Figure 76.

- 15.5 Reinstall the base clips fastening the cabinet to the concrete pad (Figure 77).



Figure 77.

- 15.6 Repeat step 15.1 through step 15.5 to reinstall the cabinet on the opposite side of the unit.

16. Repeat the Switchgear Apparatus Functional Test

- 16.1 Repeat the Switchgear Apparatus Functional Test as directed in step 2 on page 4.

Note: Consult factory service if the apparatus does not perform as expected during the functional test.

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