Breaker stationary contact replacement kit on Magnum circuit breaker

**WARNING**

1. ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD BE PERMITTED TO WORK ON THE EQUIPMENT.
2. ALWAYS DE-ENERGIZE PRIMARY AND SECONDARY CIRCUITS IF A CIRCUIT BREAKER CANNOT BE REMOVED TO A SAFE WORK LOCATION.
3. DRAWOUT CIRCUIT BREAKERS SHOULD BE LEVERED (RACKED) OUT TO THE DISCONNECT POSITION.
4. ALL CIRCUIT BREAKERS SHOULD BE SWITCHED TO THE OFF POSITION AND MECHANISM SPRINGS DISCHARGED.

FAILURE TO FOLLOW THESE STEPS FOR ALL PROCEDURES DESCRIBED IN THIS INSTRUCTION LEAFLET COULD RESULT IN DEATH, BODILY INJURY, OR PROPERTY DAMAGE.

**Section 1: General information**

The primary stationary contact is a combination of two items. One is a conductive pad mounted on the line conductor that functions as the stationary main contact. The other is an arc runner, also connected to the line conductor. The integral arc runner serves a dual purpose:

- Fixed arcing contact
- Part of the arc chute

**Required tools**

- 3/8-inch socket drive (with torque measuring capability)
- 10 mm socket
- 10 mm wrench
- 4 mm Allen wrench
- 8 mm Allen wrench
- 17 mm socket

**Kit parts identification**

Refer to Figure 1 for visual identification of the parts for the different 2A10896 kits listed below:

(A) Arc runner (three for G01–G04 and G12, four for G05–G08 and G16)
(B) 1-inch and 3/4-inch line conductor (three for G04/G12, four for G08/G16)
(C) 3/8-inch line conductor (three for G01–G03, four for G05–G07)
(D) Support block (three for G01–G04 and G12, four for G05–G08 and G16)
(E) Spacer (three for G01–G03, four for G05–G07)
(F) M10 x 60 mm socket cap screw (three for G01–G04 and G12, four for G05–G08 and G16)
(G) Voltage tap (three for G01–G04 and G12, four for G05–G08 and G16)
(H) M10 lock washer (three for G01–G04 and G12, four for G05–G08 and G16)

![Figure 1. Contents of Kit](image-url)
**Section 2: Installation of stationary contact replacement kit**

Proceed with the following 24 steps:

**Step 1:** Remove the front cover by unscrewing the hex head captive bolts (four for three-pole, six for four-pole) that join the cover to the breaker housing using a 10 mm 1/4-inch drive socket. Then hold the charge handle down approximately 45 degrees to pull off the cover.

**Figure 2. Step 1**

**Step 2:** Remove all of the arc chutes from the breaker by unthreading the captive mounting screw in each arc chute. Then slide the vented cover toward the rear, and lift the arc chute up and out.

**Figure 3. Step 2**

**Step 3:** Remove all primary disconnects, vertical adapters, heat sinks, and so on as applicable from the primary line and load conductors.

**Figure 4. Step 3**

**Step 4:** Remove the current sensor cover by unscrewing the self-threading screws (seven in three-pole breaker, nine in four-pole breaker).

**Step 5:** Remove the current sensors by sliding the sensors off the load conductors. Unplug the sensors by squeezing the tabs on the connectors.

**Figure 5. Steps 4 and 5**

**Step 6:** If the bottom of the breaker is equipped with a rejection bracket, remove it by unscrewing the three hex head bolts securing the bracket in place.

**Figure 6. Step 6**

**Step 7:** Loosen the breaker’s side plates by removing the rearmost two bolts/screws from the side plates on both sides of the breaker. Loosen the front bolt/screw just enough to pivot the plates away from the notch in the rear housing.

*Note:* A fixed breaker configuration is shown in the illustration. Drawout (Lev-in type) breakers have flat side plates mounted with flat-head screws.

**Figure 7. Step 7**
Step 8: If the line or load side conductors have fast-on voltage tap connectors attached, remove them with needle-nose pliers.

Figure 8. Step 8

Step 9: Remove the M6 hex-head bolts that join the rear housing to the front housing using a 10 mm 1/4-inch drive socket.

Step 10: Remove the rear housing. Be careful not to catch the current sensor plugs or lose the M6 square nuts.

Figure 9. Steps 9 and 10

Step 11: Remove the old stationary contact parts. Using an 8 mm or 5/16-inch Allen wrench, remove the two M10 Allen-head bolts located behind the arc runner in each pole in the rear housing. Then remove all the items held in place with these bolts and discard.

Figure 10. Step 11

Step 12a: Proceed with this step for a 3/8-inch line conductor replacement (G01, G02, G03, G05, G06, and G07) only. For a 1-inch or 3/4-inch line conductor replacement (G04 and G08 and G12/G16), skip this step and proceed directly to Step 12b.

Place the components supplied with the kit in the position and orientation shown in the illustration. The line conductors must be placed with the rounded edges (die roll) facing down and held against the locating shoulders while tightening the screws. The spacers must be located against the locating pads while tightening the screws. The voltage taps must be located between the spacer and the line conductor in the pocket with the wire groove on the outside of the housing (refer to Figure 11 in the illustration). Fasten all screws to the captive nuts and torque to 100–150 in-lbs (11–17 Nm).

Figure 11. Step 12a
Step 12b: Proceed with this step for a 1-inch or 3/4-inch line conductor replacement (G04, G08, and G12/G16).

Place the components supplied with the kit in the position and orientation shown in the illustration. The line conductors must be placed with the contacts facing up and held against the locating shoulders while tightening the screws. The voltage taps must be located between the housing and the line conductor in the pocket with the wire groove on the outside of the housing (refer to Figure 12 in the illustration). Fasten all screws to the captive nuts and torque to 100–150 in-lbs (11–17 Nm).

Step 13: Place the rear housing on the front housing. Be careful routing the wires so as not to pinch them between the housings. Refer to previously performed Steps 9 and 10.

Step 14: Reinstall the M6 x 40 mm housing bolts and torque to 75–85 in-lbs (8.5–9.6 Nm). Refer to previously performed Steps 9 and 10.

Step 15: Reinstall the fast-on terminals if previously removed. Refer to Step 8.

Step 16: Reinstall the rejection bracket if previously removed. Refer to Step 6.

Step 17: Reinstall the M6 square bolts, with the flat side facing the outside of the breaker, and install the side plates on both sides of the breaker. Refer to previously performed Step 7.

Step 18: Test the breaker to ensure proper operation by doing the following:
- Charge and CLOSE the breaker
- Recharge and OPEN and CLOSE the breaker
- OPEN the breaker

Step 19: Plug the current sensors into the connectors and hook the wires into the molded housing clips.

Step 20: Slide the current sensors over the conductors, making sure the wires are completely below the horizontal protrusion on the current sensor housing. The sensor should rest flush with the recessed shoulder in the breaker housing.

Step 21: Reinstall the current sensor cover into the breaker rear housing. Use screws and washers in the top row of holes and screws only in the bottom row, taking care to find the original screw threads in each hole.

Step 22: Reinstall all primary disconnects, vertical adapters, heat sinks and so on as applicable to the line and load conductors. Torque to 100–150 in-lbs (11–17 Nm). Refer to Step 3.

Step 23: Reinstall the arc chutes and secure with their captive screws. Refer to Step 2.

Step 24: Reinstall the front cover removed in Step 1.
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