Levering mechanism assembly replacement parts kit for Magnum low voltage drawout circuit breakers

⚠ 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.

⚠ WARNING

THE INSTRUCTIONS CONTAINED IN THIS IL AND ON PRODUCT LABELS MUST BE FOLLOWED. OBSERVE THE FIVE SAFETY RULES.

- **DISCONNECTING;**
- **ENSURE THAT DEVICES CANNOT BE ACCIDENTALLY RESTARTED;**
- **VERIFY ISOLATION FROM THE SUPPLY;**
- **EARTHING AND SHORT-CIRCUITING; AND;**
- **COVERING OR PROVIDING BARRIERS TO ADJACENT LIVE PARTS.**

Section 1: General information

The levering device (mechanism) is hand operated using a standard 3/8-inch square drive and ratchet. By rotating the levering-in screw in a counterclockwise direction, the circuit breaker is moved out of its compartment. Rotating the levering-in screw in a clockwise direction moves the circuit breaker into its compartment. When the circuit breaker is levered fully to the DISCONNECT or CONNECT position, the levering shaft hits a hard stop. Do not exceed 25 ft-lbs (33 Nm) of torque for the levering mechanism.

Levering mechanism assembly replacements parts for Magnum circuit breakers with PXR trip units have posts that face outwards on the shaft while Magnum circuit breakers with Digitrip trip units have posts that face inwards on the shaft, as depicted in **Figure 6**, Step 7.

Note: All images show a Magnum circuit breaker with a PXR trip unit unless stated otherwise. Some components, such as the trip unit, not shown for clarity.

Required tools

- 10 mm socket
- 1/4-inch socket drive
- Phillips head screwdriver (#3 recommended)

Kit parts identification

Refer to **Figure 1** for visual identification of the parts listed below:

(A) Levering mechanism assembly (one)

(B) Left-side plate (one)

(C) Right-side plate (one)

(D) M6 x 65 mm hex bolt (one)

(E) M6 x 16 mm flat-head screw (six)

(F) M6 square nut (six)

(G) M6 nylon locking hex nut (one)

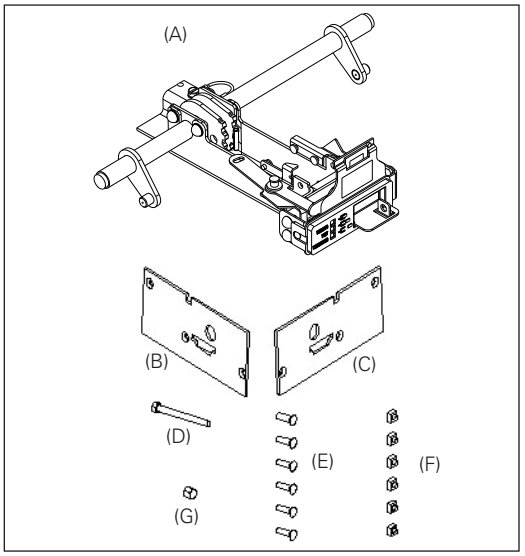

Figure 1. Contents of kit.

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Section 2: Installation of levering mechanism assembly replacement parts

Proceed with the following 14 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.

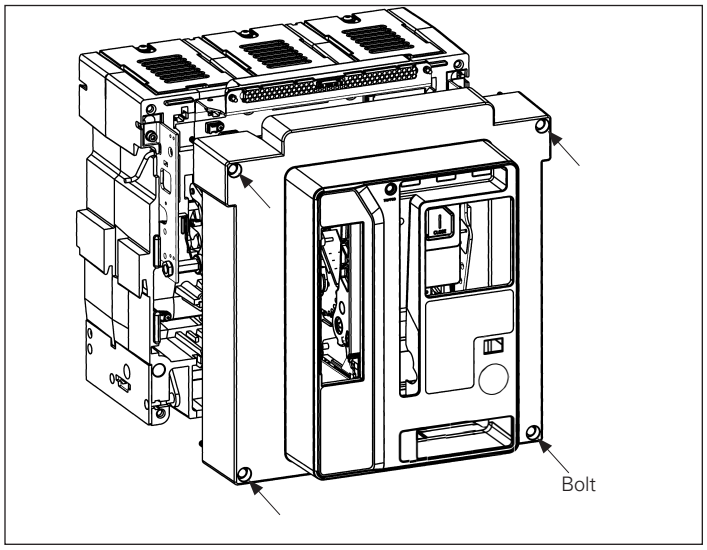

Figure 2. Step 1.

Step 2: Remove the three flat-head screws from the right- and left-side plates. Discard the plates and all mounting hardware.

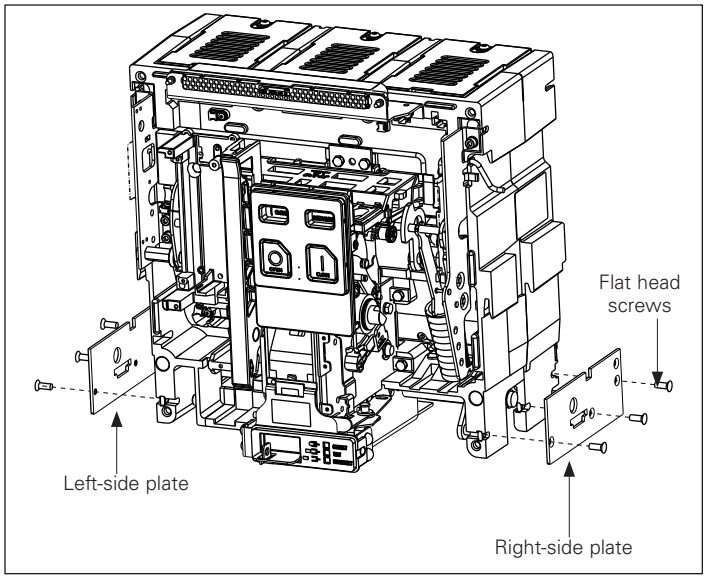

Figure 3. Step 2.

Step 3: Unscrew the M6 x 65 mm long hex bolt from the nylon locking hex nut that fastens the levering assembly to the mechanism side plates and discard the screw and nut.

Step 4: Lower the levering mechanism assembly out of its position.

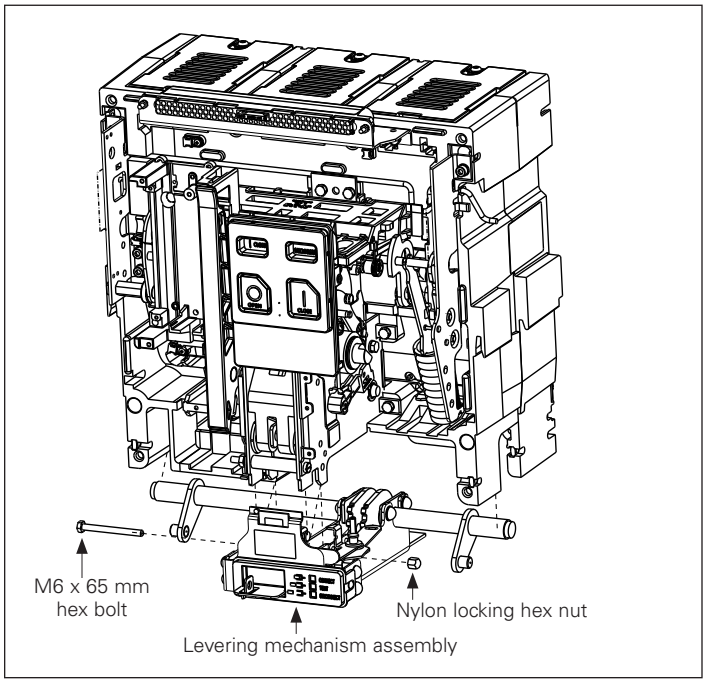

Figure 4. Steps 3 and 4.

Step 5: Replace the M6 square nuts **(F)**, three on each side. Install with the flat face of each nut toward the outside of the breaker.

Step 6: Mount the left-side plate **(B)** with three M6 x 16 mm flat-head screws **(E)** to the just inserted nuts. Torque the screws to 18–22 in-lbs (2–2.5 N·m).

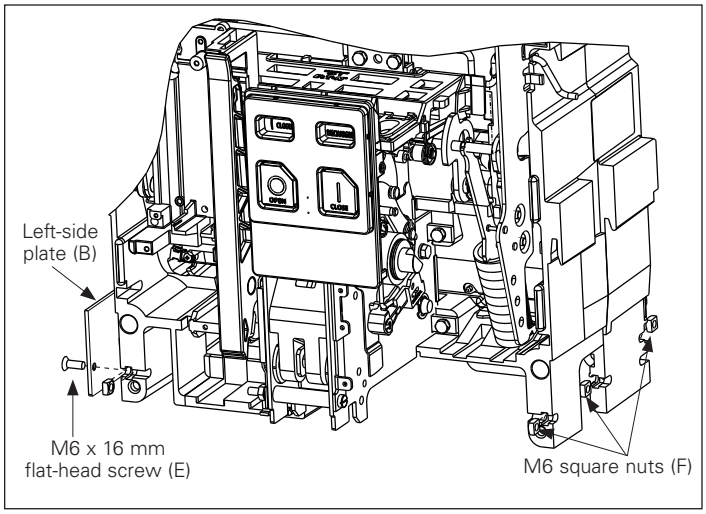

Figure 5. Steps 5 and 6

Step 7: Apply grease (Magnalube G or equivalent) on the turndown surface on both ends of the shaft on the levering mechanism.

Note: Confirm correct levering mechanism assembly is used. **Figure 6** shows the differences between the shaft for a Digitrip breaker and a PXR breaker.

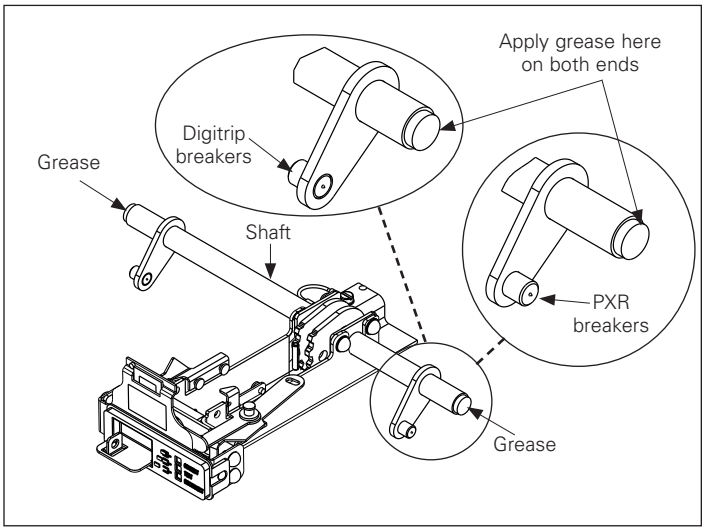

Figure 6. Step 7.

Step 8: Move the levering mechanism assembly **(A)** up into position while holding the tab forward as shown. Fit the left end of the shaft into the left-side plate **(B)**. Then fit the right-side plate **(C)** onto the right end of the shaft. Mount the right-side plate to the square nuts **(F)** inserted in the housing with three M6 x 16 mm flat-head screws **(E)**. Torque the screws to 18–22 in-lbs (2–2.5 N·m).

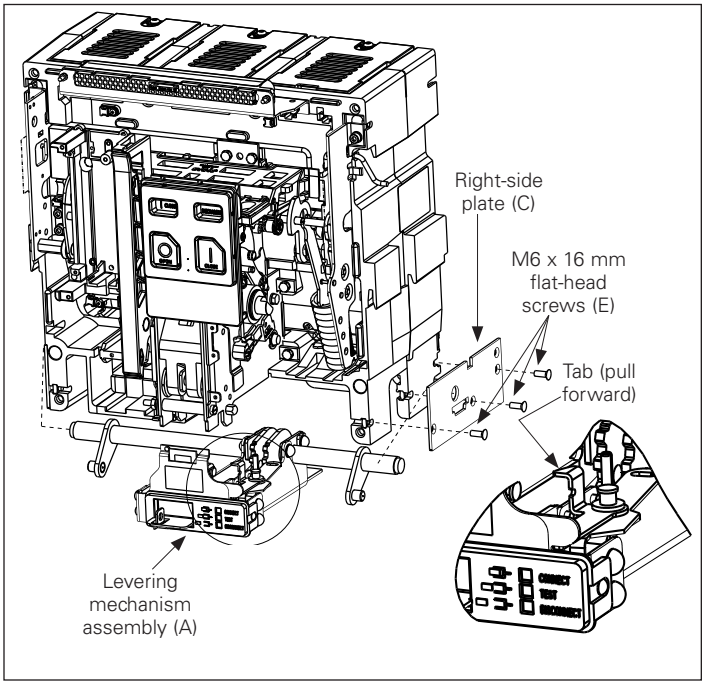

Figure 7. Step 8.

Step 9: Fasten the levering mechanism assembly to the mechanism side plates with the M6 x 65 mm long hex bolt and nylon locking hex nut. Torque to 75-85 inch-lbs (8.4 – 9.5 N·m).

Step 10: Check to be certain that the tab on the levering mechanism is resting on the swing arm on the mechanism side plate (with the breaker in the OPEN and DISCHARGED condition). If not, move tab to position shown.

Step 11: Check to be certain that the access door opens and slides freely.

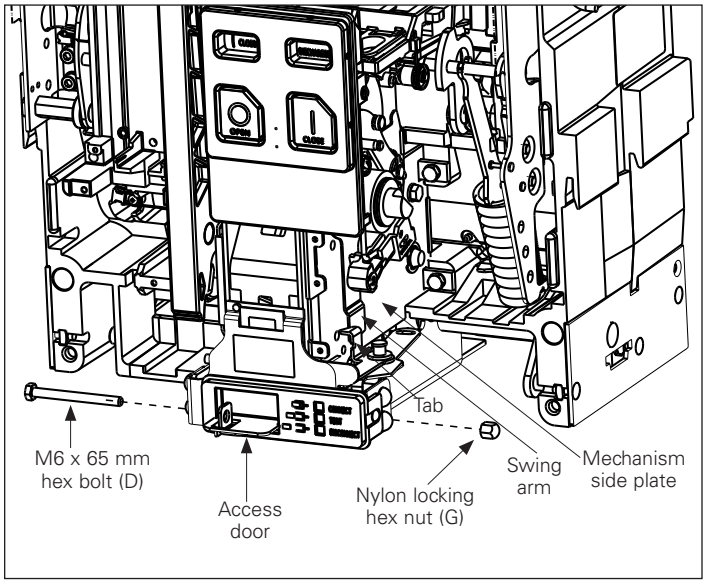

Figure 8. Steps 9,10, and 11.

Step 12: Reinstall front cover and bolts removed in Step 1 taking care to avoid pinching wires between the front cover and the circuit breaker frame.

Step 13: CHARGE and CLOSE the breaker. The access door should not open.

Step 14: OPEN the breaker. The access door should be free to open.

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