Shutter and rail locking device for low-voltage switchgear

This document provides instructions for how to properly install Eaton’s breaker shutter and rail locking device.

**Rail locking device**

**Step 1.** Identify the slot for the rail locking device.

**Step 2.** Slide device into slot from inside the cassette.

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**DANGER**

HAZARDOUS VOLTAGE. WILL CAUSE SEVERE INJURY OR DEATH. DO NOT OPEN SHUTTER IF THE EQUIPMENT IS ENERGIZED.

**WARNING**

(1) ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD BE PERMITTED TO WORK ON THE EQUIPMENT.

(2) DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON THE EQUIPMENT WHILE ENERGIZED. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING.

(3) ALWAYS DE-ENERGIZE PRIMARY AND SECONDARY CIRCUITS BEFORE REMOVING CIRCUIT BREAKER.

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

**CAUTION**

SPECIFIC OPERATING PROCEDURES MUST BE DEVELOPED BY THE RESPONSIBLE PARTY, BECAUSE OF THE UNIQUE APPLICATION AND VAST VARIETY OF SYSTEM AND USER REQUIREMENTS. FAILURE TO DEVELOP SPECIFIC PROCEDURES COULD LEAD TO IMPROPER USE OR OTHER MORE SERIOUS CONSEQUENCES.
Step 3. Install and lock a lock-out/tag-out compliant padlock according to company protocol.

Figure 4.

Step 4. Verify that the cassette rail cannot be extended.

Figure 5.

Shutter locking device

Step 1. There are three sizes of shutter locking devices available depending on the type of circuit breaker cassette. Choose the correct shutter locking device based on the cassette size. The correct size must be chosen for the shutters to be properly locked.

Figure 6. Shutter lock for Magnum DS cassette

The larger of the two pieces will always be placed to the rear of the smaller piece regardless of the side of the cassette it is being installed in.

Figure 7. Shutter lock for double-wide three-pole breaker cassette

Figure 8. Shutter lock for Magnum™ narrow frame cassette
Step 2. Place first piece nested between shutter arms and bottom of the cassette with the “remove before installing breaker” label toward the middle of the two arms.

Step 3. Repeat with the other side.

Step 4. Pull both pieces flush to the arms and line up locking holes.

Step 5. Install and lock a lock-out/tag-out compliant padlock according to company protocol.

Step 6. Verify shutter cannot be opened to access breaker stabs.
Cassette modification instructions

This section provides instructions for how to properly modify a Magnum DS cassette for use with Eaton’s rail locking device. The cassette will only need to be modified if the switchgear you have was produced before January 2018, and does not already have this slot as a feature.

Shown in Figure 14 is everything that will be used to modify the cassette. The kit includes: 1/4-20 x 5/8-inch hex head bolt, two 1/4-inch flat washers, 1/4-20 hex nut, and a cassette side sheet drill template.

Shown in Figure 15 are the tools required for the modification: 7/16-inch open-ended wrench, 7/16-inch socket, 5/32-inch drill bit, ratchet; you will also need a power drill (not shown).

Note: In the following photos, the cassette pictured has already been modified. The photos are for illustration purposes; the process and procedure for modification remains the same.

Step 1. Place the cassette side sheet drill template against the inside of the right wall of the cassette.

Step 2. Install one washer and the hex bolt through the hole.
**Step 3.** Place the other washer on the other end of the bolt, and secure the hex nut to the outside wall of the cassette.

**Step 4.** Once the cassette side sheet drill template is securely in place, use the 5/32-inch drill to create holes through the side sheet top and bottom of the slot in the template.

**Step 5.** Using an angle grinder or Dremel tool, clear the remaining material between the two holes to create the slot. Be sure to follow your company’s protocol for safe work practices with the tool you choose.

**Note:** The photos included in the step-by-step instructions above use a Magnum DS cassette; however, the modification steps do not vary based on the type of cassette.

**Figure 21** and **Figure 22** show the cassette side sheet drill template secured to a Magnum Narrow Frame cassette with the modification kit components.