



POWER-BREAK FIELD INSTALLABLE ACCESSORIES

Circuit Protective Devices Department — Plainville, Connecticut 06062

GEH-34
Rev. F

SHUNT TRIP DEVICE FOR 2000-4000A FRAMES

Catalog # TP5203 F
Ser # 107524

Note: UL listing is voided when the circuit breaker is modified to add an accessory. Remove and discard the UL label.

WARNING: When installing accessories, the breaker must be completely de-energized and disconnected from the electrical circuit. This is mandatory because breaker must be ON during certain stages of installation and testing.

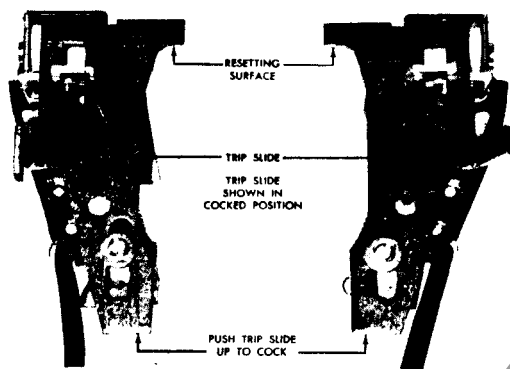


Fig. 1-R

Shunt trip device - left side and right side mounted.

ELECTRICAL DATA

CAT NO.	VOLTAGE RATING	MAX INRUSH CURRENT AMPS
TSST7	12 Vdc	4.00
TSST8	24 Vdc	2.18
TSST9	48 Vdc	1.09
TSST11	250 Vdc	0.21
TSST12	120 Vac	2.25
	240 Vac	4.50
	125 Vdc	2.35
TSST13	480 Vac	1.64
	600 Vac	2.05

GENERAL DESCRIPTION

The shunt-trip device provides remote control capability to trip the circuit breaker. A cutoff switch is supplied as part of the shunt trip to automatically remove power from its coil when the circuit breaker is tripped.

Shunt-trip device Catalog Numbers with suffix R or RB are for right side mounting; those with suffix L or LB are for left side mounting.

INSTALLATION

1. Disassemble the circuit breaker as outlined in Instructions GEH-4382.

Note: Verify that circuit breaker handle has been cranked twice before proceeding.

2. For right side mounted device, Fig. 1-R:
 - a. Remove the left knockout in right pole of the breaker base, using screwdriver and hammer as shown in Fig. 2.
 - b. Drill a 3/8-inch hole through the base wall between the right and center pole as shown; hole may be angled downward as required.
 - c. Remove all debris from breaker.

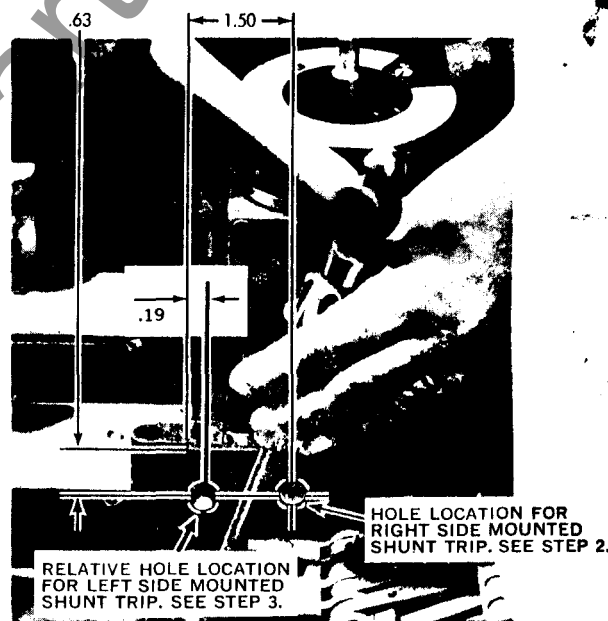


Fig. 2. View showing knockout method and 3/8-inch hole

3. For left side mounted device, Fig. 1-L:
 - a. Remove right knockout in left pole of breaker base, using method shown in Fig. 2.
 - b. Drill a 3/8-inch hole through the base wall between left and center pole in same relative location as shown in Fig. 2. Hole may be angled downward as required.
 - c. Remove all debris from breaker.
 - d. Remove the trip slide spring and trip slide. See Fig. 3.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

Instructions

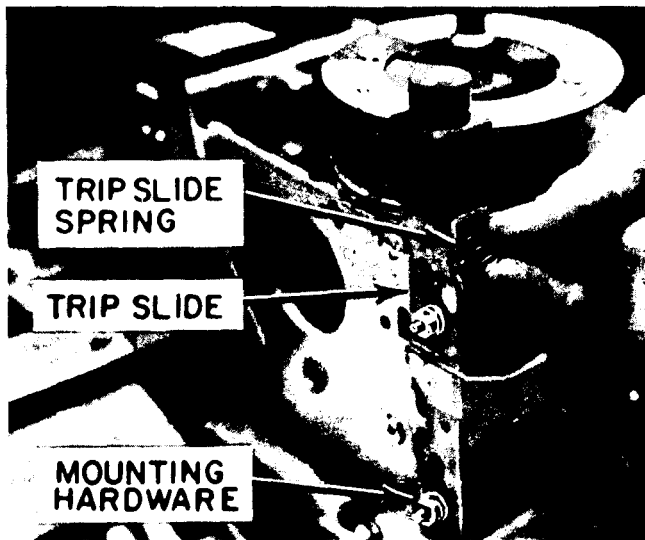


Fig. 3. Removal of trip-slide spring

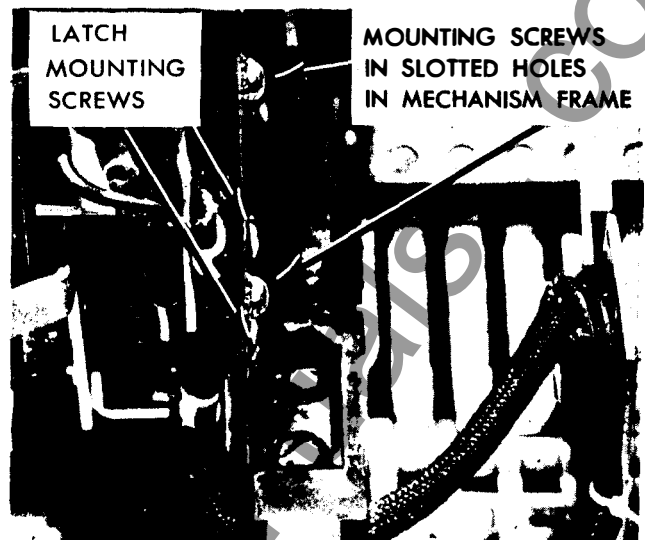


Fig. 5. View of shunt trip and auxiliary switch installation

4. For either right or left side mountings
 - a. Cock the tripping mechanism of the shunt trip by pushing the trip slide toward the solenoid, as shown in Fig. 1-R or 1-L.
 - b. Place the shunt trip device inside the breaker mechanism frame, as shown in Fig. 4 or 5.

Note: The left-side mounted device may require some care in maneuvering it through the space between the breaker mechanism frame and latch assembly.

- c. Install mounting screws through slotted holes into tapped holes in shunt trip frame.

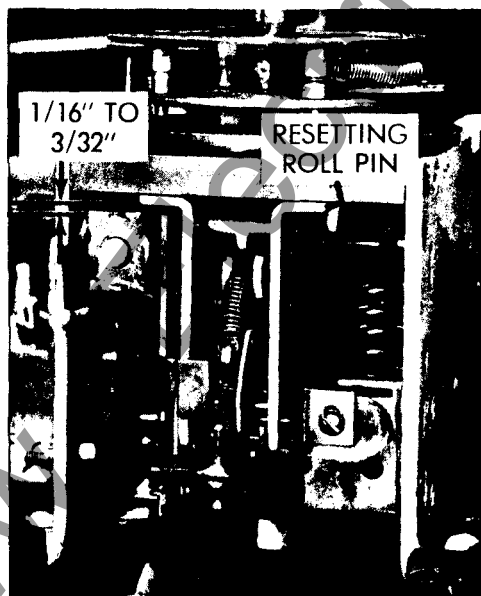


Fig. 4. View, left side mounting

- d. Position unit to provide 1/16-inch to 3/32-inch gap, as shown in Fig. 4, or 5 (as applicable) and tighten screws to 15-inch pounds torque.
 - e. Check to ensure that the resetting-roll pin is installed beneath the trip slide resetting surface.
 - f. Reposition the breaker trip slide (left-side unit mounting) on the studs provided and fasten in place with the original mounting hardware.
 - g. Torque mounting nuts to 15-inch pounds.
 - h. Check to ensure that the trip slide moves freely before installing the slide spring. It may be necessary to reposition the solenoid leads slightly to ensure free movement.

5. Install the cutoff switch as follows:

- a. Remove the left hex-head mounting bolt.
 - b. Discard the plain washer and install the switch assembly, as shown in Fig. 5, using bolt and lockwasher.
 - c. Torque the bolt to 30-inch pounds while holding the auxiliary switch in the proper mounting position.
 - d. Insert the wires and flexible sleeving from the shunt trip through the drill hole.
 - e. Cut one lead to suit, strip and solder to the upper of the two exposed switch terminals (NO).
 - f. Pass the other lead through the flexible sleeve on the switch assembly and thread this bundle through the knockout in the breaker base and along the back for attachment as desired.

Note: If the breaker was removed from its supporting structure, use tape to hold the wires in the wiring channel, as shown in Fig. 6, to ensure that no wires are pinched under the breaker mounting pads.

Note: When replacing the breaker cover, the phase barriers and the flat area on the handle shaft must be properly aligned.

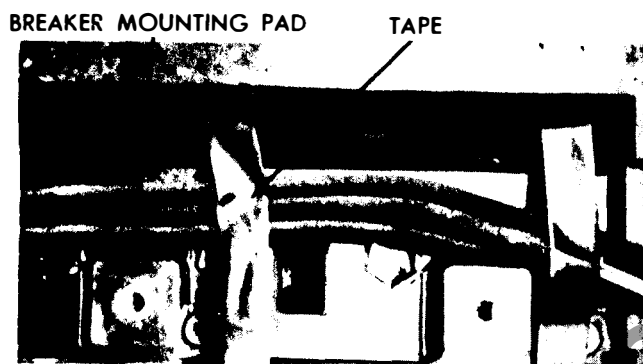


Fig. 6. View, back of breaker

6. For Functional Check

a. Manual circuit breakers:

- 1) Replace the breaker cover but do not tighten mounting screws (four).

b. Electrical circuit breakers:

- 1) Install inner cover as outlined in GEH-4382.
- 2) Install outer cover but do not tighten mounting screws (4).

7. Functional Check

- a. Actuate the circuit breaker handle twice to close the contacts in the breaker.
- b. Apply 75 percent of the rated accessory coil voltage to check the electrical and mechanical operation of the shunt-trip device. The main breaker contacts should open. Verify that voltage has been removed from the shunt trip coil.

8. Install trip unit and reassemble the breaker as outlined in Instructions GEH-4382.