

10 Jan 84

Instructions
for Installation
into MagneTrip™
Circuit Breakers



POWER BREAK® Circuit Breakers

Trip Unit for 2500 & 3000A Frames



GENERAL  ELECTRIC

Introduction

Power Break[®] insulated case circuit breakers are designed to open electrical circuits safely under normal or abnormal conditions when applied within published interruption ratings. With the introduction of Micro-VersaTrip[®], Power Break also offers a customer the ability to field install the dual magnetic trip unit in 2500-ampere and 3000-ampere frames. MagneTrip[™] circuit breakers may be ordered complete or as frames only. Magnetic trip units may be installed/replaced without voiding the UL listing. These instructions detail the installation of trip units into MagneTrip frames.

Breaker Operation

Charge

Crank the manual charging handle three times. The breaker contacts will remain open. The charge indication window will read CHG (manual) or CHARGED (electrical).

Close

Push the "ON" button or close remotely.

Open

Push the "OFF" button or trip remotely.

For more specific information, see GEH-4656 Power Break 2500-4000 Ampere, shipped with each frame.

Disassembly

CAUTION: BEFORE REMOVING THE BREAKER COVER, TRIP AND REMOVE THE DEVICE FROM THE ELECTRICAL CIRCUIT. THE MECHANISM MUST BE CLOSED FOR TESTING.

Remove the Breaker Cover

To remove the breaker cover, proceed as follows:

1. Loosen four screws, shown in Fig. 1, and remove the escutcheon plate.
2. Loosen and remove the four cover mounting screws. Two are located under the escutcheon.
3. Remove the breaker cover.
4. On electrically operated devices, loosen the mid-cover retaining screw (A), Fig. 2, and lift off the mid-cover.

Remove the Trip Unit

To remove the trip unit, proceed as follows:

1. Loosen the hex-head screws (A) and socket-head conductor mounting screws (B), Fig. 3. Loosen and remove the trip unit case mounting screws (C).
2. Lift the load end of the unit first and pull out of the frame. See Fig. 4.

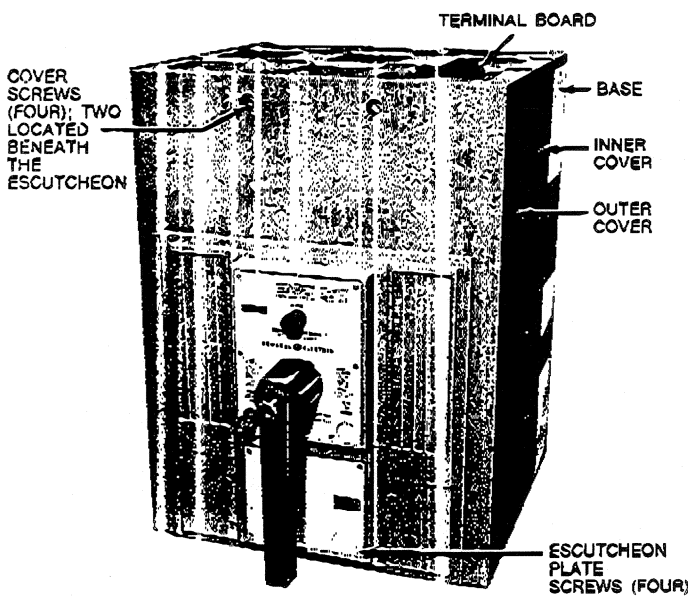


Fig. 1. Front view of Power Break[®] circuit breaker.

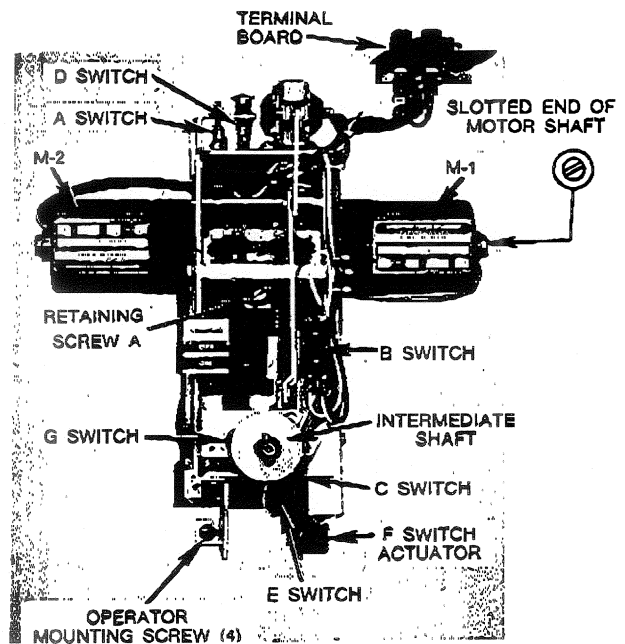


Fig. 2. Breaker with outer cover removed.

Reassembly

Install the Trip Unit

To install the trip unit, proceed as follows:

1. Check that all contact surfaces are clean, smooth, and free of burrs.
2. Lower the trip unit into the breaker frame as shown in Fig. 4. The trip paddle should sit over the mechanism latch.
3. Secure the trip unit case to the frame with four round-head screws (C), Fig. 3.
4. Insert and start the hex head screws (A), Fig. 3, to connect the line end of the trip unit coils to line contact carriers. Do not tighten at this point.
5. Insert and start the socket head screws (B) to connect the load end of the trip unit coils to the load-end terminals.
6. Tighten the trip coil hardware to 100 in-lbs.

Replace the Breaker Cover

1. Mid-cover (Electrical Operator Only)
 - a. Lower the motor end of the mid-cover onto the support pins of the mechanism. See Fig. 5.

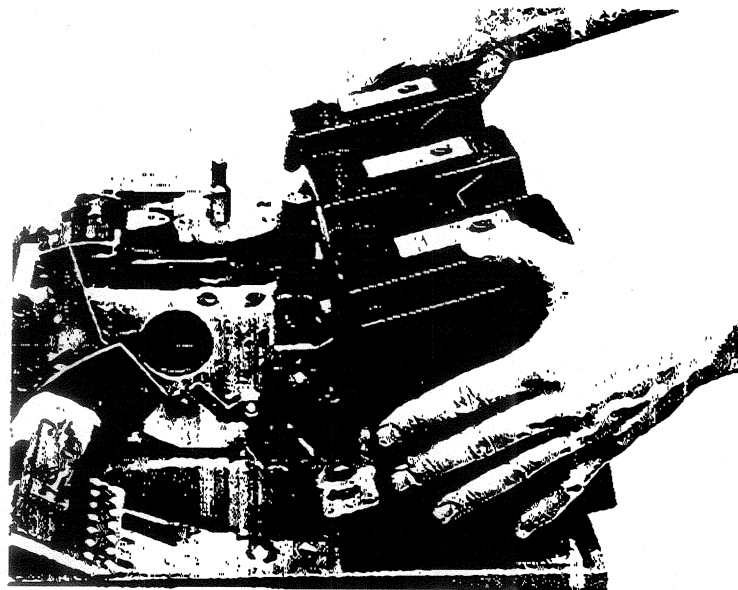


Fig. 4. Method for removal and installation of trip unit.

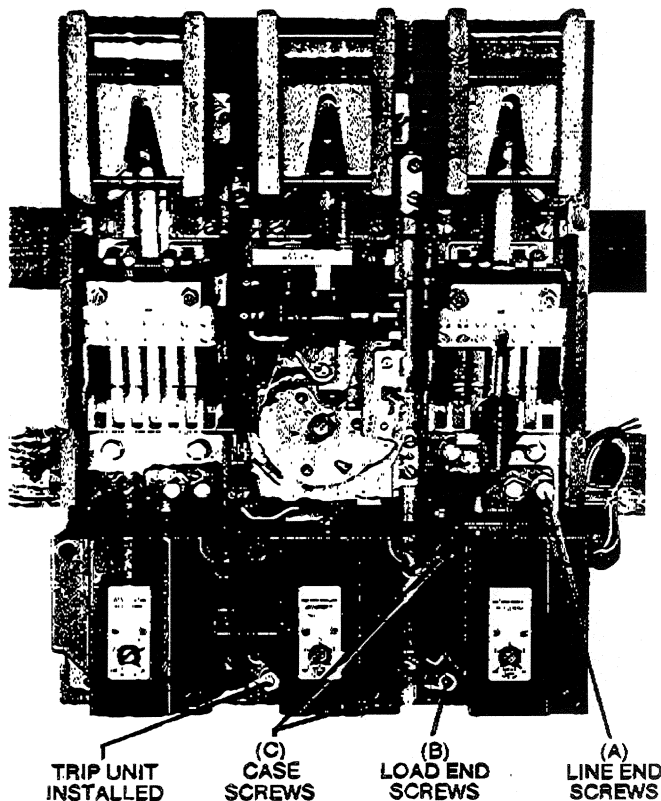


Fig. 3. Breaker, with covers removed, showing trip unit installed.

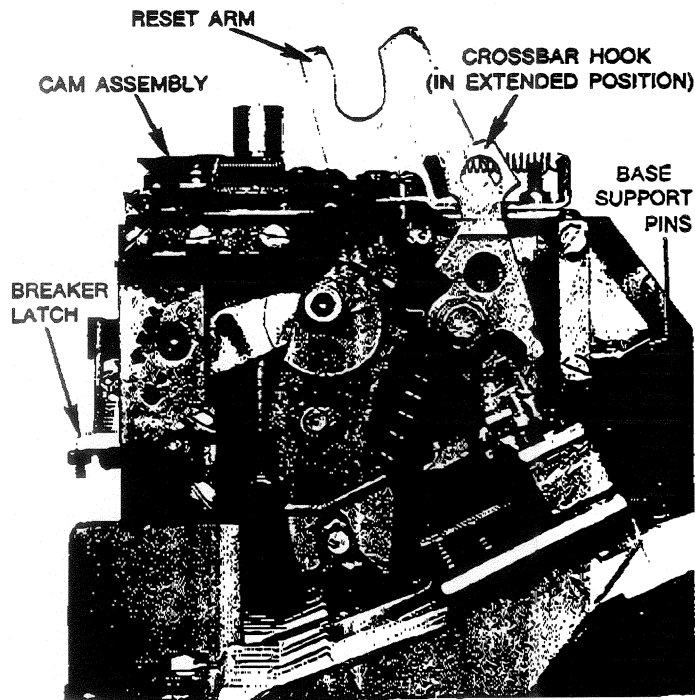


Fig. 5. Cam and contact assembly as viewed through side of inner cover.

- b. Lower the drive unit rollers into the base reset arms.
- c. With the flat surface of the intermediate shaft towards the drive unit worm gears, set the key of the shaft into slot in mechanism cam.

NOTE: With proper installation, the shaft is vertical and capable of springing up and down.

- d. Retighten retaining screw (A), Fig. 2.

2. Top Cover

- a. Make sure the flat on the handle shaft is towards the center pole arc chute.
- b. Replace the cover. Secure the mounting screws to 40 in-lbs.
- c. Adjust trip unit settings to desired values as shown in Fig. 6.
- d. Replace and secure the cover escutcheon. See Fig. 1.

Operation

Before inserting into the electrical circuit, check the charge-close-open cycle of the breaker to be sure of proper functioning.

NOTE: A de-energized undervoltage device and other features may prevent the mechanism from latching. See GEH-4656.

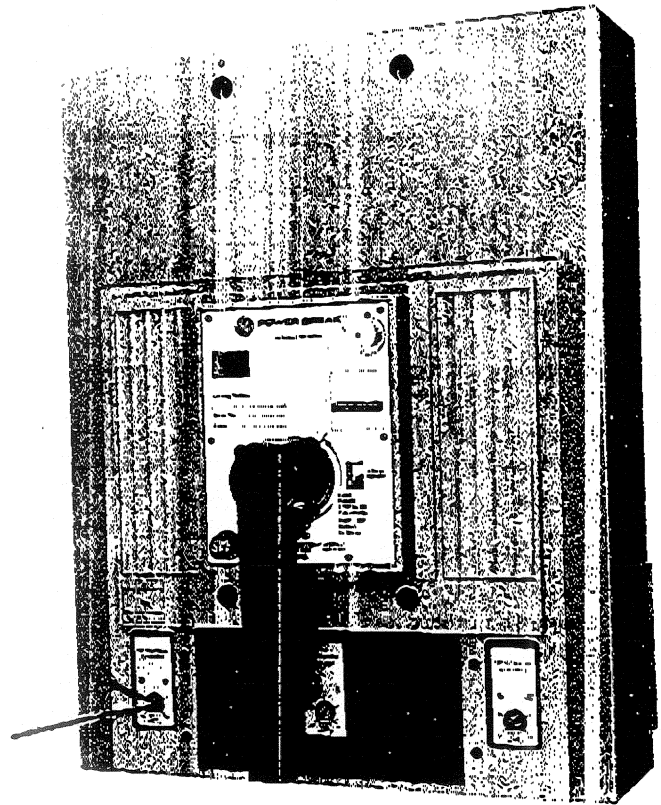


Fig. 6. View showing adjustment of trip setting.

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.

For further information call or write your local General Electric Sales Office or . . .

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