



DEH0003900

# Installation Instructions

## TQD Service Barrier Installation Kit

### Introduction

This document details the installation of the Service Barrier Kit for the TQD 2P and 3P circuit breakers. These barriers are required when the breaker is used as a single service entrance main device inside GE load centers, MSLC, and lighting panels.

Panel boards may be provided with barriers, plugs, and reducers (when required) factory installed. Barrier installation is required on the line side of the main device prior to energizing in forward or reverse feed applications. These barriers are required in order to ensure isolation from live parts on the line side when the main breaker is turned off.

If a Lug barrier is removed from a circuit breaker for maintenance while the incoming line is shut off, it must be reinstalled prior to reenergizing in order to maintain isolation.

### Contents per Installation Kit

#### TQDSB – TQD Lug Service Barrier kit

Description	Qty.
TQD Lug Barrier	3
Lug Screw Plug	3
TQD Wire Reducer	3

**NOTICE:** These instructions do not purport to cover all details or variations in equipment or to provide for every possible contingency to be met in connection with the installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purposes, the matter should be referred to the General Electric Company. These instructions are intended for use by qualified personnel only.

### Hazard Classifications

The following important highlighted information appears throughout this document to warn of potential hazards or to call attention to information that clarifies a procedure.

Carefully read all instructions and become familiar with the devices before trying to install, operate, service or maintain this equipment.

<b>⚠ DANGER:</b> Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
<b>⚠ WARNING:</b> Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
<b>⚠ CAUTION:</b> Indicates that if the hazard is not avoided could result in minor or moderate injury.

**NOTICE:** Is used to notify of practices not related to personal injury.

**⚠ DANGER:** Electrical arc flash hazard. Personal protection equipment required. Turn off power to the equipment before working inside.

### Installation

A service entrance panel board with TQD as a main circuit breaker will require three lug barriers, three plugs, and three reducers (when required). Use one of each part per pole.

No tools are required for the installation of lug barriers, reducers, and plugs. For the removal of lug barriers see Figure 5. Lug barriers must be installed and removed before the wire installation is complete.

Figure 1 depicts the Lug Barrier included in the kit.

TQD Lug Barrier (x3) Lug Screw Plug (x3) Wire Reducer (x3)



Figure 1: TQD Lug Barrier, Lug Screw Plug & Reducer

### Installation Steps

Align the lug barrier with the line side lug of the circuit breaker as shown in Figure 2. (Note: Install lug barrier on the load side for reverse feed application)

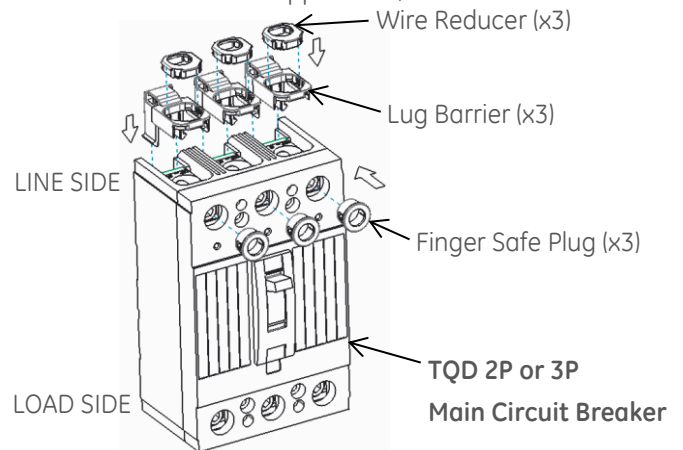


Figure 2: Lug Barrier, Plug & Reducer Installation

**NOTICE:** Reducer is required for: 3 AWG to 1/0 AWG Cu/Al wire

Install the reducer into the lug barrier opening (when required). Install the lug barrier by holding on the sides and pushing the barrier down around the lug until it is fully seated. Install the plug by holding on the top of plug and pushing it down inside the hole until it is seated flush with the breaker cover. Ensure the lug barrier, reducer (if applicable), and plug are fully installed and in position as shown in Fig. 3.

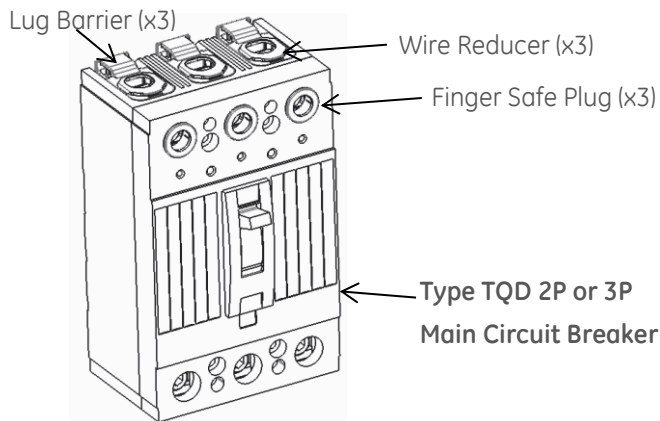


Figure 3: Fully Assembled Lug Barrier, Plug & Reducer

The wires must be stripped to the correct length to maintain isolation. Strip the wire to a maximum of 0.85 inches.

After stripping the wires to the required length, the wires can be installed as shown in Figure 4. The lug barrier must be correctly installed to maintain electrical isolation from accidental contact. Torque the wires according to the torque specification on the breaker.

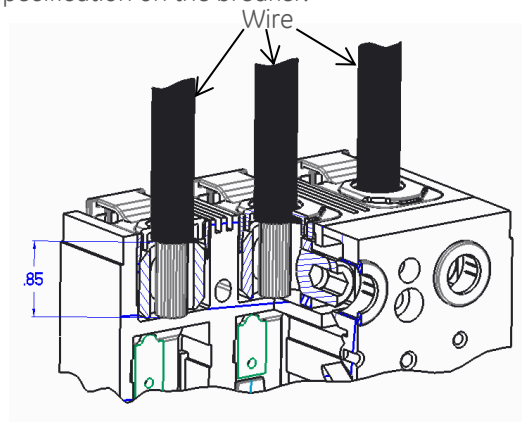


Figure 4: Maximum Wire Strip Length

To remove the lug barrier, reducer and plug from breakers, use screw driver as shown in Figure 5.

**⚠ WARNING:** Lug service barriers must be correctly installed on the line side of a main device in GE load centers, MSLC, and lighting panels to ensure isolation from live parts.

**⚠ WARNING:** Installing an incorrect size wire than the specified sizes for each circuit breaker frame will negate the barrier ability to protect personnel from exposed live components.

Table 1 shows the allowable wire sizes for the barrier.

Location	Conductors
Lug Hole without reducer	2/0 AWG to 300 MCM Cu/Al
Lug Hole with reducer	3 AWG to 1/0 AWG Cu/Al

Table 1: Service Barrier Wire Range

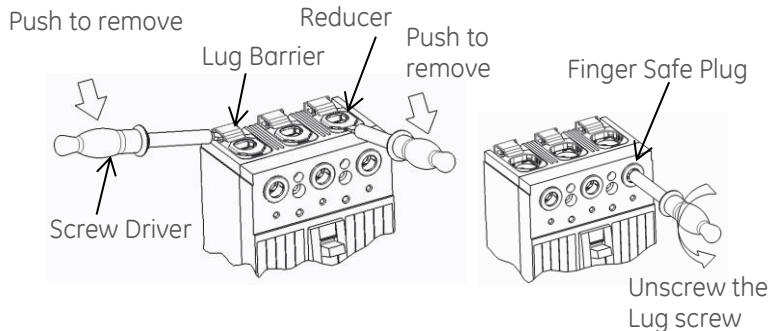


Figure 5: Barriers, Reducer, and Plug Removal

## Imagination at work

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