

## INSTALLATION INSTRUCTIONS

Original Issue Date: 12/04

Model: 20-60REOZJB-NEX Generator Sets

Market: Industrial

Subject: Battery Charger Relay Kit GM39659

### Introduction

The battery charger relay kit prevents the battery charger from discharging the battery when the battery charger is connected to the battery(ies) and is NOT connected to an AC power supply.

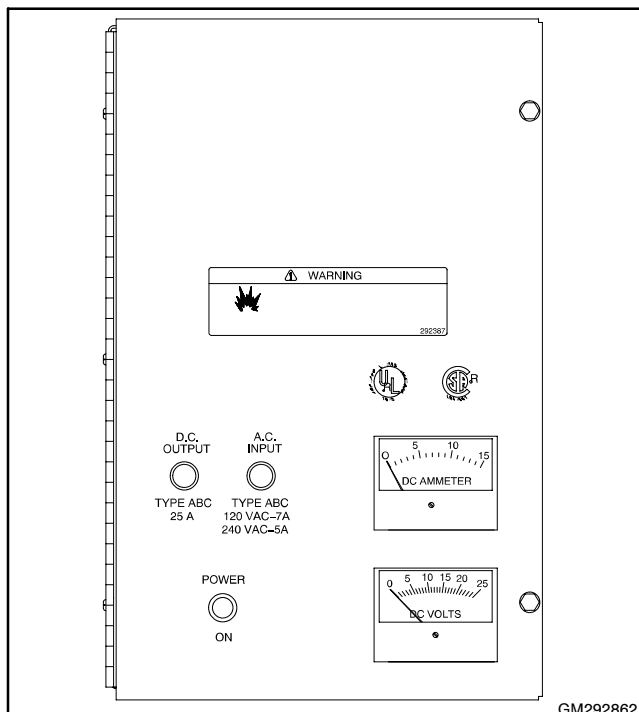
The battery charger sensing leads draw battery current for sensing the charging needs of the battery. When battery charger AC power is disconnected, this battery current draw is not replenished.

This kit applies to the following float/equalize battery charger (see Figure 1):

- PAD-292862

### Electric Tools Required

- Electric drill
- Drill bit 4 mm (5/32 in.)

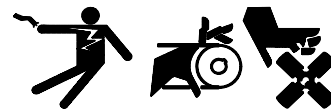


**Figure 1** Float/Equalize Battery Charger

### Safety Precautions

Observe the following safety precautions while installing the kit.

#### ⚠ WARNING



**Accidental starting.**  
**Can cause severe injury or death.**

Disconnect the battery cables before working on the generator set. Remove the negative (-) lead first when disconnecting the battery. Reconnect the negative (-) lead last when reconnecting the battery.

**Disabling the generator set. Accidental starting can cause severe injury or death.** Before working on the generator set or connected equipment, disable the generator set as follows: (1) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

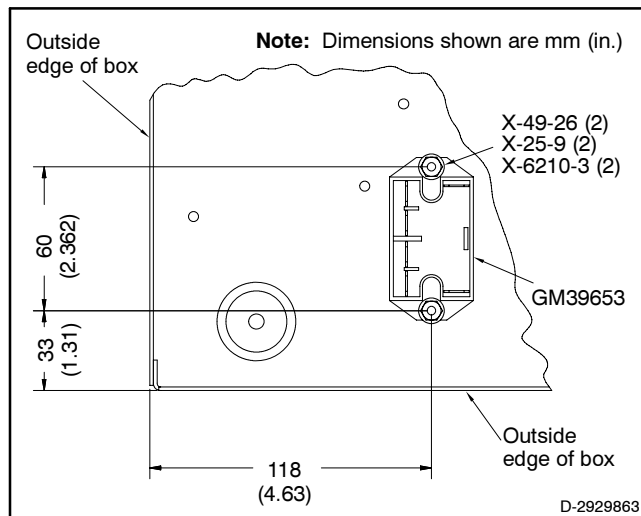
Read the entire installation procedure and compare the kit parts with the parts list in this publication before beginning installation. Perform the steps in the order shown.

### Installation Procedure

- 1. Remove the generator set from service.**
  - 1.1 Place the generator set master switch in the OFF/RESET position.
  - 1.2 Disconnect the power to the battery charger.
  - 1.3 Disconnect the generator set engine starting battery(ies), negative (-) lead first.

## 2. Mount the relay to the battery charger.

- 2.1 Remove the hardware securing the battery charger cover and open the battery charger.
- 2.2 Remove the battery charger from its mounting. Save the hardware as it will be reused.
- 2.3 Use the dimensions given in Figure 2 and drill two 4 mm (5/32 in.) diameter holes in the battery charger box between the DC terminal strip and main circuit board. Deburr holes and remove all metal chips.



**Figure 2** Mounting the Relay to the Battery Charger

- 2.4 Mount relay GM39653 to the inside of the box using two screws, plain washers, and nuts. Locate the screw heads on the outside of the box and install the relay, plain washers, and nuts.

## 3. Connect the relay to the battery charger.

Reference K4 relay in Figure 3.

- 3.1 Remove red wire P from the sensing (+) terminal on the DC terminal strip. Cut the existing terminal from the wire as close as possible to the terminal. Strip and crimp the red wire P to wire P of the wiring harness at the insulink.
- 3.2 Remove red wire B4 from the output (+) terminal on the DC terminal strip. Cut the existing terminal from the wire as close as possible to the terminal. Strip and crimp the red wire B4 to wire B4 of the wiring harness at the insulink.
- 3.3 Connect wire PA with ring terminal to the sensing (+) terminal on the DC terminal block.

- 3.4 Connect wire B4A with ring terminal to the output (+) terminal on the DC terminal block.
- 3.5 Connect wire 4 with ring terminal to the AC terminal block terminal #4.
- 3.6 Connect wire 6 with ring terminal to the AC terminal block terminal #6.
- 3.7 Connect wire P with push-on terminal to relay terminal #1.
- 3.8 Connect wire PA with push-on terminal to relay terminal #2.
- 3.9 Connect wire B4 with push-on terminal to relay terminal #3.
- 3.10 Connect wire B4A with push-on terminal to relay terminal #4.
- 3.11 Connect wire 4 with push-on terminal to relay terminal #5.
- 3.12 Connect wire 6 with push-on terminal to relay terminal #6.
- 3.13 Mount the battery charger using the original hardware.
- 3.14 Close the battery charger cover and secure the cover using the original hardware.

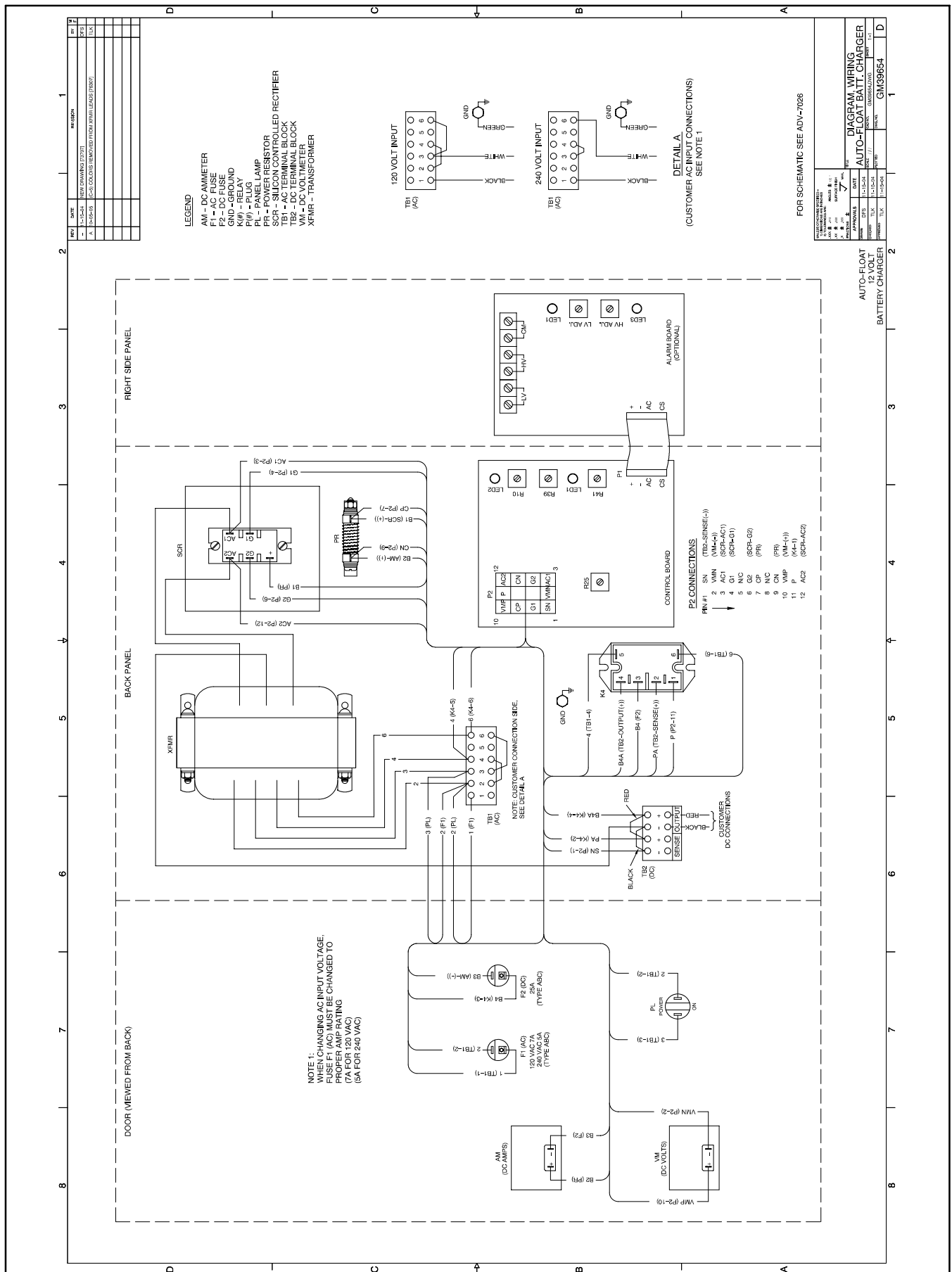
## 4. Restore the generator set to service.

- 4.1 Check that the generator set master switch is in the OFF position.
- 4.2 Reconnect the generator set engine starting battery, negative (-) lead last.
- 4.3 Reconnect power to the battery charger.
- 4.4 Verify that the battery charger DC voltmeter is displaying the battery voltage and verify that the battery charger is charging the battery.

## Parts List

### Battery Charger Relay Kit GM39659

Qty.	Description	Part Number
1	Relay, panel mount	GM39653
2	Screw, 6-32 x 1/2	X-49-26
2	Washer, plain	X-25-9
2	Nut, 6-32	X-6210-3
1	Harness, wiring	GM39658
1	Installation Instruction	TT-1404



**Figure 3** Battery Charger Wiring Diagram

