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## INSTALLATION INSTRUCTIONS

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Original Issue Date: 9/04

Model: Alpha5, COM5, COM7.5

Market: Industrial

Subject: Control Board Replacement Kit GM38867

### Introduction

Use this kit to replace control boards GM17820 and GM22402 on model Alpha5, COM5, and COM7.5 generator sets in the event of control board failure. The control board replacement kit includes one control board (GM22402) and three (3) jumpers (294634).

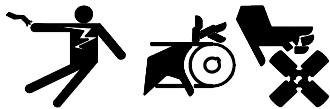
Read the entire installation procedure and compare the kit parts with the parts list at the end of this publication before beginning installation. Perform the steps in the order shown.

### Safety Precautions

Observe the following safety precautions while installing the kit.

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#### 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.

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**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.

### Installation Procedure

1. Place the generator set master switch in the OFF position.
2. Disconnect the power to the battery charger, if equipped.
3. Disconnect the generator set engine starting battery(ies), negative (-) lead first.
4. Open the enclosure to access the control board.
5. Disconnect all connectors to the control board, and remove the board from the enclosure.
6. Before installing replacement control board GM22402, install the jumper(s) (294634) as shown in Figure 1 to obtain the rated power (kW) and voltage for the generator set. Zero (0) to three jumpers are required, depending on the selected voltage and power ratings. See Figure 2 for valid power and voltage combinations and Figure 3 for the jumper locations.  
  
**Note:** Verify that connector P2 is not connected to the board during jumper installation or removal.
7. Install the control board and connect all connectors removed in step 5.
8. Verify board mounting and connections and then close the enclosure.
9. Check that the generator set master switch is in the OFF position.
10. Reconnect the generator set engine starting battery, negative (-) lead last.
11. Reconnect power to the battery charger, if equipped.
12. Test run the generator set to verify the rated output voltage.

Power Selection Jumpers		
kW rating	JP1A	JP1B
3.5	OUT	OUT
5.0	OUT	IN
7.5	IN	OUT
Voltage Selection Jumpers		
Voltage Rating, VDC	JP1C	JP1D
24	OUT	OUT
36	OUT	IN
48	IN	OUT
96	IN	IN
<b>Note:</b> Jumpers JP1E and JP1F have no function. Jumpers JP1G and JP1H are for factory use only.		

**Figure 1** Jumper Configurations

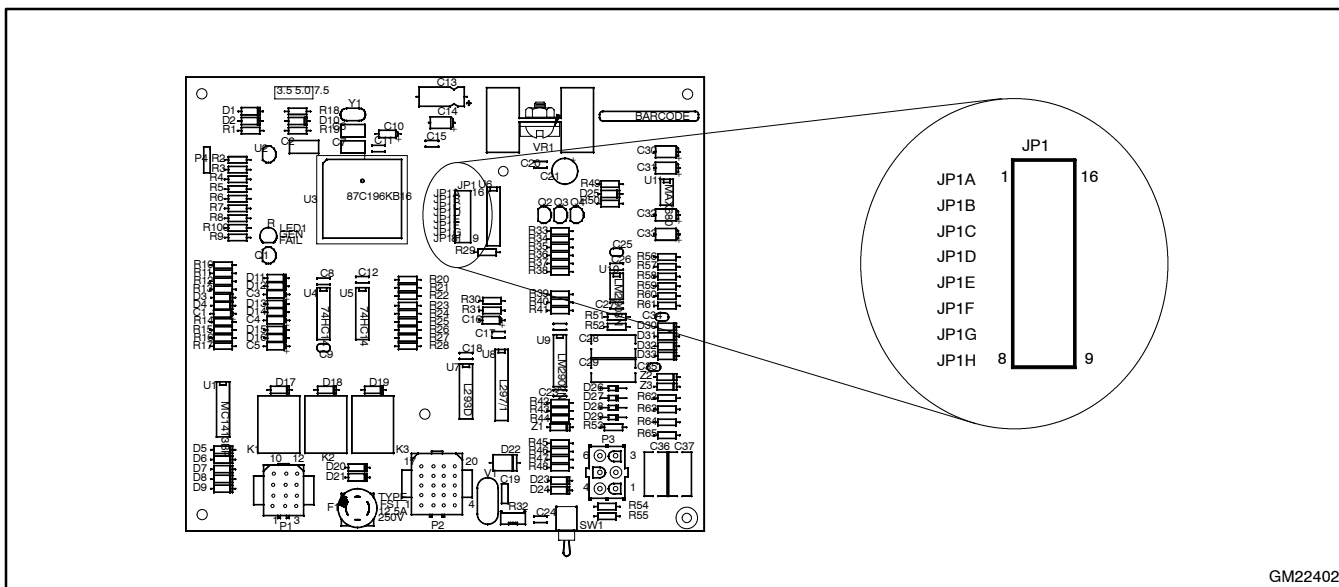
Rating	3.5 kW	5.0 kW	7.5 kW
36 VDC	Yes	Yes	No
48 VDC	Yes	Yes	Yes
96 VDC	No	No	Yes

**Figure 2** Valid Configurations

## Parts List

### Control Board Replacement Kit

Kit: GM-38867		
Qty.	Description	Part Number
1	PCB Assembly	GM22402
3	Shunt, programming	294634



**Figure 3** Jumper Locations on Control Board GM22402