

INSTALLATION INSTRUCTIONS

Original Issue Date: 9/05
Model: 20-230 kW Generator Sets
Market: Industrial and Marine
Subject: Digital Isochronous Governor Service Kits GM36253, GM36254, GM38323, GM39342, and GM39343

Introduction

The digital isochronous governor kits replace discontinued generator set governors. See Figure 1. The governor kits have non-load share and load share versions available.

Service Kit	Governor Assembly	Replaces:
GM36253	GM17644-4	A-249922
GM36254	GM17644-4	A-246045
GM38323	GM17644-4	324515, 324704, 326814, 336236, 336396
GM39342*	GM17644-5	227264, 255932, 324547, 336397, 347840, 347841
GM39343	GM17644-6	GM22742

* Load share governor

Figure 1 Service Kits and Discontinued Governors

The replacement governors are not direct bolt-in replacements and are shipped unprogrammed. After installation and wiring, the governor kit requires downloading software and changing the default settings.

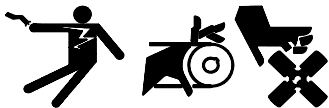
Electric Tools Required

- Electric drill
- Drill bit 6 mm (7/32 in.)
- Soldering gun
- Rosin-core solder

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, if equipped.
- 1.3 Disconnect the generator set engine starting battery(ies), negative (-) lead first.

2. Locate and remove the existing governor controller.

- 2.1 Locate the governor controller mounted on the outside of the junction box.
- 2.2 Remove the junction box panels as needed to access the mounting hardware.
- 2.3 Label the individual leads to the governor controller as needed using masking tape or other means.
- 2.4 Disconnect the wiring to the governor controller.
- 2.5 Remove the existing hardware and governor controller from the junction box.

3. Mount and connect the new governor controller.

- 3.1 **Kit GM36254 only.** Attach harness adapter GM36256 to the engine harness using the push-on terminals. Match engine harness lead color and number to harness adapter.
- 3.2 **Kit GM36255 only.** Remove existing terminals from the wiring harness to the governor controller. Strip lead ends and crimp-on supplied harness adapter. Match engine harness lead color and number to harness adapter.
- 3.3 If the kit does not include a harness adapter, strip leads ends of engine harness and tin with rosin-core solder.
- 3.4 Place the new governor controller in the same location as the original governor controller and determine if holes align. Typically the controller mounting holes will not align with the junction box holes.

- 3.5 Select a location for mounting the governor controller using at least one of the original junction box holes. See Figure 2 for governor controller mounting and overall dimensions. When selecting the mounting location, the engine wiring harness leads must be within reach of the governor controller terminals.

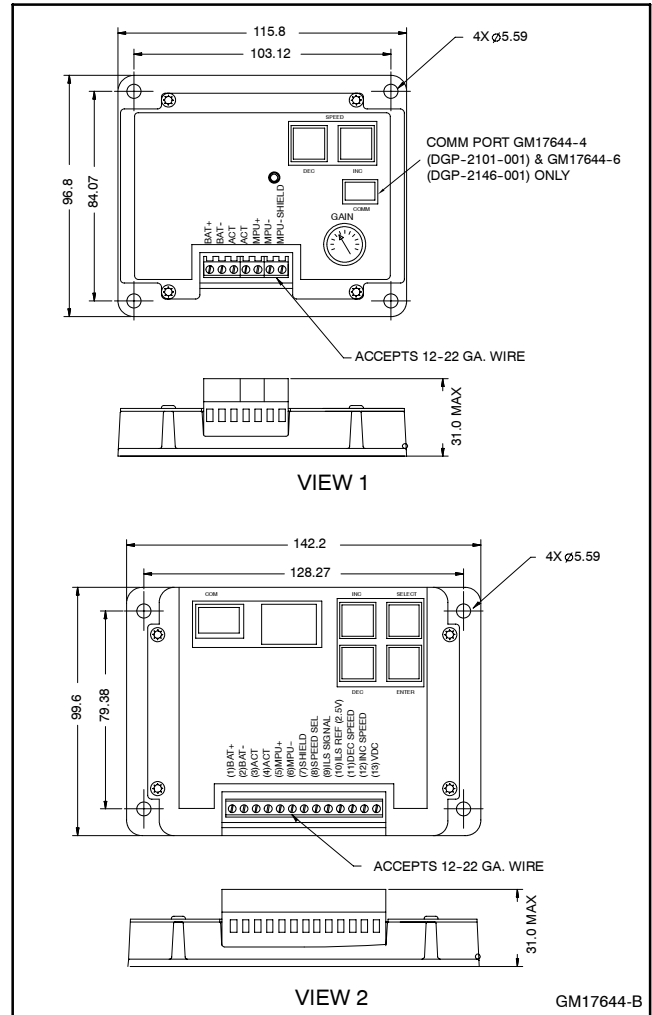


Figure 2 Governor Controller Dimensions

- 3.6 Verify that no obstruction or component is located on the junction box inside surface where the mounting holes will be made. Use the governor controller as a template and drill 6 mm (7/32 in.) holes as needed.
- 3.7 Mount the new governor controller using the existing hardware or user-supplied hardware.
- 3.8 Attach the engine wiring harness to the governor controller as shown in Figure 3.

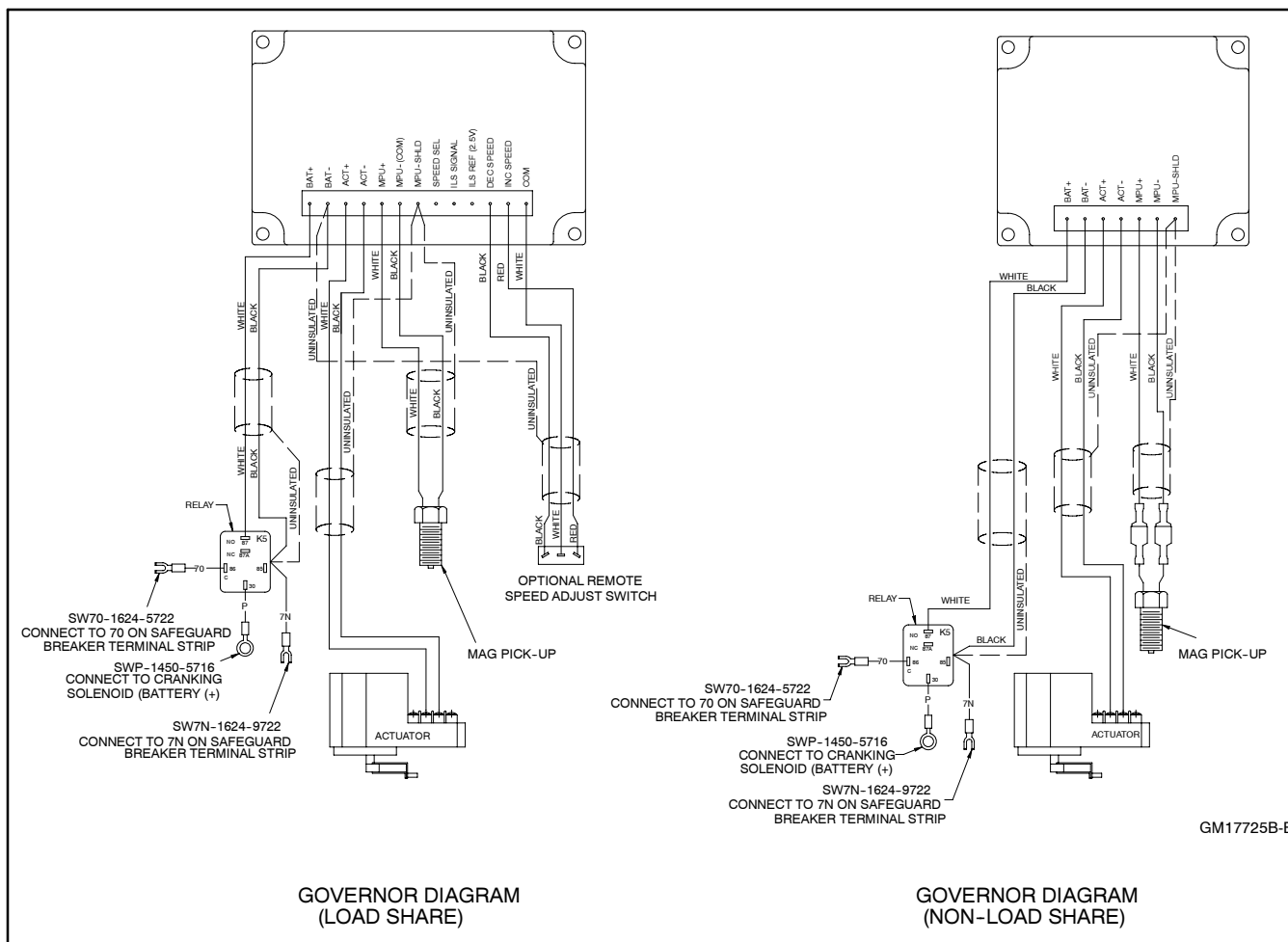


Figure 3 Governor Controller Connections

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, if equipped.

5. Program the governor controller.

Replacement governors are shipped unprogrammed. Use TT-1399 supplied with governor programming kit GM39344 and the instructions supplied with the CD for downloading the software and changing the default settings.

Parts List

Governor Service Kits

Governor Service Kits						
Qty.	Description	GM36253	GM36254	GM38323	GM39342	GM39343
1	Governor	GM17644-4	GM17644-4	GM17644-4	GM17644-5	GM17644-6
1	Harness, Adapter	GM36255	GM36256	—	—	—