

INSTALLATION INSTRUCTIONS

Original Issue Date: 6/14

Model: 14/20RES(L)/RESA(L), 20RESC(L), and 8/10/12RESV(L)

Market: Residential/Light Commercial

Subject: Battery Heater Kits GM92406-KP2-QS and GM92406-KP3-QS

Introduction

The battery heater kit contains a heating pad to help warm the battery in cold climates. See Figure 1. The battery heater is equipped with a thermostat that turns the heater on at 18°C (65°F) and turns off at 27°C (80°F). Battery heaters are recommended for regions where the temperature regularly falls below 0°C (32°F).

The battery heater requires a source of AC power. Verify that AC power is connected to the generator set as described in the generator set Installation Manual. The circuit must be backed up by the generator set to provide power at all times.

120 VAC generator sets are equipped with one or two 120 VAC receptacles. On Models 14/20RES and RESL, one receptacle is used for the battery charger. If this battery heater kit is used with a carburetor heater kit, use the splitter provided with that kit to plug multiple AC accessories into the receptacle.

The 240 VAC heater kit uses a 3-pin power connector. Generator sets built after 10/9/2013 with serial numbers SGM327VFJ or later have knockouts under the controller for 240 VAC power connectors. The kit includes an adapter harness to allow connection of multiple 240 VAC accessories. Refer to the Installation Procedure for instructions to connect power.

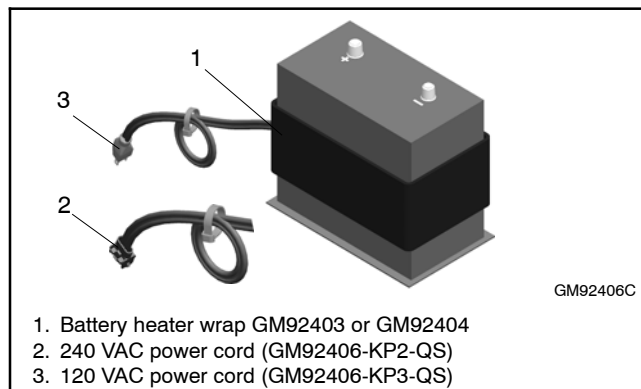


Figure 1 Battery Heater

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.

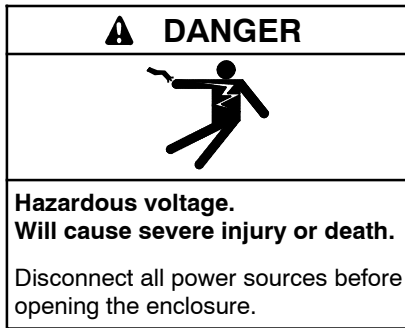
⚠ WARNING



**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 equipment connected to the set, disable the generator set as follows: (1) Press the generator set off/reset button to shut down the generator set. (2) Disconnect the power to the battery charger, if equipped. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent the starting of the generator set by the remote start/stop switch.



Grounding electrical equipment. Hazardous voltage can cause severe injury or death. Electrocutation is possible whenever electricity is present. Ensure you comply with all applicable codes and standards. Electrically ground the generator set and related equipment and electrical circuits. Turn off the main circuit breakers of all power sources before servicing the equipment. Never contact electrical leads or appliances when standing in water or on wet ground because these conditions increase the risk of electrocution.

Installation Procedure

1. Press the OFF button on the generator controller.
2. Disconnect the utility power to the generator.
3. 14/20RES/RESL: Unplug the battery charger's power cord.
4. Disconnect the generator set engine starting battery(ies), negative (-) lead first.
5. Remove the battery from the battery rack.
6. Find the label on the battery heater. See Figure 2. Wrap battery heater GM92403 (120 VAC kits) or GM92404 (240 VAC kits) around the battery with the labeled side contacting the battery. See Figure 1.
7. Reinstall the battery into the battery rack.

Note: For 240 VAC kits, proceed to step 13.

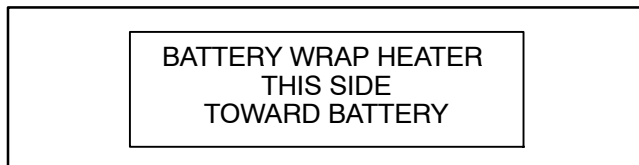


Figure 2 Label

Power Cord Routing and Connection, 120 VAC Kits

8. **Models 14/20RESA/RESAL and 20RESC/RESCL:** Remove and discard the existing plug from the opening in the bulkhead. Insert bushing X-634-28 and discard bushing X-634-18 which is included in kit GM92406-KP3-QS. See Figure 3.

Models 8/10/12RESV(L): Remove and discard the existing plug from the opening in the bulkhead. Insert bushing X-634-18 and discard bushing X-634-28 which is included in kit GM92406-KP3-QS. See Figure 4.

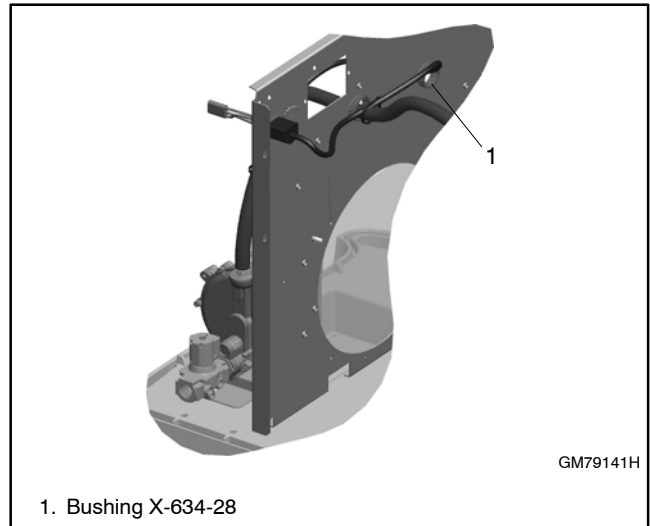


Figure 3 120VAC Power Cord and Receptacle for 14/20RES(L)/RESA(L) and 20RESC(L)

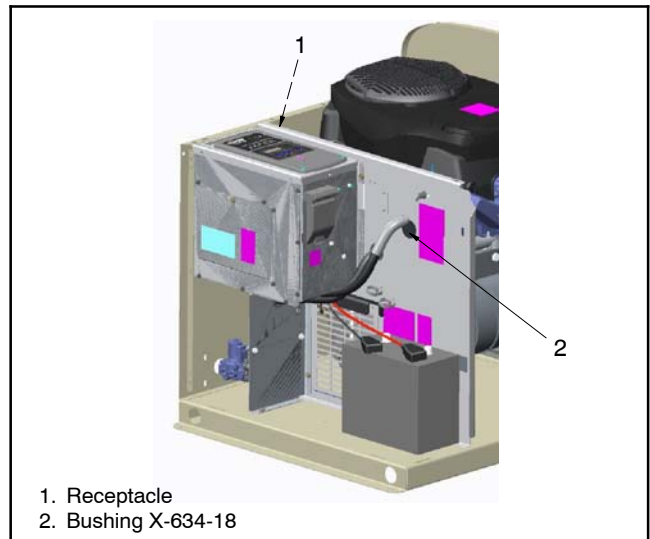


Figure 4 120VAC Power Cord and Receptacle for Model 8/10/12RESV(L)

9. Route the power cord through the opening in the bulkhead. See Figure 3 and Figure 4. Avoid contact with any sharp edges.
10. Plug the heater's power cord into the 120 VAC receptacle. See Figure 3 and Figure 4. If this kit is used with a carburetor heater kit, use the 3-way extension cord included in that kit to plug multiple AC accessories into the receptacle.
11. Use the cable ties X-468-1, provided with the kit, to secure the power cord.
12. Go to step 20.

Power Cord Routing and Connection, 240 VAC Kits

13. Remove two screws that secure the controller. Lift the controller carefully to access the wiring and the inside of the controller junction box. Do not disconnect the wiring to the controller.
14. Generator sets built after 10/9/2013 with serial numbers SGM327VFJ or later have a knockout under the controller for the 240 VAC power connector. Remove a knockout in the bottom of the controller box. See Figure 5.
15. Insert the heater's power cord connector into the knockout opening. See Figure 5. Confirm that the connector clicks securely in place.
16. Locate the 3-pin power connection to the 120 VAC receptacle. See Figure 6. Disconnect the power at the 3-pin Mate-N-Lock connector. The 120 VAC receptacle now has no power connected.
17. If only one 240 VAC accessory is used, connect the 3-pin power connector directly to the battery heater power cord connector that was installed in step 15. Proceed to step 19.
18. If multiple 240 VAC accessories are installed (typically this battery heater, the fuel regulator heater for 20 kW models, and/or a carburetor heater), connect P1 of adapter harness GM88996 to the 3-pin power connector. See Figure 7. Connect P2, P3, and P4 of harness GM88996 to the battery heater power cord connector and other 240 VAC accessories.
19. Carefully reinstall the controller and secure with two screws.

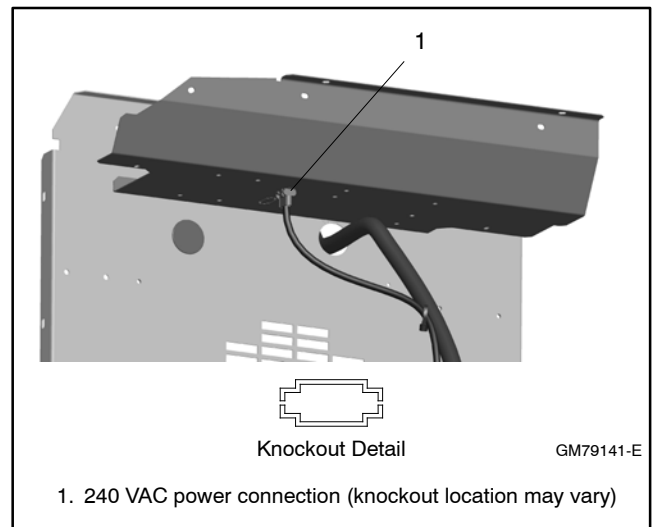


Figure 5 240VAC Power Cord and Knockout

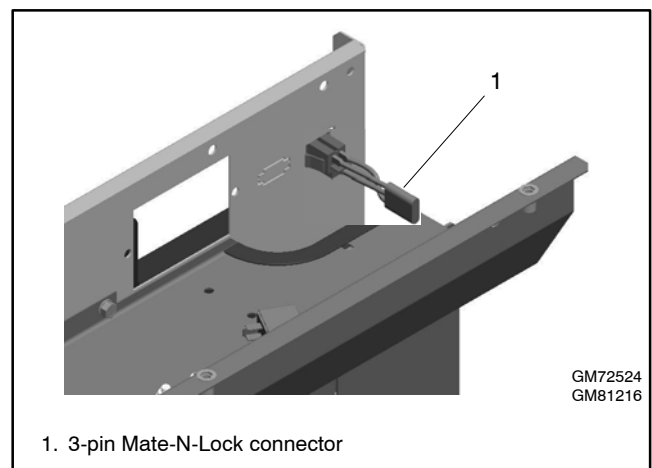


Figure 6 Disconnect Power Cable from 120VAC Receptacle

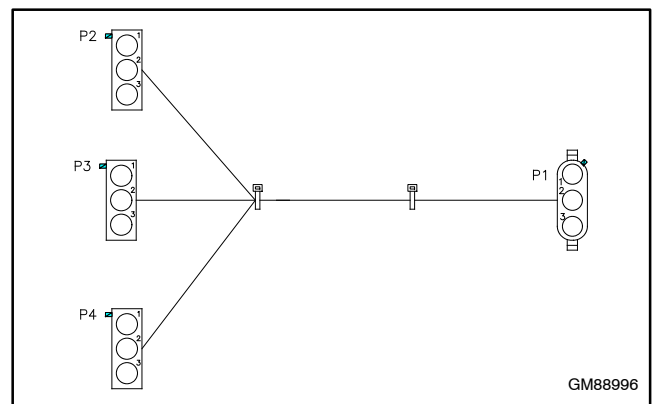


Figure 7 Adapter Harness GM88996 for 240VAC Accessories

For All Kits

20. Press the OFF button on the generator controller.
21. Reconnect the generator set engine starting battery, negative (-) lead last.
22. 14/20RES/RESL: Plug in the battery charger's power cord.
23. Replace the air intake end panel and secure with two screws.
24. Reconnect utility power to the generator.
25. Press the AUTO button on the generator set controller to put the system into automatic mode.
26. Close the roof and lock the enclosure.

Parts Lists

Battery Heater, 50W, 230/240 VAC

Kit: GM92406-KP2-QS		
Qty.	Description	Part Number
1	Battery heater, 50W, 240V	GM92404
1	Cable tie	X-468-1
1	Harness, adapter	GM88996
1	Installation Instructions	TT-1634

Battery Heater, 50W, 110/120 VAC

Kit: GM92406-KP3-QS		
Qty.	Description	Part Number
1	Battery heater, 50W, 240V	GM92403
1	Cable tie	X-468-1
1	Bushing	X-634-18
1	Bushing	X-634-28
1	Installation Instructions	TT-1634

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