
INSTALLATION INSTRUCTIONS

Original Issue Date: 4/01

Model: 8.5/11RMY

Market: Residential/Commercial

Subject: Carburetor Heater Kit GM19462-KP1

Introduction

The carburetor heater warms the carburetor for improved engine starting when the ambient temperature falls to approximately 35°F (2°C).

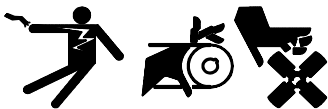
Note: The heater requires a continuous source of 120 V power.

Install the heater between the engine air cleaner and the carburetor. 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 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. Remove the generator set from service.**
 - 1.1 Place the generator set master switch in the OFF position.
 - 1.2 Disconnect the power to the battery charger, if equipped.
 - 1.3 Disconnect the generator set engine starting battery, negative (-) lead first.
 - 1.4 Remove the generator set enclosure door and roof to gain full access to the engine air cleaner.

- 2. Remove the air cleaner assembly. See Figure 1.**
 - 2.1 Loosen the air cleaner cover retaining knob and remove the cover.
 - 2.2 Remove the wing nut and the element cover.
 - 2.3 Remove the air cleaner element and foam precleaner.
 - 2.4 Remove the four screws that attach the air cleaner bracket and base to the carburetor assembly. Remove the bracket and base.

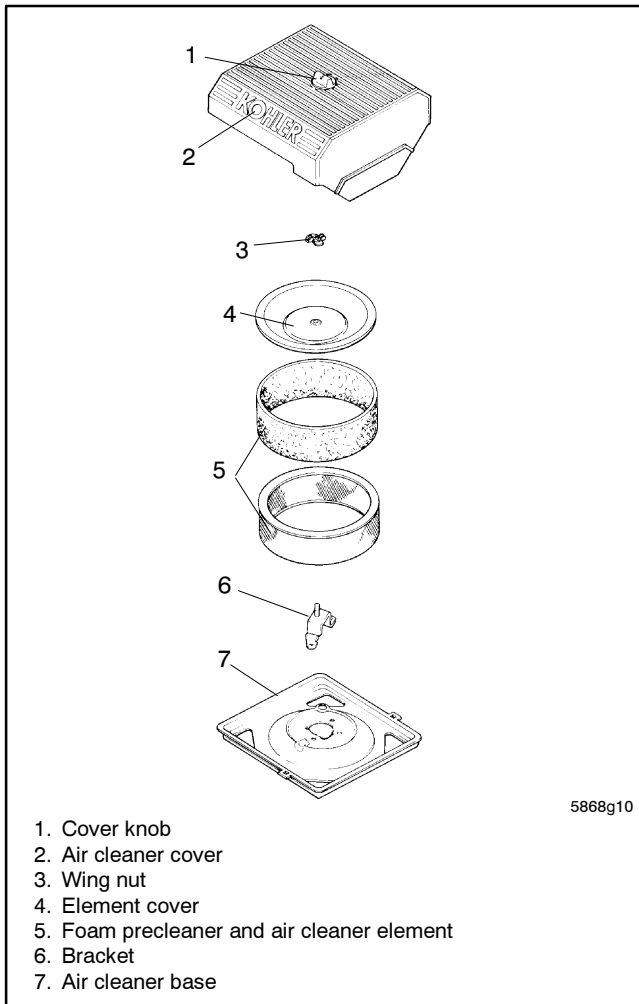


Figure 1 Air Cleaner Components

3. Prepare to install the heater.

- 3.1 Remove and discard the air cleaner spacer and two gaskets. See Figure 2.
- 3.2 Remove the rubber crankcase breather hose. Save the clamp to reuse later. See Figure 2.
- 3.3 Apply a bead of RTV sealant just below the top flanges of the two blower housing covers, 24 096 17, and install them in the blower housing openings. See Figure 3.

Note: If you plan to operate the unit at or near full load during the summer and expect the ambient temperatures to exceed 100°F (38°C), remove the blower housing covers. Reinstall the covers in cold weather.

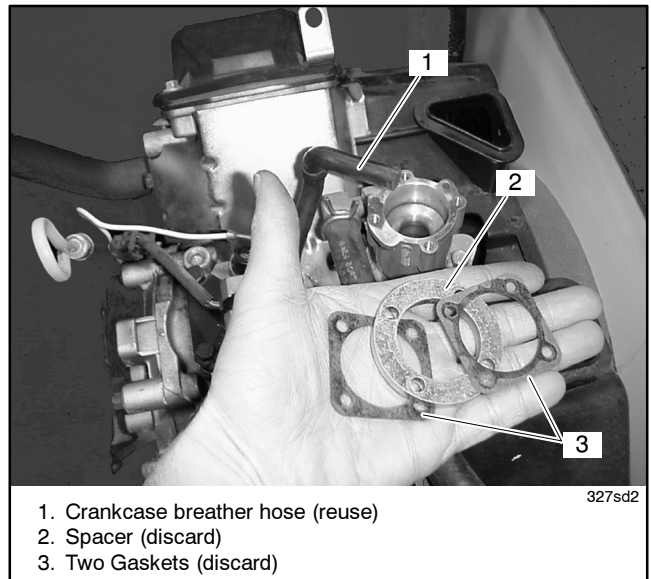


Figure 2 Crankcase Breather Hose, Air Cleaner Spacer, and Gaskets



Figure 3 Blower Housing Openings

4. Assemble the heater parts.

- 4.1 Apply RTV sealant to the end of the copper breather tube, GM19464 (included in the kit), and insert it into the drilled hole in the heater, GM19463. See Figure 4. Press the breather tube approximately 0.4 inches into the heater plate so that the end of the breather tube is flush with the inside diameter but does not extend into the large opening of the heater.
- 4.2 Place the heater on the carburetor without a gasket and adjust the angle of the breather tube to line up with the breather nipple on the engine crankcase. See Figure 5.
- 4.3 Install the insulation, GM19465, over the breather tube. See Figure 6.

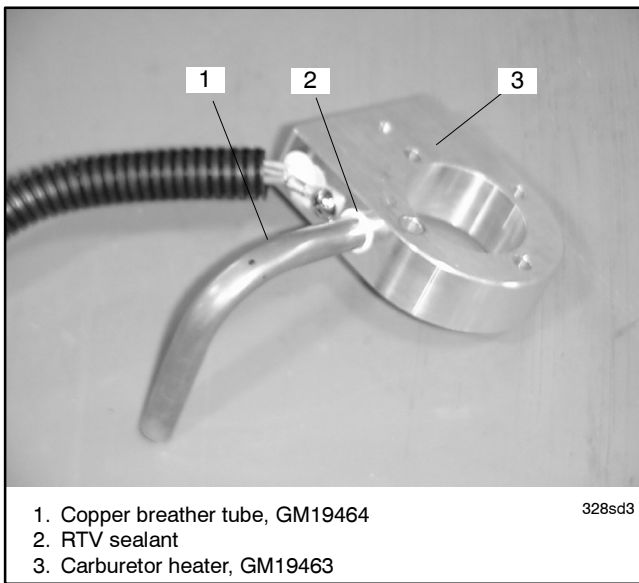


Figure 4 Heater with Copper Breather Tube

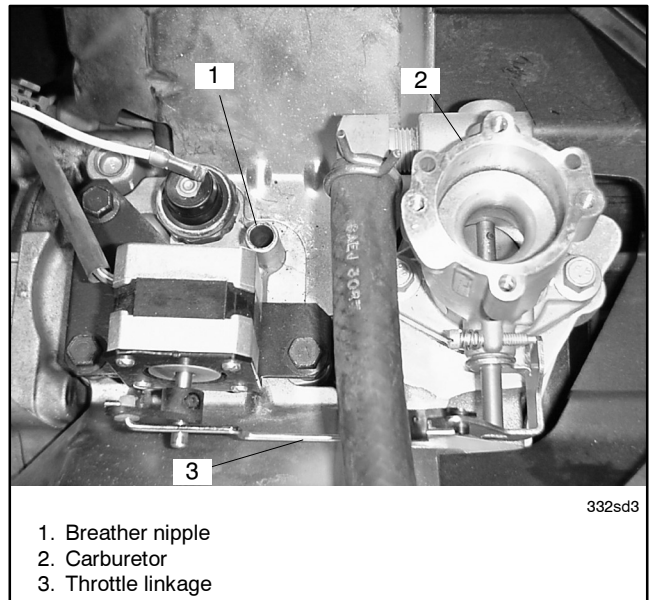


Figure 5 Engine Crankcase Breather Nipple

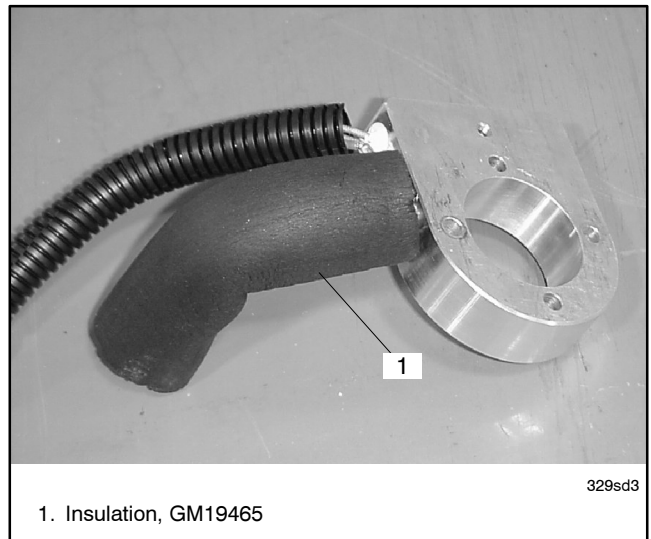


Figure 6 Breather Tube Insulation

- 4.4 Cut off the rubber breather hose two inches from the engine end. See Figure 7.
- 4.5 Slide the clamp removed in step 3.2 onto the 2-inch section of hose.
- 4.6 Slip the 2-inch length of breather hose onto the end of the breather tube. Insert the breather tube into the small end of the hose until the end of the breather tube reaches the expanded diameter of the hose. See Figure 8.

5. Install the heater.

- 5.1 Apply a thin layer of RTV to both sealing surfaces of the heater. See Figure 9.

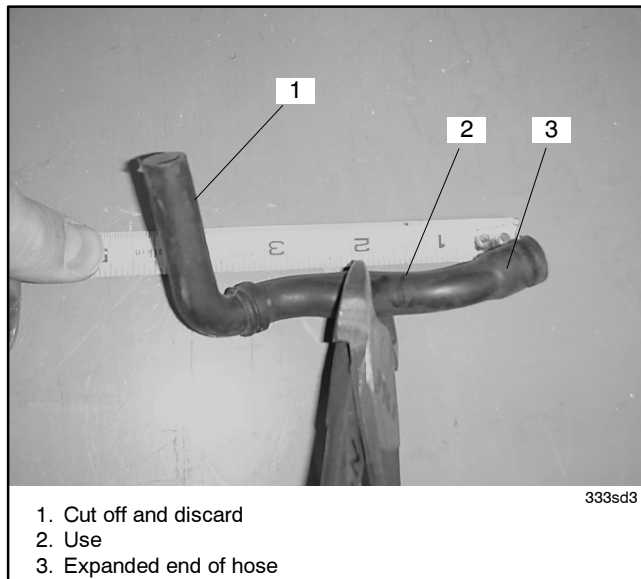


Figure 7 Cutting Off the Rubber Breather Hose

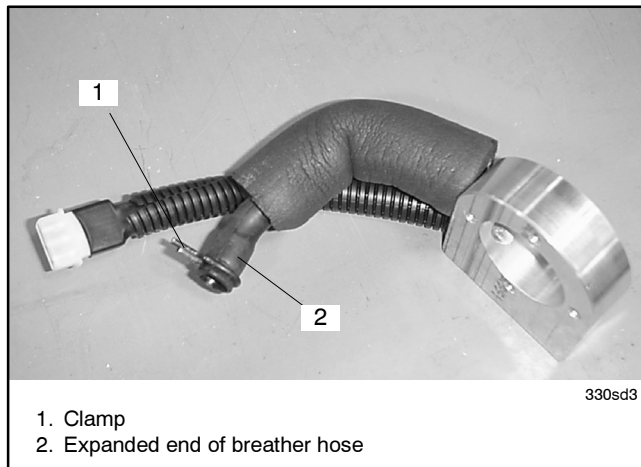


Figure 8 Breather Hose and Clamp

- 5.2 Place the heater on the carburetor. Do not use a gasket. Route the power cord along the fuel line. See Figure 10.

Note: Use cable ties to attach the heater power cord to the fuel line. Make sure that the power cord does not interfere with the free operation of the throttle linkage. See Figure 10.

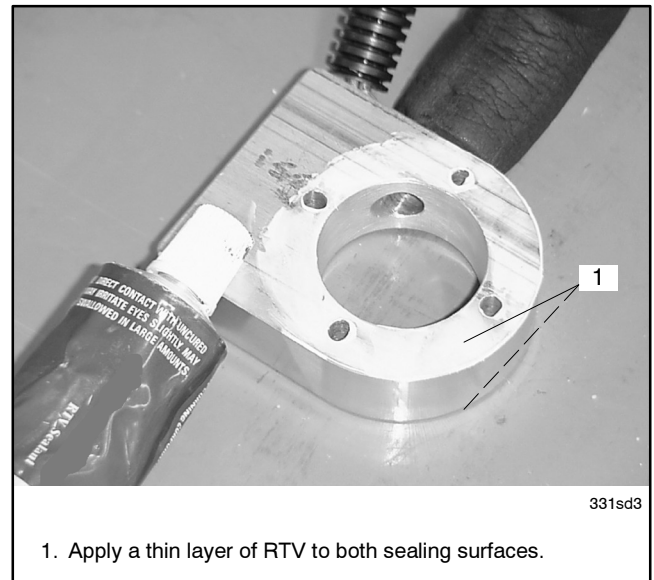


Figure 9 RTV Sealant

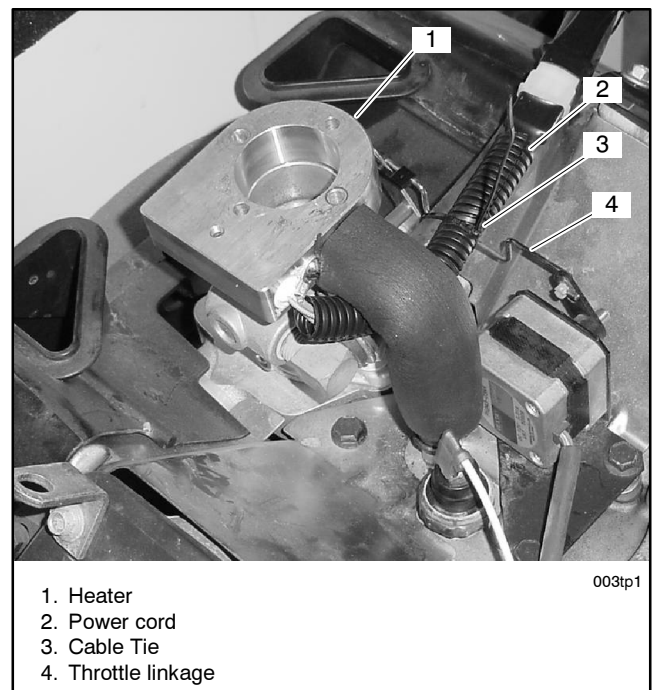


Figure 10 Heater Location

5.3 Use the clamp removed in step 3.2 to attach the breather tube to the breather nipple on the engine crankcase. See Figure 11.

6. Reinstall the air cleaner.

6.1 Plug the breather access hole in the air cleaner base plate with plug X-301-23. Insert the plug from the bottom of the base plate. See Figure 12.

6.2 Place the air cleaner base on the heater and align the screw holes.

6.3 Place the air cleaner bracket on the air cleaner base. Attach the air cleaner base, bracket, and heater to the carburetor using the four M5 x 30 mm screws, M933-05030-60. See Figure 13.

6.4 Reinstall the air cleaner element and covers. See Figure 1.



Figure 11 Breather Hose Clamp

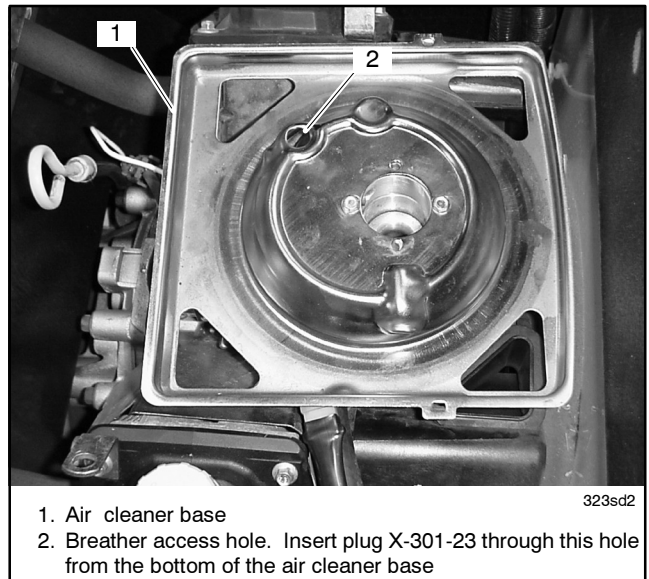


Figure 12 Air Cleaner Base

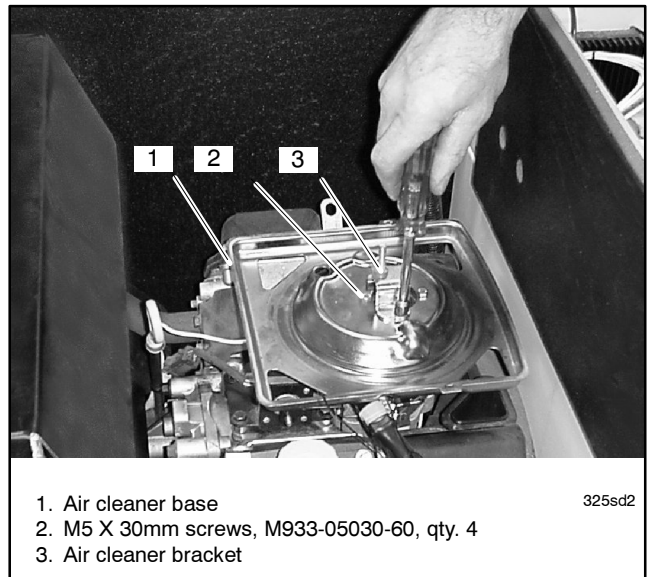


Figure 13 Air Cleaner Bracket and Screws

7. Route the heater power cord and thermostat.

- 7.1 Route the power cord along the fuel line and down through the opening into the air intake area/battery compartment. See Figure 14.
- 7.2 Place the heater thermostat, which is located near the end of the power cord, in the generator set housing air intake area/battery compartment. See Figure 15.

Note: Do not locate the heater thermostat inside the generator set engine compartment. The thermostat must be exposed to the ambient air. The thermostat will shut off power to the heater when the ambient temperature reaches approximately 60°F (16°C).

- 7.3 Plug the carburetor heater into an outlet that has continuous 120 volt power.

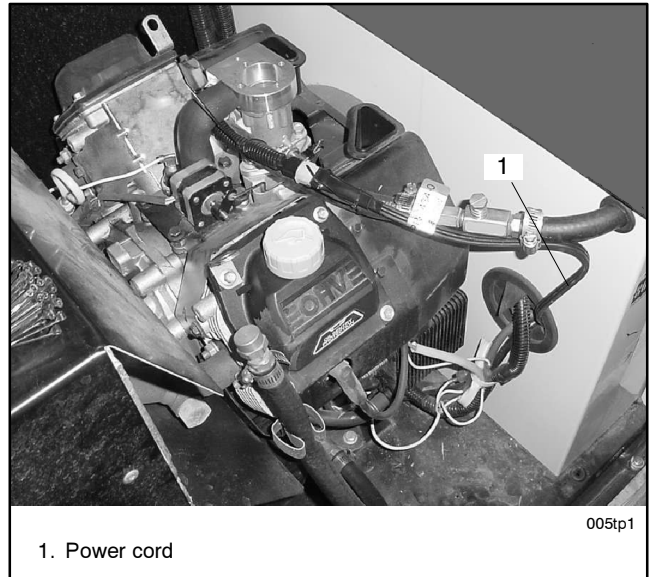


Figure 14 Routing the Power Cord

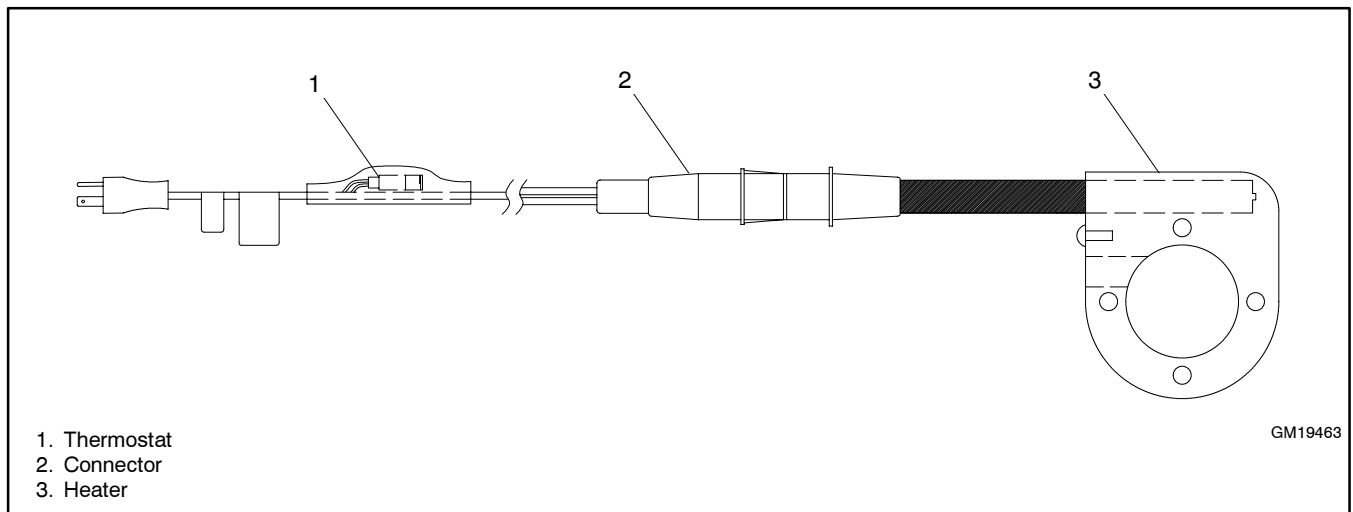


Figure 15 Heater with Thermostat

8. Restore the generator set to service.

- 8.1 Check that the generator set master switch is in the OFF position.
- 8.2 Reconnect the generator set engine starting battery, negative (-) lead last.
- 8.3 Reconnect power to the battery charger, if equipped.

Parts List

Carburetor Heater Kit

Kit: GM19462-KP1		
Qty.	Description	Part Number
1	Carburetor heater, 120V	GM19463
1	Tube, breather	GM19464
1	Insulation, breather line	GM19465
2	Cover, blower housing	24 096 17
1	Plug, button	X-301-23
4	Screw, hex cap	M933-05030-60

