PARTS BULLETIN

Original Issue Date: **11/13**
Model: **38RCL and 48RCL Generator Sets**
Market: **Residential/Light Commercial**
Subject: **Radiator GM79552 Replacement**

Introduction

The design of radiator GM79552 has been updated. The updated radiator is taller than the original design.

Generator sets built as of August 1, 2013, are designed to accommodate both radiator designs.

If replacing the radiator on a 38RCL or 48RCL generator set built before August 1, 2013, the installer will need to modify a mounting bracket (part number GM82973).

Following the procedure described in this bulletin to modify the mounting bracket.

Special Equipment

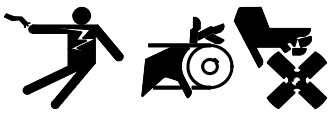
The following items are necessary.

- Drill
- 11/32 inch drill bit

Safety Precautions

Observe the following safety precautions while performing this procedure.

⚠ 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.

⚠ WARNING

Hot coolant and steam.
Can cause severe injury or death.

Before removing the pressure cap, stop the generator set and allow it to cool. Then loosen the pressure cap to relieve pressure.

⚠ WARNING

Handling caustic engine fluids and chemical products.
Can cause severe chemical burns, nausea, fainting, or death.

Most chemicals such as used engine oil, antifreeze/coolant, rustproofing agent, inhibiting oil, degreasing agent, spray paint, and adhesives are hazardous to health. Read and follow the user information found on the packaging. Avoid inhalation and skin contact. Use only in well-ventilated areas and use a protective mask when spraying. Store engine fluids and chemical products in a locked cabinet. Contact your local recycling center for disposal information and locations.

Procedure

1. Remove the generator set from service.

1.1 Press the OFF button on the RDC2 generator set controller.

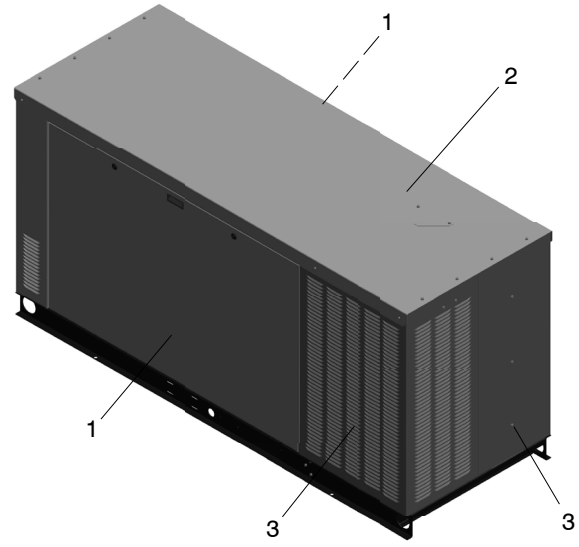
1.2 Disconnect utility power to the generator set by opening the circuit breaker at the distribution panel.

1.3 Disconnect the battery, negative (–) lead first.

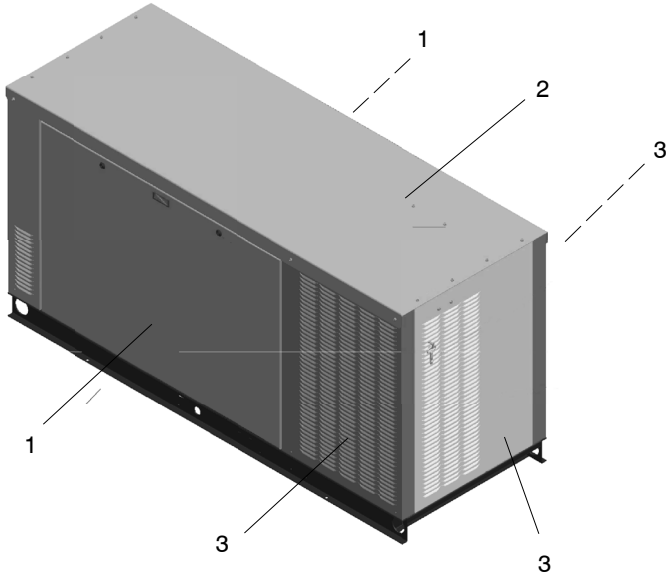
2. Remove enclosure panels.

2.1 Use the latch opening tool to unlock the doors.

2.2 Remove doors, roof, and side and/or end panels as necessary to access the radiator. See Figure 1.



Enclosure GM82895–MA1



Enclosure GM85089-MA1

1. Remove doors
2. Remove roof
3. Remove end panels

Figure 1 Enclosure

3. Drain the cooling system.

Use an appropriate container to catch the coolant. Coolant capacity is 4–5 gallons. See Figure 5.

Note: Disconnect power to the block heater, if equipped, before draining the cooling system.

3.1 Allow the engine to cool. Release pressure from the cooling system before removing the pressure cap. To release pressure, cover the pressure cap with a thick cloth and then slowly turn the cap counterclockwise to the first stop.

3.2 Remove the cap after pressure has been completely released and the engine has cooled.

3.3 Place a container under the drain valve. Open the drain valve at the bottom of the radiator.

3.4 Wait for the coolant to drain.

3.5 Dispose of used coolant in a safe manner. Contact your local recycling center for disposal information and locations.

4. Remove the old radiator.

4.1 See Figure 2 for component locations.

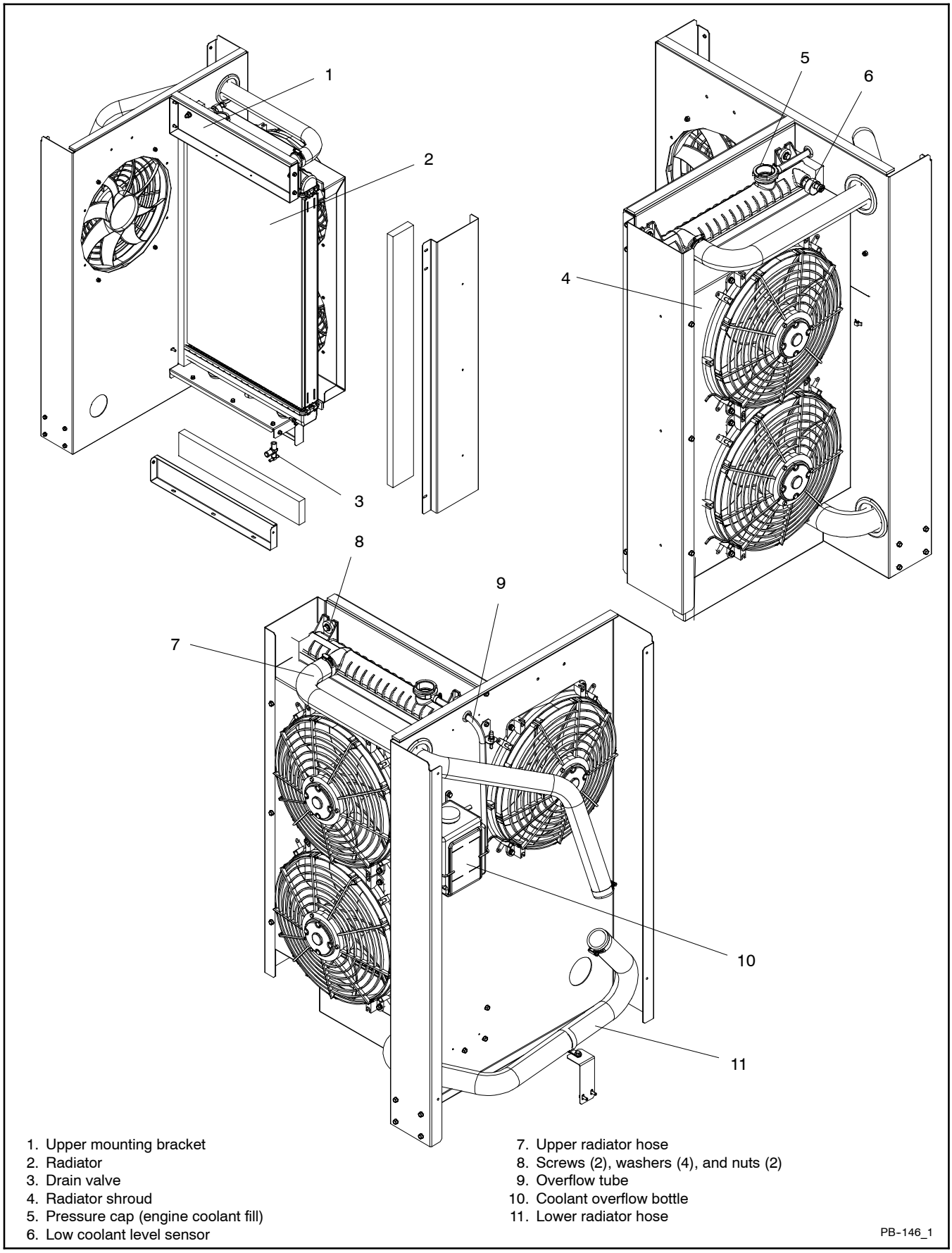
4.2 Remove the coolant level sensor. Save for reinstallation onto the new radiator.

4.3 Disconnect radiator hoses and overflow tube.

4.4 Remove two M931-08040-60 screws, washers, and nuts from the upper mounting bracket. Save for reinstallation.

4.5 Remove the radiator.

4.6 Remove the coolant drain valve from the bottom of the radiator. Save for reinstallation onto the new radiator.



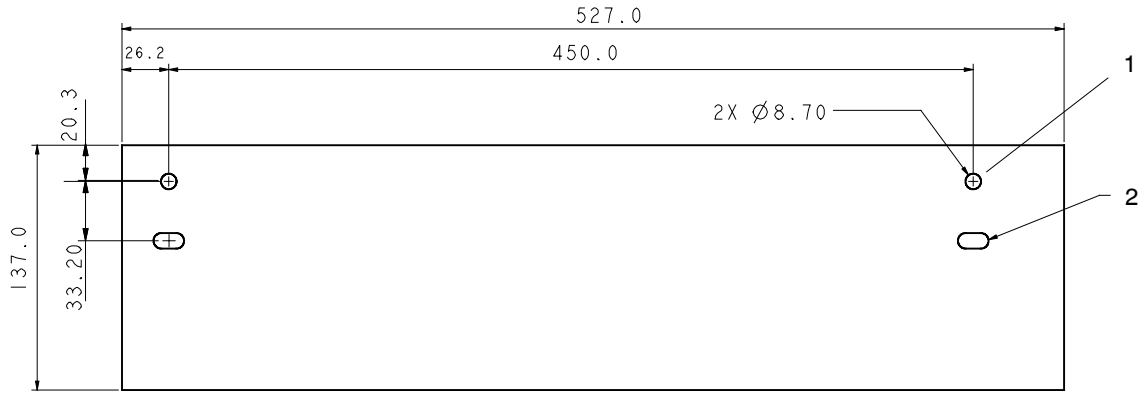
1. Upper mounting bracket
2. Radiator
3. Drain valve
4. Radiator shroud
5. Pressure cap (engine coolant fill)
6. Low coolant level sensor
7. Upper radiator hose
8. Screws (2), washers (4), and nuts (2)
9. Overflow tube
10. Coolant overflow bottle
11. Lower radiator hose

Figure 2 Cooling System (Some items moved or removed for clarity)

5. Prepare upper mounting bracket for new radiator (only for units manufactured before August 2013.)

5.1 See Figure 3. Drill two 8.7 mm (11/32 in.) holes 33.2 mm (1.3 in.) above the existing holes in the upper mounting bracket.

5.2 Alternately, drill holes after positioning new radiator into the shroud.



Note: Dimensions are in mm.
25.4 mm = 1 inch

GM82973
GM89490

1. Drill two 8.7 mm (11/32 in.) holes as shown
2. Existing holes

Figure 3 New Mounting Holes, Upper Mounting Bracket GM82973

6. Install the new radiator.

6.1 Install the coolant drain valve into the new radiator.

6.2 Position the new radiator into the shroud.

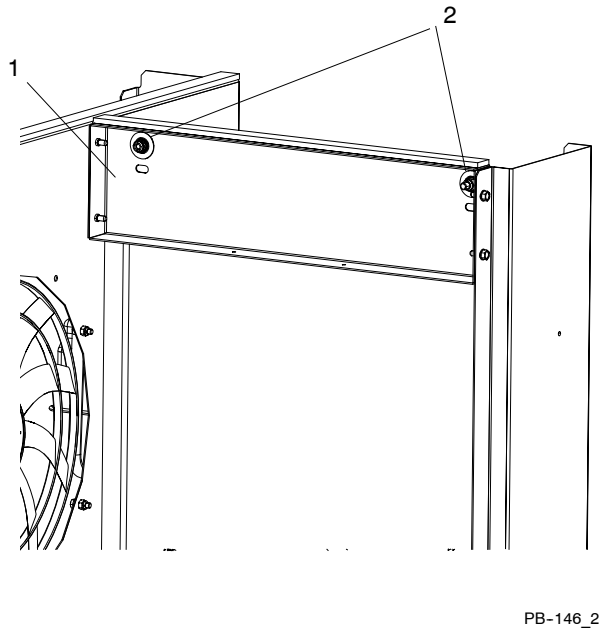
6.3 If not completed in step 5.1, drill two 8.7 mm (11/32 in.) holes in the upper mounting bracket using the radiator mounting holes as a guide.

6.4 Align mounting screws with new mounting holes in the upper bracket.

6.5 Use existing mounting hardware to secure the radiator. Place one washer on the radiator mount and one washer on the opposite side of the bracket. Tighten the screws to 23 Nm (17 ft. lb.). See Figure 4.

6.6 Apply pipe sealant to threads of the coolant level sensor and install into the new radiator.

6.7 Connect radiator hoses and overflow tube.



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1. Upper mounting bracket
2. Place one washer on radiator mount and one on opposite side of bracket. (2 places)

Figure 4 Radiator Mounting

7. Return the generator set to service.

7.1 Reconnect the battery, negative (-) lead last.

7.2 Reconnect utility power to the generator set by closing the circuit breaker at the distribution panel.

8. Fill cooling system.

8.1 Close the radiator's coolant drain valve and tighten the hose clamps.

Note: Do not add coolant to a hot engine. Adding coolant to a hot engine can cause the cylinder block or cylinder head to crack. Wait until the engine has cooled.

8.2 Fill the radiator with a mixture of 50% long life type coolant and 50% clean, softened water to inhibit rust/corrosion and prevent freezing. See Figure 5 for coolant capacity and Figure 2 for coolant fill location. Do not replace the pressure cap at this time.

Note: A solution of 50% long life coolant provides freezing protection to -37 deg. C (-34 deg. F) and overheating protections to 149 deg. C (300 deg. F). A coolant solution with less than 50% long life coolant may not provide adequate freezing and overheating protection. Do not mix long life coolants and conventional coolants. **Do not mix different types and/or colors of long life coolants.**

8.3 Check for leaks.

8.4 Check the oil level before operating the engine.

8.5 Operate the engine with the radiator's pressure cap removed until the thermostat opens and the radiator upper hose becomes hot. Check for leaks during operation.

8.6 Stop the engine and allow it to cool.

8.7 Add coolant to the radiator to just below the overflow tube on the filler neck. See Figure 2 for the coolant overflow bottle location.

8.8 Replace the radiator's pressure cap.

8.9 Maintain the coolant level in the coolant overflow bottle between the High and Low markings. See Figure 2

Note: Block Heater Damage. The block heater will fail if the energized heater element is not immersed in coolant. Fill the cooling system before turning on the block heater. Run the engine until it is warm, and refill the radiator to purge the air from the system before energizing the block heater.

	Coolant Capacity, L (Gal.)	
Model	**Engine**	**Engine with Block Heater**
38RCL	15 (4.0)	17 (4.5)
48RCL	17 (4.5)	19 (5.0)

Figure 5 Coolant Capacity

9. Press Auto on the generator set controller.

10. Reinstall enclosure panels.

11. Lock the enclosure doors to prevent unauthorized access.

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