



**Engine Block Heater Kits (Tank-Type) 80-100ROZJ
6359T and 6059T
(John Deere-Powered Standby Generator Sets)**

Model	Voltage	Kit No.
80-100ROZJ	120	PA-275585
80-100ROZJ	240	PA-275590

The engine block heater kit is used to heat engine coolant, making starting easier and warm-up quicker. The thermostat will automatically turn off when coolant temperature reaches 120°F (49°C).

⚠ WARNING

	
Hazardous voltage.	Moving rotor.

Can cause severe injury or death.

Do not operate generator set without all guards and electrical enclosures in place.

Hazardous voltage can cause severe injury or death. Engine block heater can cause electrical shock. Remove engine block heater plug from electrical outlet before working on block heater electrical connections.

NOTE

Block heater will fail if not immersed in water. Always unplug block heater(s) before draining coolant and fill engine block with coolant prior to plugging in block heater(s). Block heater element **MUST** be immersed in engine coolant before being energized.




⚠ WARNING
Accidental starting.
Can cause severe injury or death.

Disconnect battery cables before working on generator set (negative lead first and reconnect it last).

Accidental starting can cause severe injury or death. Turn Generator Master Switch to OFF position, disconnect power to battery charger, and remove battery cables (remove negative lead first and reconnect it last) to disable generator set before working on any equipment connected to generator. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.

⚠ WARNING



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

Before removing pressure cap stop generator, allow to cool and loosen pressure cap to relieve pressure.

Hot coolant can cause severe injury or death. Allow engine to cool and release pressure from cooling system before opening pressure cap. To release pressure, cover the pressure cap with a thick cloth then turn it slowly counterclockwise to the first stop. After pressure has been completely released and the engine has cooled, remove cap. If generator set is equipped with a coolant recovery tank, check coolant level at tank.

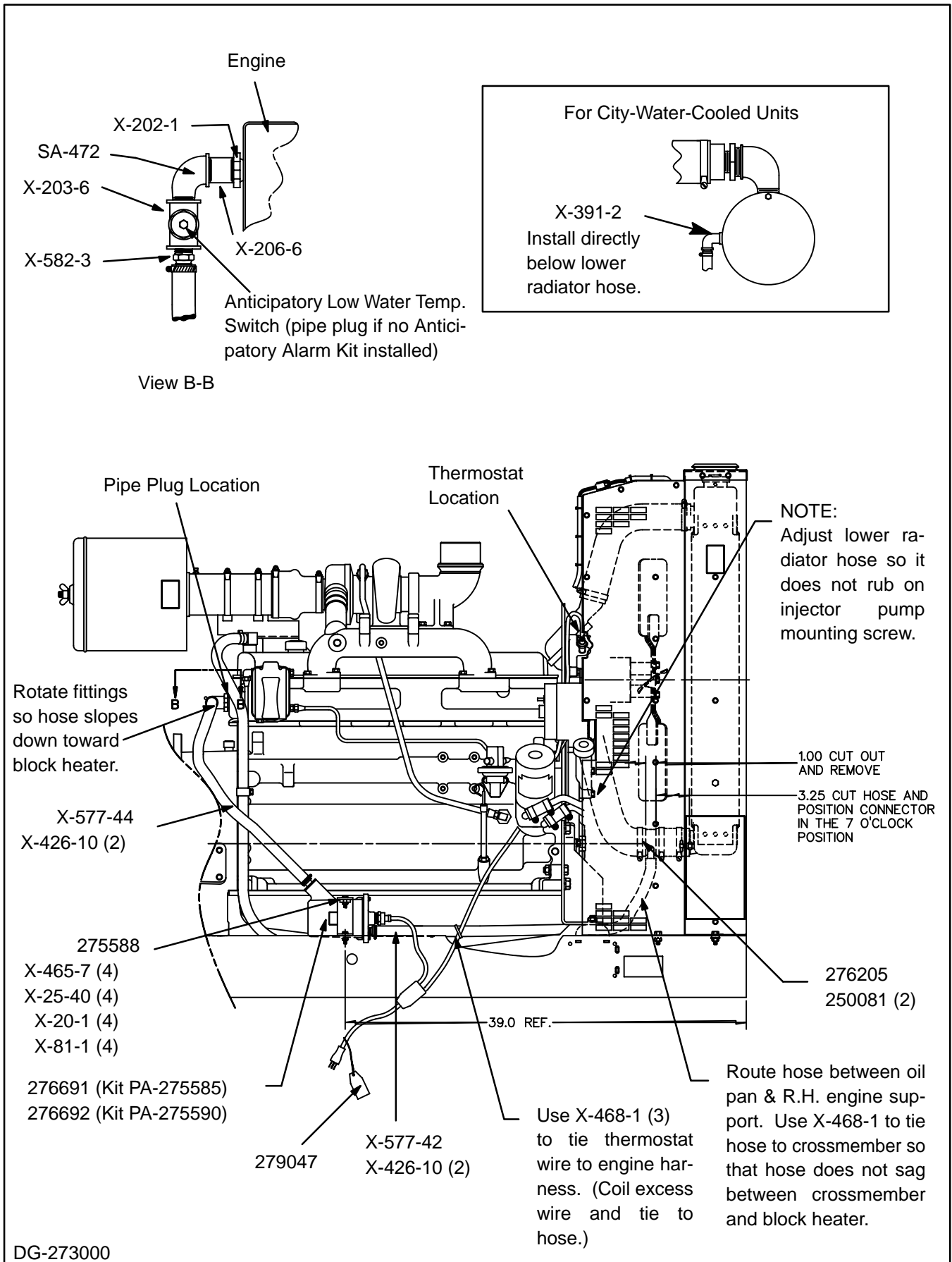


Figure 1. Block Heater Installation (Tank-Type).

Installation

1. Move the controller master switch to the OFF position. Disconnect the generator set battery, negative lead first.

NOTE

The drain valve is located on the radiator bottom and/or the side of the engine crankcase.

2. Unplug the heater. With the generator set sufficiently cooled, drain the coolant into a suitable container. Dispose of used engine coolant in an environmentally safe manner. Take used coolant to a suitable collection facility. Do not pour used coolant on the ground, down sewers, or into streams or other bodies of water.
3. Remove the pipe plug from the engine water jacket near the starter. Clean hole and remove all burrs. See Figure 1, View B-B for location. Older units might have a High Water Temp. Sender instead of a pipe plug. Remove and save it—it will be reused.

NOTE

Apply pipe sealant to male the threads of all components when assembling.

4. Install 3/4 in. reducer bushing X-202-1, pipe nipple X-206-6, elbow SA-472, pipe tee X-203-6, and hose connector X-582-3. See Figure 1, View B-B.

NOTE

Rotate the fittings so the hose slopes down toward the block heater.

5. If the High Water Temp. Sender was removed in step 3, it must now be relocated to the position indicated in Figure 2. Replace the plug and O-ring near the starter with 273692 tapped plug and 273693 O-ring, and then install the High Water Temp. Sender into the plug.
6. Some units might require rewiring of the engine wiring harness. Figure 3 shows the required wiring. If necessary, modify the engine wiring harness using the diagram and the lead information in Figure 3. Refer to the wiring diagrams in the generator service literature as needed.
7. Locate hose clamp X-426-10 1/4 in. (6 mm) from end of hose X-577-44 and tighten it to the hose connector mentioned in step 4.
8. Attach mounting bracket 275588 to the skid using the supplied mounting hardware.

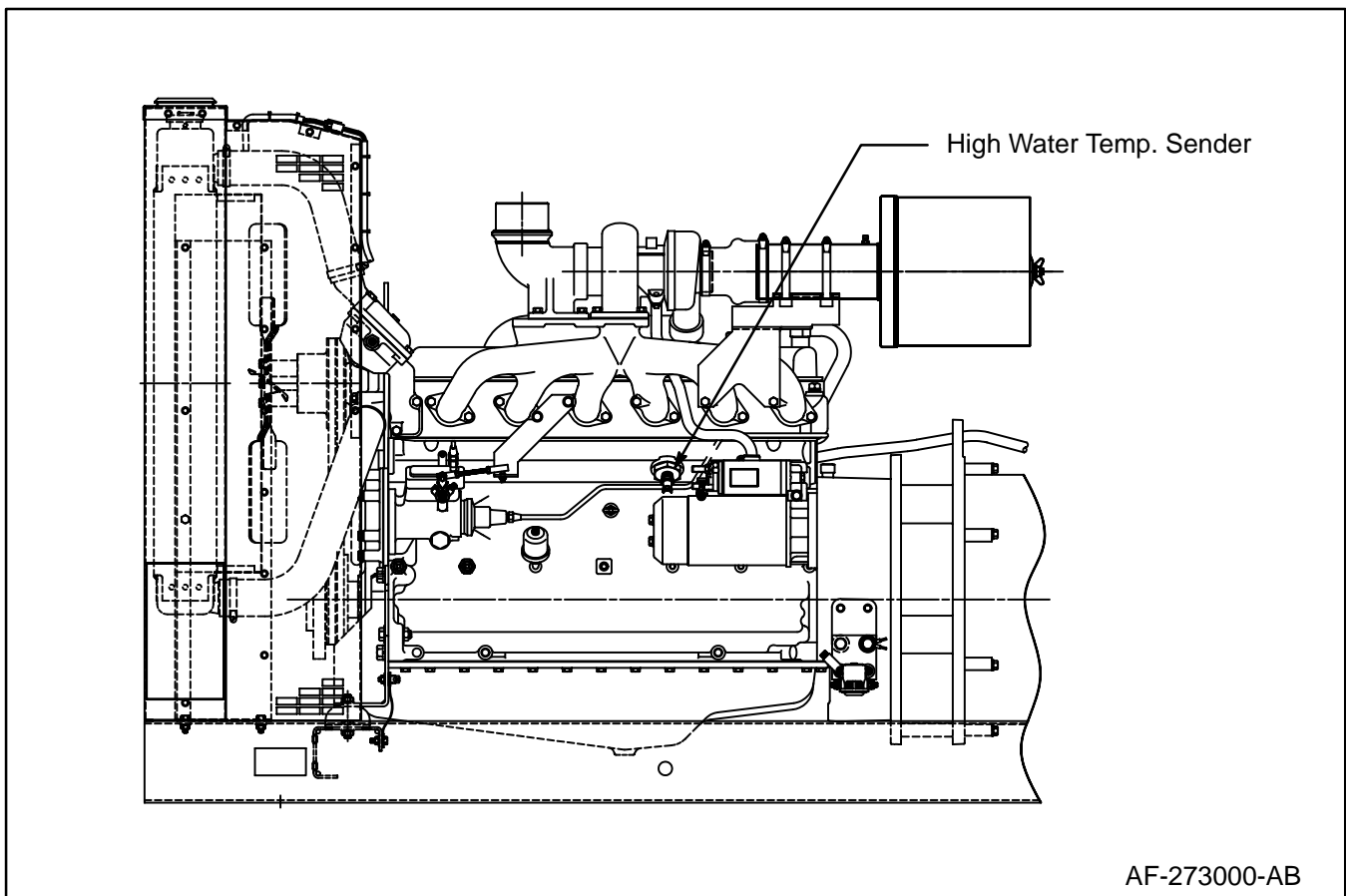


Figure 2. High Water Temp. Sender Relocation.

AF-273000-AB

9. Install the block heater (276691 or 276692) to the mounting bracket. Locate hose clamp X-426-10 1/4 in. (6 mm) from the end of hose X-577-44 and tighten it to the block heater outlet.
10. Connect hose X-577-42 to the block heater inlet with hose clamp X-426-10. Locate hose clamp 1/4 in. (6 mm) from the end of the hose. Route the hose between the oil pan and the R.H. engine support.

NOTE

If installing the block heater kit on a city-water-cooled unit, omit steps 11 and 12 and proceed to step 13.

11. Locate the lower radiator hose and mark it 3.25 in. (82 mm) and 4.25 in. (107 mm) from the radiator outlet. Cut at these marks to remove 1 in. (25 mm).

12. Place one 250081 large hose clamp on each end of the cut hose. Install hose connector 276205 and position it in the 7 o'clock position as viewed from the radiator end. Locate hose clamp X-426-10 1/4 in. (6 mm) from the end of the hose (X-577-42) and tighten it to the nipple on the hose connector.

13. If installing the block heater kit on a city-water-cooled unit: Install hose connector X-391-2 directly below the lower radiator hose in the heat exchanger as shown in Figure 1. Locate hose clamp X-426-10 1/4 in. (6 mm) from the end of hose X-577-42 and tighten it to the hose connector. (Items 276205, hose connector, and 250081, hose clamps, will not be used.)

14. Use an X-468-1 cable tie to tie the hose to the crossmember so that no point in the hose is lower than the point where the hose joins the block heater.

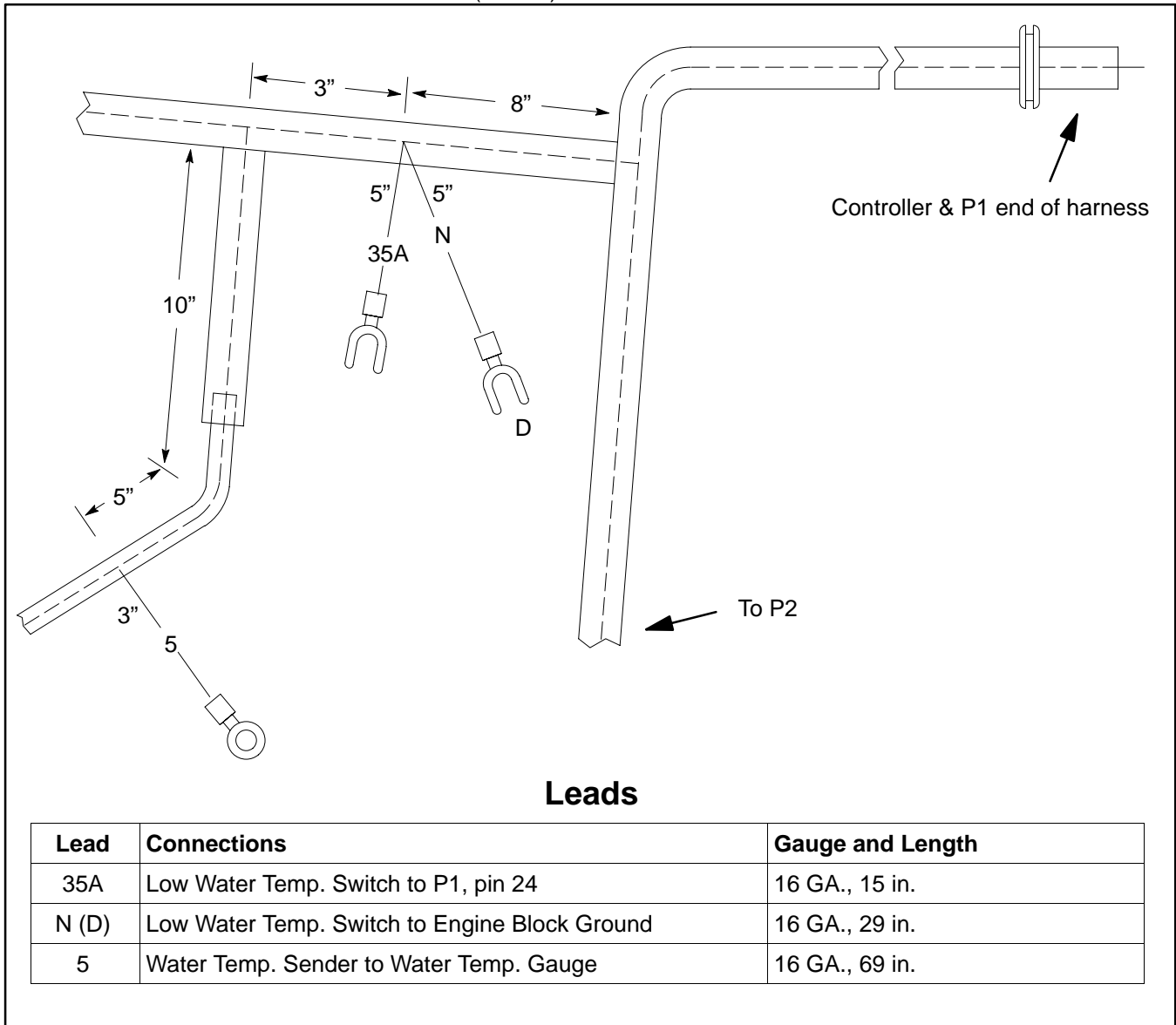


Figure 3. Wiring Harness Configuration and Lead Information.

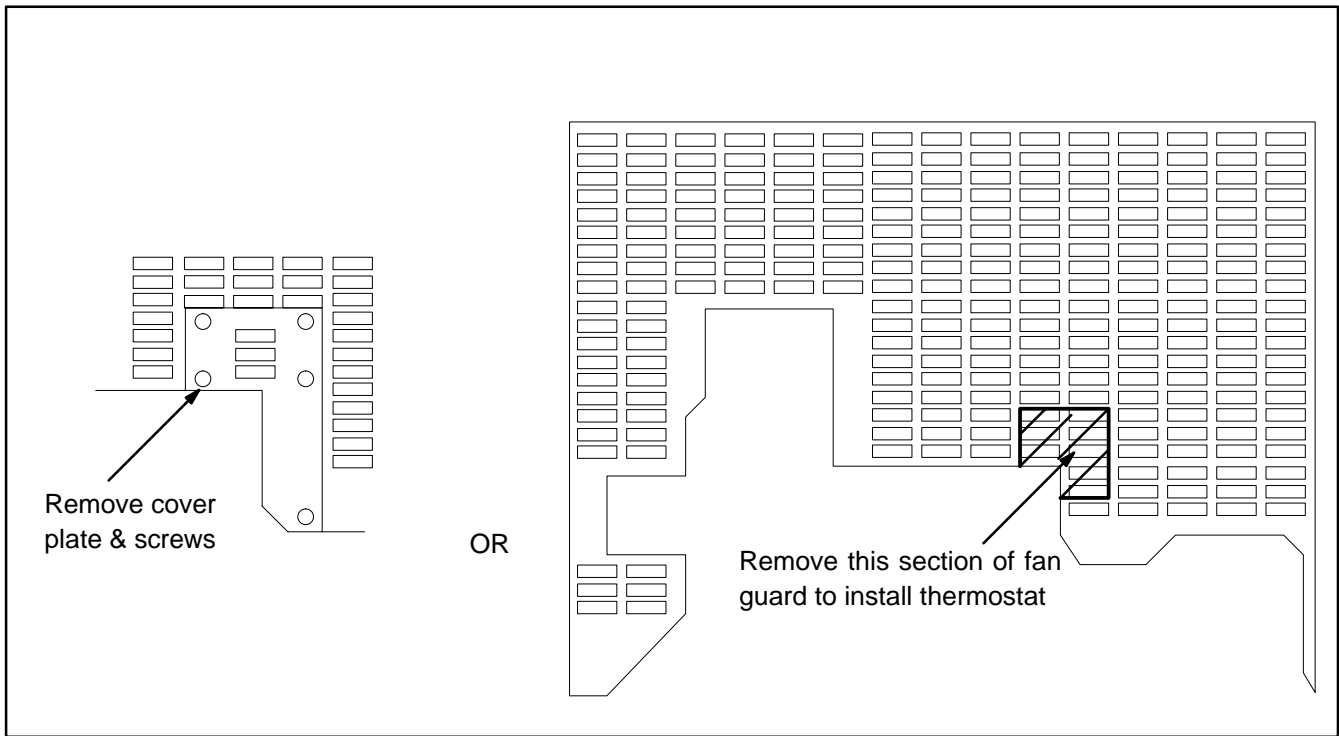


Figure 4. Top Fan Guard.

15. Remove cover plate 276693 and screws X-794-1 (qty. 5) and discard them. If the top fan guard does not have the cover plate then it must be trimmed to accommodate the thermostat's new location. See Figure 4.
16. Position the thermostat at the location shown in Figure 1 by removing the existing plug.
17. Use an X-468-1 cable tie to tie the thermostat wire to the engine harness (Coil excess wire and tie to hose.)

NOTE

Adjust the lower radiator hose so it does not rub on the injector pump mounting screw.

18. Use cable ties, as necessary, to protect and secure the wiring from sharp objects, the exhaust system, and any moving parts.
19. Close all petcock valves on the radiator and/or the engine block.

20. Fill the cooling system to the proper level with fresh coolant. A solution of 50% ethylene glycol and 50% clean, softened water is recommended to inhibit rust/corrosion and provide freezing protection. See Figure 5 for coolant capacities.

Model	Standard Radiator	Remote Radiator	City Water Cooled
80ROZJ	5.5 (20.4)	9.8 (37.1)	4.05 (15.3)
100ROZJ	5.5 (20.4)	9.8 (37.1)	4.05 (15.3)

NOTE: Capacities shown may vary from model to model and are subject to change.

Figure 5. Coolant Capacities, U.S. Gal. (L)

NOTE

Coolant mixtures exceeding 50% ethylene glycol may cause block heater element failure.

21. Check that the controller master switch is in the OFF position. Reconnect the battery, negative lead last.
22. Test run the generator set for a few minutes and check for leaks. Stop generator set. After the set has cooled check coolant level.
23. Connect the block heater electrical plug to the proper voltage outlet. Tie hang tag 279047 to the electrical cord coming from the block heater.

NOTE

Special attention should be given when checking for the proper coolant level. After a radiator has been drained, it normally requires some time before complete refill of all air cavities takes place.

Parts List				
Qty.	Description	Common Parts	Unique Parts (by Kit Number)	
			PA-275585	PA-275590
4	Washer, Lock 1/4 in.	X-20-1		
1	Bushing, Reducer 3/4 x 1 in.	X-202-1		
4	Washer, Plain 9/32 x 5/8 x .05 in.	X-25-40		
4	Clamp, Hose (max. range 1.00 in.)	X-426-10		
4	Screw, H.C.	X-465-7		
1	Hose, 27 in.	X-577-44		
1	Connector, Hose	X-582-3		
4	Nut, Hex. 1/4-20	X-81-1		
2	Clamp, Hose (max. range 3.00)	250081		
1	Bracket, Mounting	275588		
1	Connector, Hose	276205		
1	Heater, Block		276691	276692
1	Tag, Hang	279047		
1	Nipple, Pipe 3/4 x 3-1/2 in.	X-206-6		
1	Elbow	SA-472		
1	Tee, Pipe 3/4 x 3/4 x 1/2 in.	X-203-6		
4	Tie, Cable	X-468-1		
1	Hose 40 in.	X-577-42		
1	Connector, Hose	X-391-2		
1	Terminal	X-283-3		
1	Plug, 1-5/8–12 class 2A str. thd., 1/2–14 NPT tap	273692		
1	O–ring, 1.475 ID x 0.118 in. rubber	273693		

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