



Engine Block Heater Service Kits (Tank-Type) 20-60ROZJ 4239D, 4239T, 4039D, and 4039T (John Deere-Powered Standby Generator Sets)

Model	Voltage	Kit No.
20-60ROZJ	120	276507
20-60ROZJ	240	276508

This service kit details removal of the immersion type block heater (or earlier version tank-type block heater) and installation of a new tank type block heater kit.

The engine block heater kit (tank-type) 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).

CAUTION

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 death or serious personal injury. 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 can cause severe burns.

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.

NOTE

The following installation instructions describe two different methods for removing existing block heater (immersion-type vs. earlier version tank-type) and installing new tank type block heater. Be sure to follow appropriate instructions for whichever style block heater is being removed.

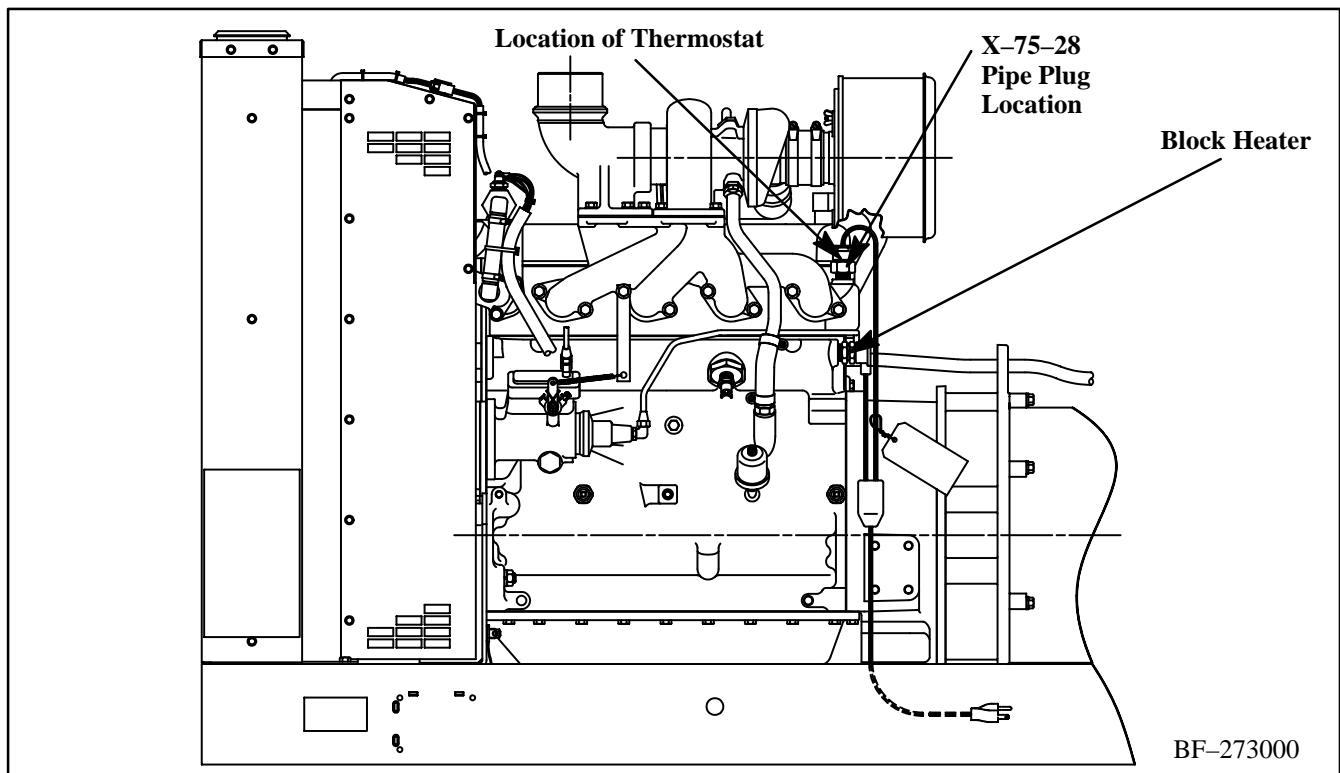


Figure 1. Block Heater Kit Removal (Immersion Type)

Installation (Removal of Immersion-Type Block Heater)

1. Move controller master switch to OFF position. Disconnect battery of generator set, negative lead first. Disconnect power from existing block heater.
2. With 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 in your area. Do not pour used coolant on the ground, down sewers, or into streams and other bodies of water.**

NOTE

Drain valve is located on radiator bottom and/or side of engine crankcase.

3. Remove electrical connections to block heater and thermostat. Discard electrical connections. These parts will not be reused. See Figure 1.

4. Remove thermostat and discard. These parts will not be reused. Clean threads on engine and apply pipe sealant to 1/2 inch pipe plug (X-75-28) and install into block. See Figure 1.

NOTE

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

5. Remove block heater from engine block and discard. These items will not be reused. Install 3/4 inch reducer bushing (X-202-1), pipe nipple (X-206-4), elbow (X-215-2), and hose connector (X-582-3). See Figure 2, view A-A.

NOTE

Rotate fittings so hose is directed toward block heater.

6. Locate hose clamp (X-426-10) 1/4 in. (6 mm) from end of hose (X-577-35) and tighten to hose connector mentioned in Step 5.
7. Attach mounting bracket (275583) to skid using mounting hardware supplied.

8. Install block heater (276691 or 276692) to mounting bracket. Locate hose clamp (X-426-10) 1/4 in. (6 mm) from end of hose (X-577-35) and tighten to block heater outlet.
9. Connect hose (X-577-44) to block heater inlet with hose clamp (X-426-10). Locate hose clamp 1/4 in. (6 mm) from end of hose. Route hose between oil pan and R.H. engine support.

NOTE

If installing block heater kit on a city water cooled unit, omit steps #10 and #11 and proceed to step #12.

10. Locate lower radiator hose and mark hose at 3 in. (76 mm) and 4 in. (102 mm) from radiator outlet. Cut at these marks to remove 1 in. (25 mm) from hose.
11. Place two large hose clamps (X-426-6) on cut radiator hose (one on each end). Install hose connector (275581) with nipple pointing downward. Locate hose clamp (X-426-10) 1/4 in. (6 mm) from end of hose (X-577-44) and tighten to nipple on hose connector.
12. Install hose connector (X-391-2) directly below lower radiator hose as shown in Figure 2. Locate hose clamp (X-426-10) 1/4 in (6 mm) from end of hose (X-577-44) and tighten to hose connector. (Items 275581 – Hose Connector and X-426-6 – Hose Clamps will not be used in this instance).
13. Use cable tie (X-468-1) to tie hose to crossmember so that hose does not sag between crossmember and block heater.
14. Position thermostat on other side of block at location shown in Figure 2 by removing existing plug in block. (NOTE: If by-pass hose is located in this position, use service kit #276577 to upfit.)
15. Route wire (from block heater to thermostat) along radiator hose. Tie with cable ties (X-468-4).

16. Use cable ties (X-468-1) to tie thermostat wire to block heater hose. (Coil excess wire and tie to hose).
17. Use cable ties, as necessary, to protect and secure wiring from sharp objects, exhaust system, and any moving parts.
18. Close petcock valves on radiator and/or engine block.
19. Fill cooling system to 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 Table 1 for coolant capacities.

NOTE

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

20. Check that the controller master switch is in the OFF position. Reconnect battery, negative lead last.

Model	Standard Radiator	Remote Radiator	City-Water Cooled
20ROZJ	5 (17.6)	9 (34.1)	3.25 (12.3)
30ROZJ	5 (17.6)	9 (34.1)	3.25 (12.3)
40ROZJ	5 (17.6)	9 (34.1)	3.25 (12.3)
50ROZJ	5 (17.6)	9 (34.1)	3.25 (12.3)
60ROZJ	5 (17.6)	9 (34.1)	3.25 (12.3)

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

Table 1. Coolant Capacities – U.S. Gal. (L)

NOTE

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

21. Test run generator set for a few minutes and check for leaks. Stop generator set and after set has cooled, check coolant level.
22. Connect block heater electrical plug to proper voltage outlet. Tie hang tag (279047) to electrical cord coming from block heater.

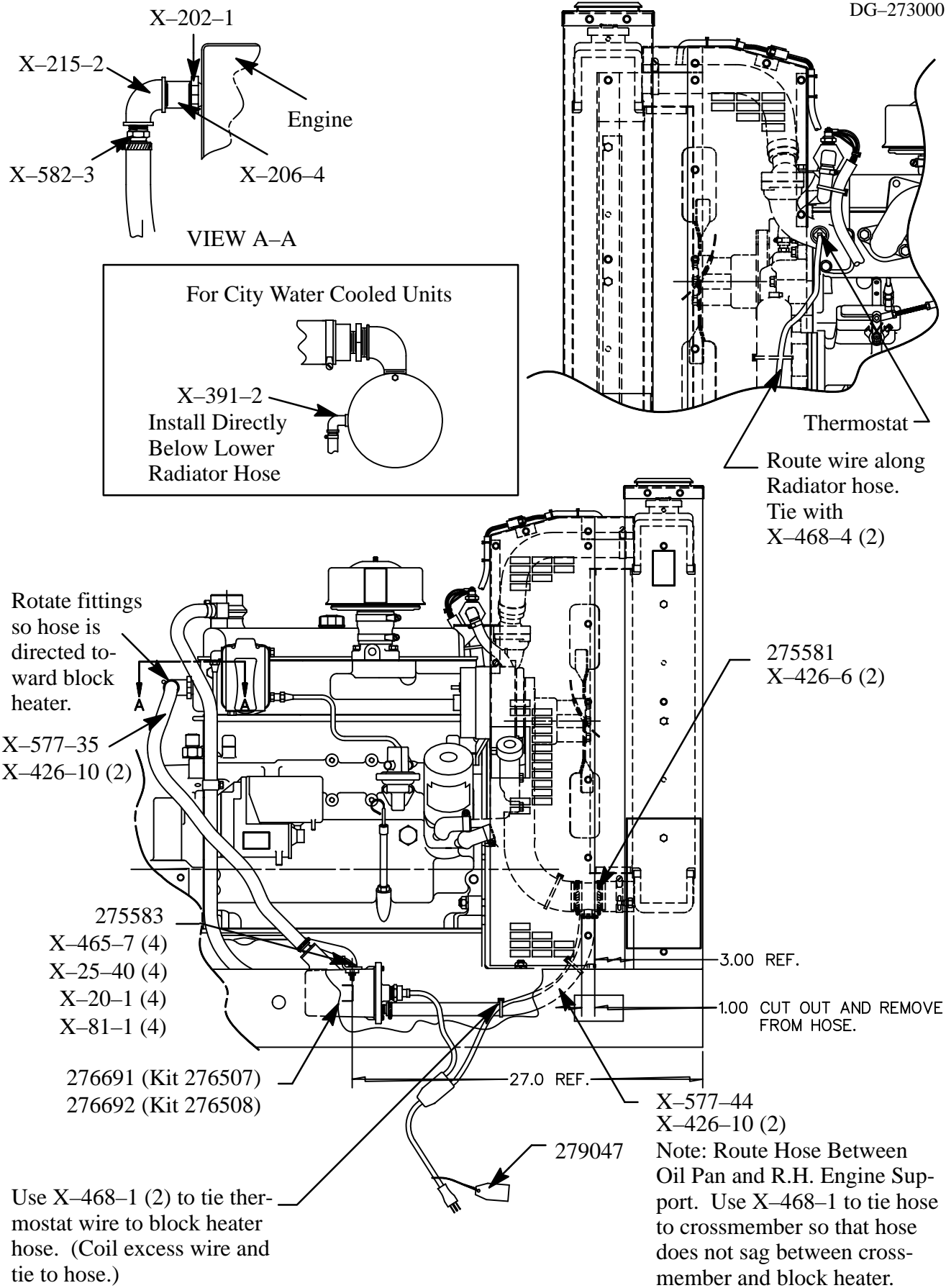


Figure 2. Block Heater Installation (Tank-Type)

**PARTS IDENTIFIED WILL
NOT BE RE-USED.**

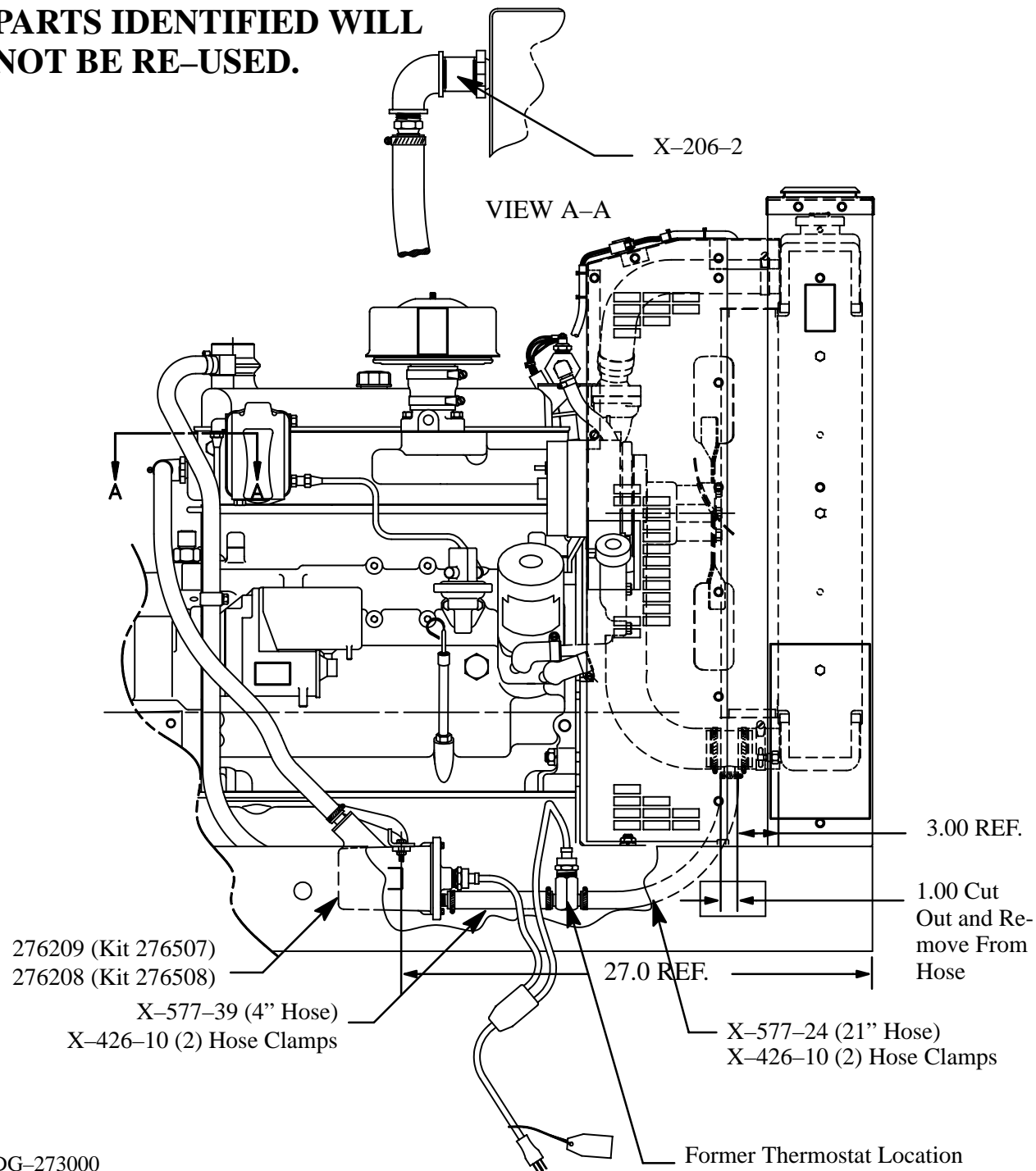


Figure 3. Block Heater Kit Removal (Earlier Version Tank-Type)

Installation

(Removal of Earlier Version Tank-Type Block Heater)

1. Move controller master switch to OFF position. Disconnect battery of generator set, negative lead first. Disconnect power from existing block heater.
2. With 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 in your area. Do not pour used coolant on the ground, down sewers, or into streams and other bodies of water.**

NOTE

Drain valve is located on radiator bottom and/or side of engine crankcase.

NOTE

All parts included in this kit may not be used. However, if component parts of existing block heater kit show wear or are damaged in some way replace with new parts supplied in kit (refer to Figure 2 for proper positions).

3. Remove pipe nipple (X-206-2) and replace with pipe nipple (X-206-4). See Figures 2 and 3 (Views A-A).

NOTE

Rotate fittings so hose is directed toward block heater.

4. Remove existing block heater, discard and replace with new block heater supplied in kit (276691 or 276692).
5. Remove and discard 4" hose (X-577-39) and two hose clamps (X-426-10). See Figure 3.
6. Remove and discard 21" hose (X-577-24) and two hose clamps (X-426-10). See Figure 3.
7. Connect hose (X-577-44) to block heater inlet and secure with hose clamp (X-426-10). Locate hose clamp 1/4 in. (6 mm) from end of hose. Route hose between oil pan and R.H. engine support.
8. Locate hose clamp (X-426-10) 1/4 in (6 mm) from end of hose (X-577-44) and tighten to nipple on existing hose connector (275581) see Figure 2.
9. Use cable tie (X-468-1) to tie hose to crossmember so that hose does not sag between crossmember and block heater.
10. Position thermostat on opposite side of block in location shown in Figure 2 by removing existing plug in block.

11. Route wire (from block heater to thermostat) along radiator hose. Tie with cable ties (X-468-4).
12. Use cable ties (X-468-1) to tie thermostat wire to block heater hose. (Coil excess wire and tie to hose).
13. Use cable ties, as necessary, to protect and secure wiring from sharp objects, exhaust system, and any moving parts.
14. Close petcock valves on radiator and/or engine block.
15. Fill cooling system to 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 Table 1 for coolant capacities.

NOTE

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

16. Check that the controller master switch is in the OFF position. Reconnect battery, negative lead last.

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

Table 1. Coolant Capacities – U.S. Gal. (L)

NOTE

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

17. Test run generator set for a few minutes and check for leaks. Stop generator set and after set has cooled, check coolant level.

18. Connect block heater electrical plug to proper voltage outlet. Tie hang tag (279047) to electrical cord coming from block heater.

Parts Listing

Qty	Description	Common Parts	Kit Numbers	
			276507	276508
1	Elbow, Pipe 3/4"	X-215-2		
4	Washer, Lock 1/4"	X-20-1		
1	Bushing, Reducer 3/4" x 1"	X-202-1		
4	Washer, Plain 9/32" x 5/8" x .05"	X-25-40		
4	Clamp, Hose	X-426-10		
2	Clamp, Hose 1-9/16" x 2-1/2"	X-426-6		
4	Screw, H.C.	X-465-7		
1	Hose 30"	X-577-35		
1	Connector, Adapter Hose	X-582-3		
1	Plug, Pipe 1/2"	X-75-28		
4	Nut, Hex. 1/4"-20	X-81-1		
1	Connector, Hose	275581		
1	Bracket, Mounting	275583		
1	Heater, Block		276691	276692
1	Tag, Hang	279047		
1	Nipple, Pipe 3/4" x 2.5"	X-206-4		
1	Connector, hose 5/8 x 3/8	X-391-2		
3	Cable tie	X-468-1		
2	Cable tie	X-468-4		
1	Hose 27"	X-577-44		

NOTES