



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

Model	Voltage	Kit No.
20-60ROZJ	120	PA-275584
20-60ROZJ	240	PA-275589

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.

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

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.

CAUTION



Engine block heater can cause electrical shock. Remove engine block heater plug from electrical outlet before working on block heater electrical connections.

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.

Installation

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

NOTE

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

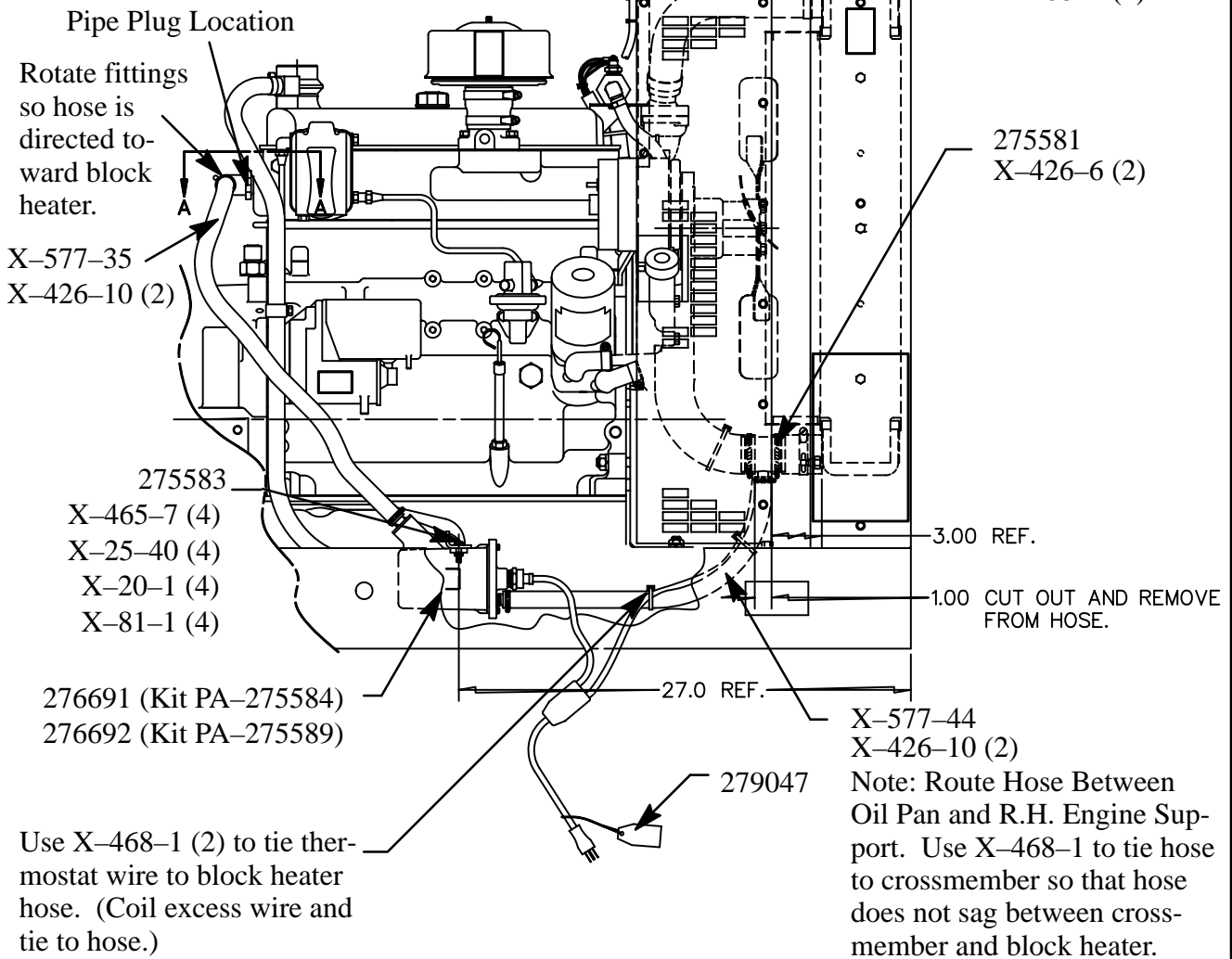
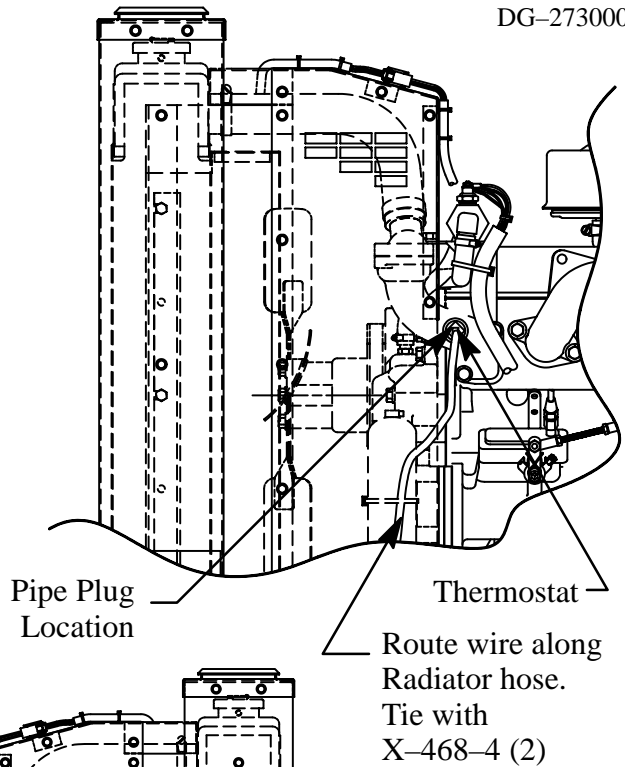
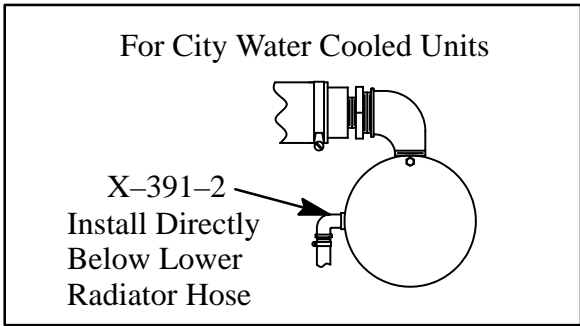
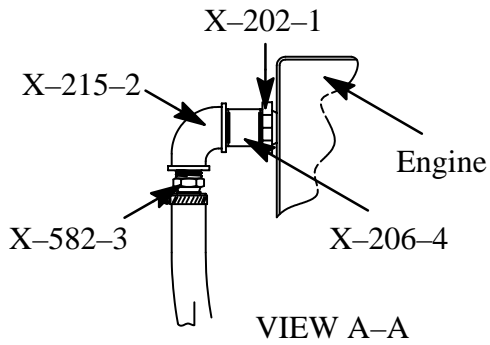


Figure 1. Block Heater Installation (Tank-Type)

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.**
3. Remove pipe plug from engine using a 5/8 inch allen socket wrench. Clean hole and remove burrs. See Figure 1 for location.

NOTE

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

4. Install 3/4 inch reducer bushing (X-202-1), pipe nipple (X-206-4), elbow (X-215-2), and hose connector (X-582-3) into block where pipe plug was located. See Figure 1. View A-A.
5. 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 4.
6. Attach mounting bracket (275583) to skid using mounting hardware supplied.
7. 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.
8. 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 #9 and #10 and proceed to step #11.

9. 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.

10. 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.
11. If installing block heater kit on a city water cooled unit: Install hose connector (X-391-2) directly below lower radiator hose as shown in Figure 1. 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.)
12. Use cable tie (X-468-1) to tie hose to crossmember so that hose does not sag between crossmember and block heater. See Figure 1.
13. Locate thermostat at position shown in Figure 1 by removing existing plug in block. (NOTE: If by-pass hose is located in this position, use service kit #276577 to upfit.)
14. Route wire (from block heater to thermostat) along radiator hose. Tie with cable tie (X-468-4).
15. Use cable ties, as necessary, to protect and secure wiring from sharp objects, exhaust system, and any moving parts.
16. Close petcock valves on radiator and/or engine block.
17. 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.

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)

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

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.

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

20. 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	
			PA-275584	PA-275589
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 1/2" x 1"	X-426-10		
2	Clamp, Hose 1-9/16" x 2-1/2"	X-426-6		
4	Screw, H.C. 1/4-20 x 1"	X-465-7		
1	Hose 30"	X-577-35		
1	Connector, Hose	X-582-3		
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		
3	Cable Tie	X-468-1		
2	Cable Tie	X-468-4		
1	Hose 27"	X-577-44		
1	Connector, Hose	X-391-2		