

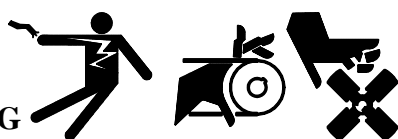


Block Heater Kits PA-272964 (450-600ROZD) and PA-274979 (750/800ROZD) Standby Generator Sets

The block heater kits heat engine coolant making starting easier and warm-up quicker. The block heater kits have a 4000 watt heater element.



WARNING



Accidental starting.

Can cause death or serious personal injury.

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

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



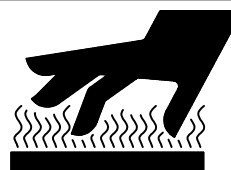
**Hot coolant and steam.
Can cause severe burns and personal injury.**

Before removing cap stop generator, allow to cool and loosen cap to relieve pressure. Fill system before starting unit.

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CAUTION



**Hot engine and exhaust system.
Can cause severe burns.**

Do not work on generator set until unit is allowed to cool.

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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.

Hot parts can cause personal injury.

Do not touch hot engine parts. An engine gets hot while running and exhaust system components get extremely hot.

NOTE

Split lock washers may be supplied with some kits. If split lock washers are supplied with kit, their use is optional.

INSTALLATION

1. Place controller master switch to OFF position. Disconnect battery of generator set, negative lead first.
2. With generator set sufficiently cooled, drain the coolant into a suitable container. It is only necessary to drain the coolant to a level just below the lower radiator hose to engine inlet.

NOTE

Petcock valve is located on radiator bottom and/or engine block.

3. Mount 274977 (Kit PA-272964) or 279481 (Kit PA-274979) block heater bracket to skid using two X-6238-4 screws, X-25-37 plain washers, and X-83-2 nuts. See Figure 1 for location. Locate the plain washers with the nuts. Distance from radiator end of skid to first hole is 55 in. (1397 mm) for Kit PA-272964. Distance from radiator end of skid to first hole is 65.9 in. (1674 mm) for Kit PA-274979.
4. Mount 274427 block heater to block heater bracket using four X-465-7 screws, X-25-40 plain washers, and X-81-1 nuts. Locate the plain washers with the nuts.
5. Remove pipe plug from engine block located on right side near cylinder head and flywheel (as viewed from the generator end). Remove pipe plug from tube above lower radiator hose. See Figure 1.
6. Apply pipe sealant to X-582-8 hose connector and install in engine block near cylinder head and flywheel.

7. Apply pipe sealant to male threads of X-274-2 45 degree elbow and install in tube above lower radiator hose. Apply pipe sealant to X-582-8 hose connector and install in 45 degree elbow.
8. Place two X-426-12 hose clamps on each end of X-691-19 hose. Install hose to hose connector on engine block near cylinder head and flywheel and to block heater outlet. Locate hose clamps 1/4 in. (6 mm) from end of hose ends and tighten. Use X-468-1 cable tie to prevent hose from sagging and forming a low spot or water trap.
9. Place two X-426-12 hose clamps on each end of X-691-31 (Kit PA-272964) or X-691-30 (PA-274979) hose. Install hose to hose connector near lower radiator hose and to block heater inlet. Locate hose clamps 1/4 in. (6 mm) from end of hose ends and tighten.
10. Determine voltage of power supply and use Figure 1, *block heater wiring instructions* to connect block heater kit. Wiring should be done according to local codes and National Electrical Code (N.E.C.).

NOTE

All electrical connections should be done by a certified electrician or competent electrical technician.

11. Close petcock valves on radiator and/or engine block.
12. Fill cooling system to proper level with fresh coolant.

13. Check that the controller master switch is in the OFF position. Reconnect battery, negative lead last.
14. Test run generator set for a few minutes and check for leaks. STOP generator set. After generator set has cooled, check coolant level.
15. Energize block heater kit.

NOTE

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

Parts Listing

Description	Qty.	Kits	
		PA-272964	PA-274979
Washer, .406 x .812 x .062 plain	2	X-25-37	X-25-37
Washer, .281 x .625 x .060 plain	4	X-25-40	X-25-40
Elbow, 45 degree 3/4 NPT	1	X-274-2	X-274-2
Clamp, 1-1/4 in. hose	4	X-426-12	X-426-12
Screw, 1/4-20 x 1 in.	4	X-465-7	X-465-7
Tie, cable	1	X-468-1	X-468-1
Connector, 3/4 NPT x 3/4 ID hose	2	X-582-8	X-582-8
Screw, 3/8-16 x 1-1/4 in.	2	X-6238-4	X-6238-4
Hose, 3/4 ID x 60 in.	1	X-691-19	X-691-19
Hose, 3/4 ID x 26 in.	1	X-691-31	—
Hose, 3/4 ID x 35 in.	1	—	X-691-30
Nut, 1/4-20	4	X-81-1	X-81-1
Nut, 3/8-16	2	X-83-2	X-83-2
Heater, block	1	274427	274427
Bracket, block heater	1	274977	279481

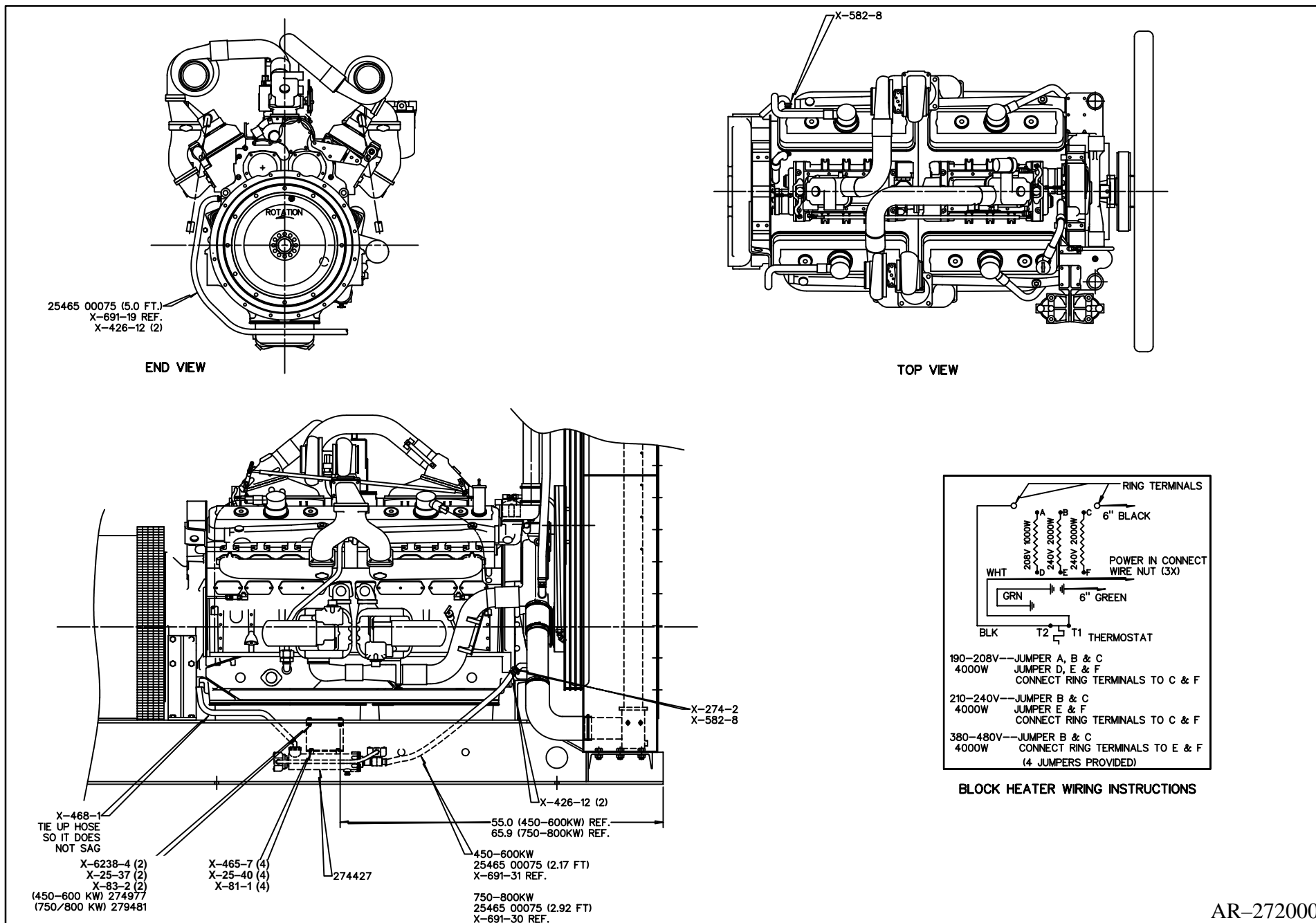


Figure 1. Installing Block Heater Kits