
INSTALLATION INSTRUCTIONS

Original Issue Date: 9/93

Model: 450-1600 kW

Market: Industrial

Subject: Battery Heater Kit PA-272783 and PA-272783-SD

The battery heater kit provides a means to increase battery temperature in cold climates. The battery warmers are connected to a thermostat for controlled heating. This kit requires that the batteries be mounted to the generator set using the optional battery rack kit.



**Accidental starting.
Can cause severe injury or death.**

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

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Turn generator set 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 set. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.

⚠ WARNING



**Sulfuric acid in batteries.
Can cause severe injury or death.**

Use protective goggles and clothes. Battery acid can cause permanent damage to eyes, burn skin, and eat holes in clothing.

Sulfuric acid in batteries can cause severe injury or death. Sulfuric acid in battery can cause permanent damage to eyes, burn skin, and eat holes in clothing. Always wear splash-proof safety goggles when working around the battery. If battery electrolyte is splashed in the eyes or on skin, immediately flush the affected area for 15 minutes with large quantities of clean water. Seek immediate medical aid in the case of eye contact. Never add acid to a battery once the battery has been placed in service. This may result in hazardous spattering of electrolyte.

Explosion can cause severe injury or death. Battery gases can cause an explosion. Do not smoke or permit flame or spark to occur near a battery at any time, particularly when it is being charged. Avoid contacting terminals with tools, etc., to prevent burns and sparks that could cause an explosion. Remove wristwatch, rings, and any other jewelry before handling battery. Never connect negative (–) battery cable to positive (+) connection terminal of starter solenoid. Do not test battery condition by shorting terminals together. Sparks could ignite battery gases or fuel vapors. Ventilate any compartment containing batteries to prevent accumulation of explosive gases. To avoid sparks, do not disturb battery charger connections while battery is being changed. Always turn battery charger off before disconnecting battery connections. Remove negative lead first and reconnect it last when disconnecting battery.

NOTE

Observe all applicable national, state, and local electrical codes during installation.

Installation

1. Move generator set master switch to the OFF position. Disconnect generator set battery(ies), negative (–) lead first.
2. Remove batteries from battery rack if already installed.
3. Install mounting bracket (272829) to battery rack using hardware indicated in Figure 1.

4. Remove four attaching screws and remove covers from relay boxes (A-272825). See Figure 2 for relay box assembly components.
5. Mount relay box assemblies (A-272825) to bracket (272829) using hardware indicated in Figure 1. Use connector 272828 to join the relay box assemblies.
6. Locate black and white leads in relay box and connect to power source. Use supplied wire nut (202054) as required. See wiring diagram, Figure 3.

NOTE

Do not yet energize receptacle boxes in relay boxes.

7. Reinstall relay box covers.
8. Attach battery plate warmers (255649) to top of battery rack using hardware indicated in Figure 1.

Place end of battery warmer equipped with cord nearest the relay box. Do not yet plug the battery plate warmers into the relay box.

9. Install and secure batteries in battery rack. Do not yet reconnect battery cables.
10. Attach a battery wrap heater (258780) to each battery using cable ties supplied with kit.
11. Plug battery plate warmers into top outlet and plug battery wrap heaters into bottom outlet of nearest box assembly.
12. Energize the battery heater kit.
13. Check to make sure the generator set master switch is in the OFF position. Reconnect the generator set battery(ies), negative (–) lead last.

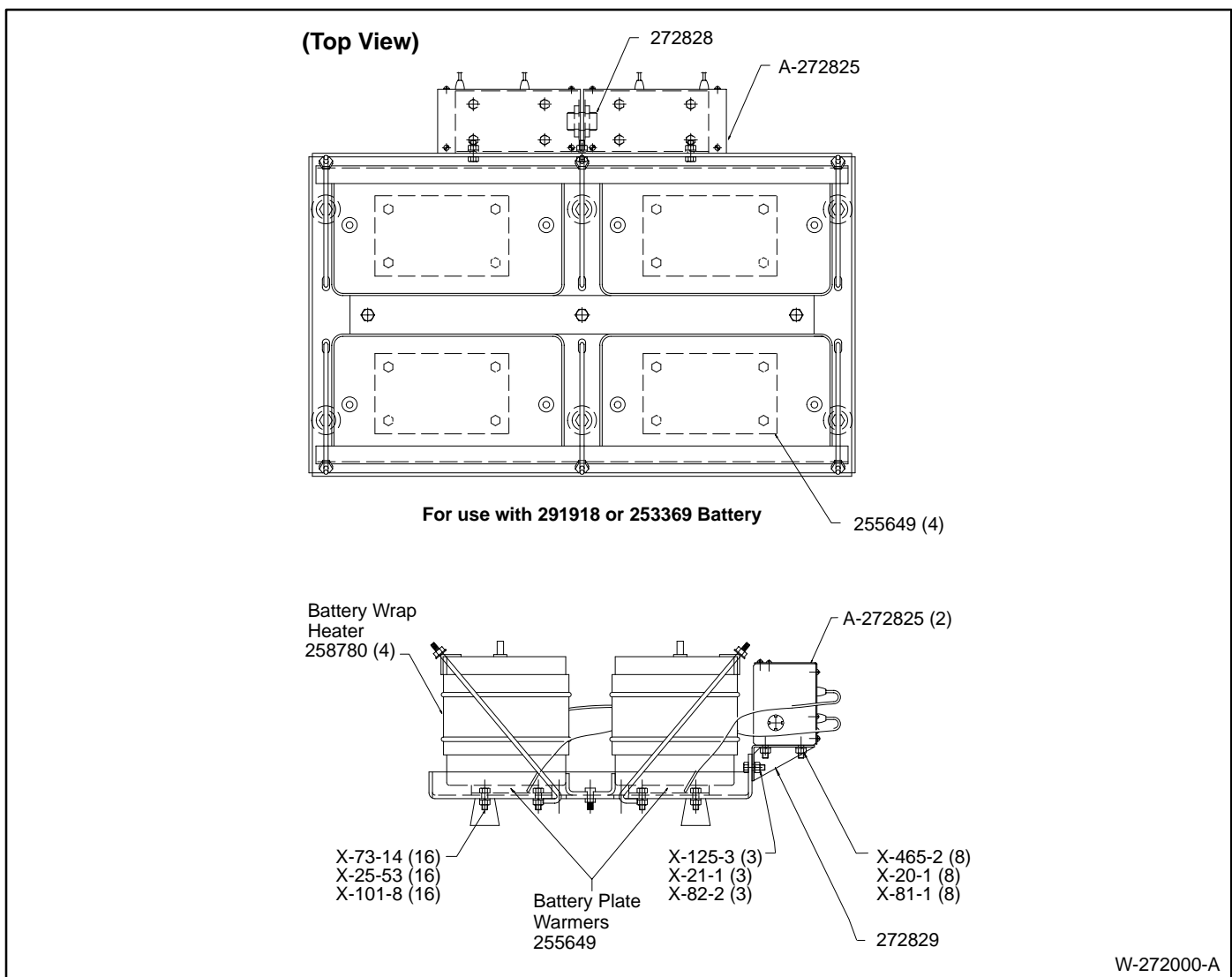
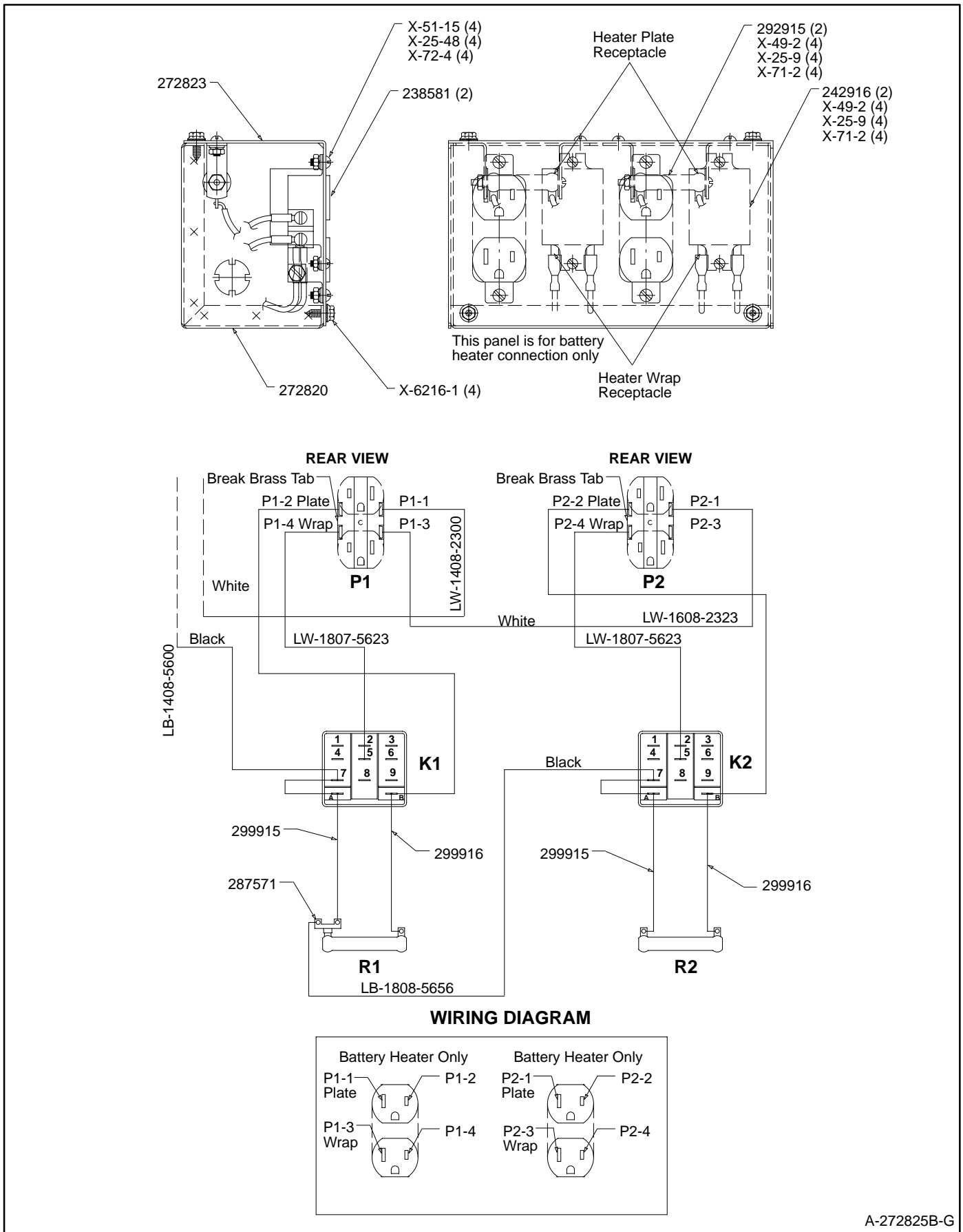


Figure 1. Battery Heater Kit Installation



A-272825B-G

Figure 2. Relay Box Assembly Components

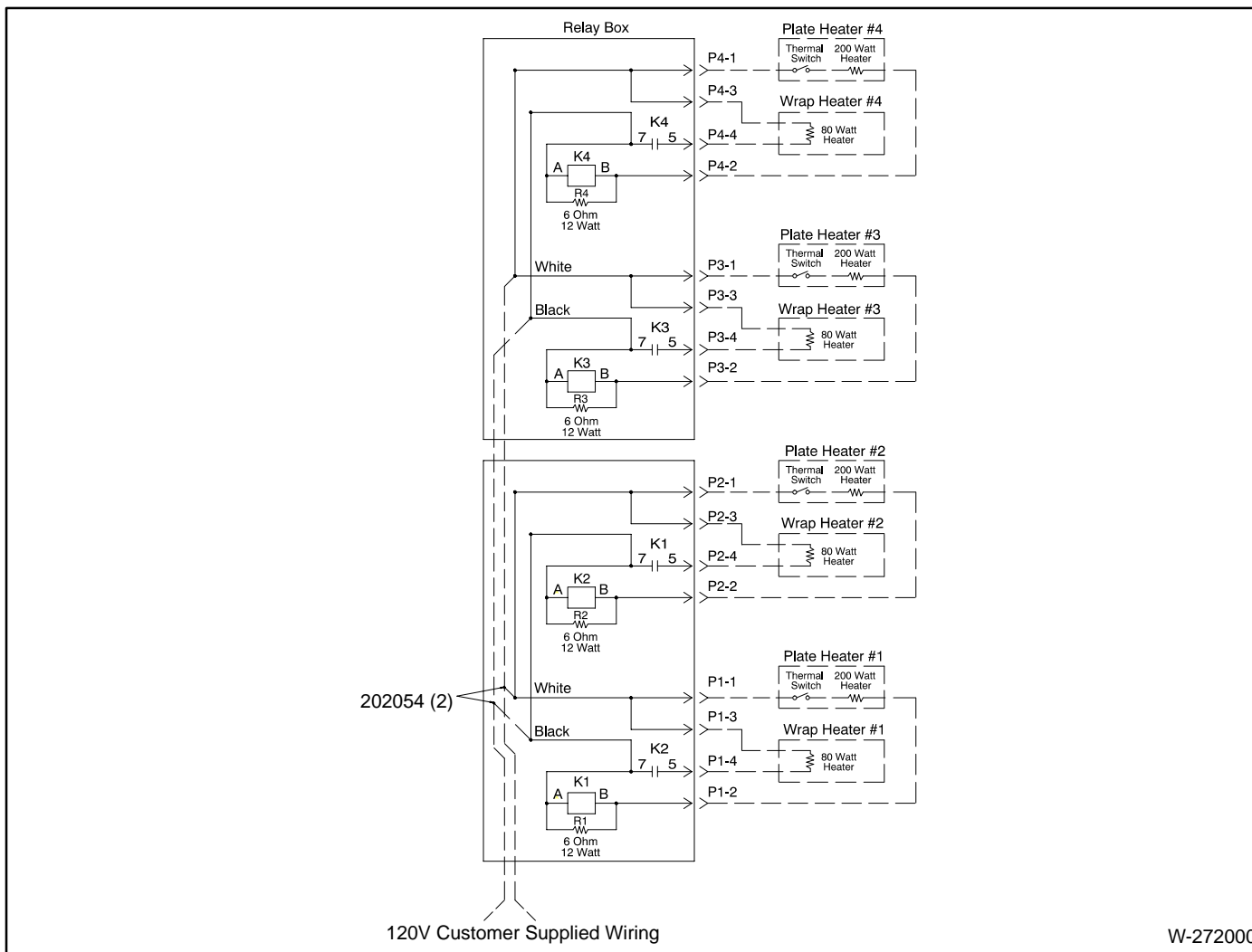


Figure 3. Battery Heater Kit Wiring Diagram

Parts List		
KITS PA-272783 and PA-272783-SD		
Qty.	Description	Part No.
2	Box assembly, relay	A-272825
1	Lead*	LB-1408-5600
1	Lead*	LB-1808-5656
1	Lead*	LW-1408-2300
1	Lead*	LW-1608-2323
1	Lead*	LW-1807-5623
8	Screw, 6-32 x 3/8*	X-49-2
4	Screw, 8-32 x 1/2*	X-51-15
4	Screw, Phillips® head, 10-24 x 1/2*	X-6216-1
2	Receptacle, ac*	238581
1	Box, relay*	272820
1	Cover, silkscreen*	272823
1	Adapter, tab*	287571
*Represents parts included in relay assembly.		

Parts List (continued)		
Qty.	Description	Part No.
2	Lead assembly*	299916
2	Lead assembly*	299915
2	Relay*	292916
2	Resistor*	292915
1	Bracket, relay box mtg.	272829
4	Warmer, battery	255649
4	Heater, battery	258780
1	Connector	272828
2	Nut, wire	202054
8	Screw, 1/4-20 x 5/8	X-465-2
3	Washer, 1/4	X-25-85
3	Screw, H.C. 5/16-18 x 3/4	X-125-3
24	Washer, plain 1/4	X-25-40
16	Nut, elastic stop 1/4-20	X-101-8
8	Nut, 1/4-20	X-6210-2
3	Nut, 5/16-18	X-6210-7
16	Screw, 1/4-20 x 5/8	X-73-14