
INSTALLATION INSTRUCTIONS

Original Issue Date: **9/91**

Model: **230-300 kW**

Market: **Industrial**

Subject: **Battery Rack Kits PA-272712, PA-272712-SD,
PA-274288, PA-274288-SD**

The battery rack kit provides a safe and convenient means of securing the generator set batteries to the generator set skid. Battery cables supplied in the kit connect the batteries together. Observe the following safety precautions while installing the kit.



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 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.



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.



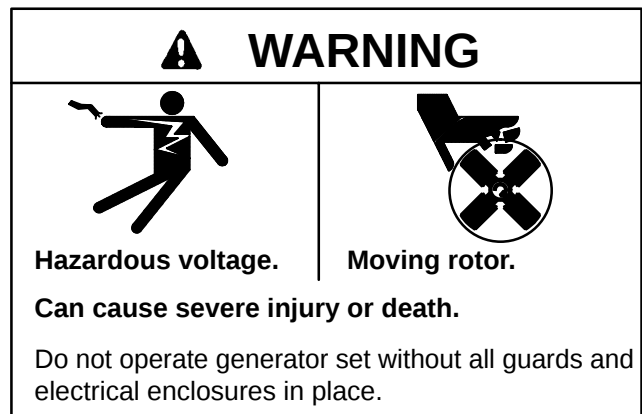
Explosion.

Can cause severe injury or death. Relays in battery charger cause arcs or sparks.

Locate in a well-ventilated area. Keep explosive fumes away.

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.

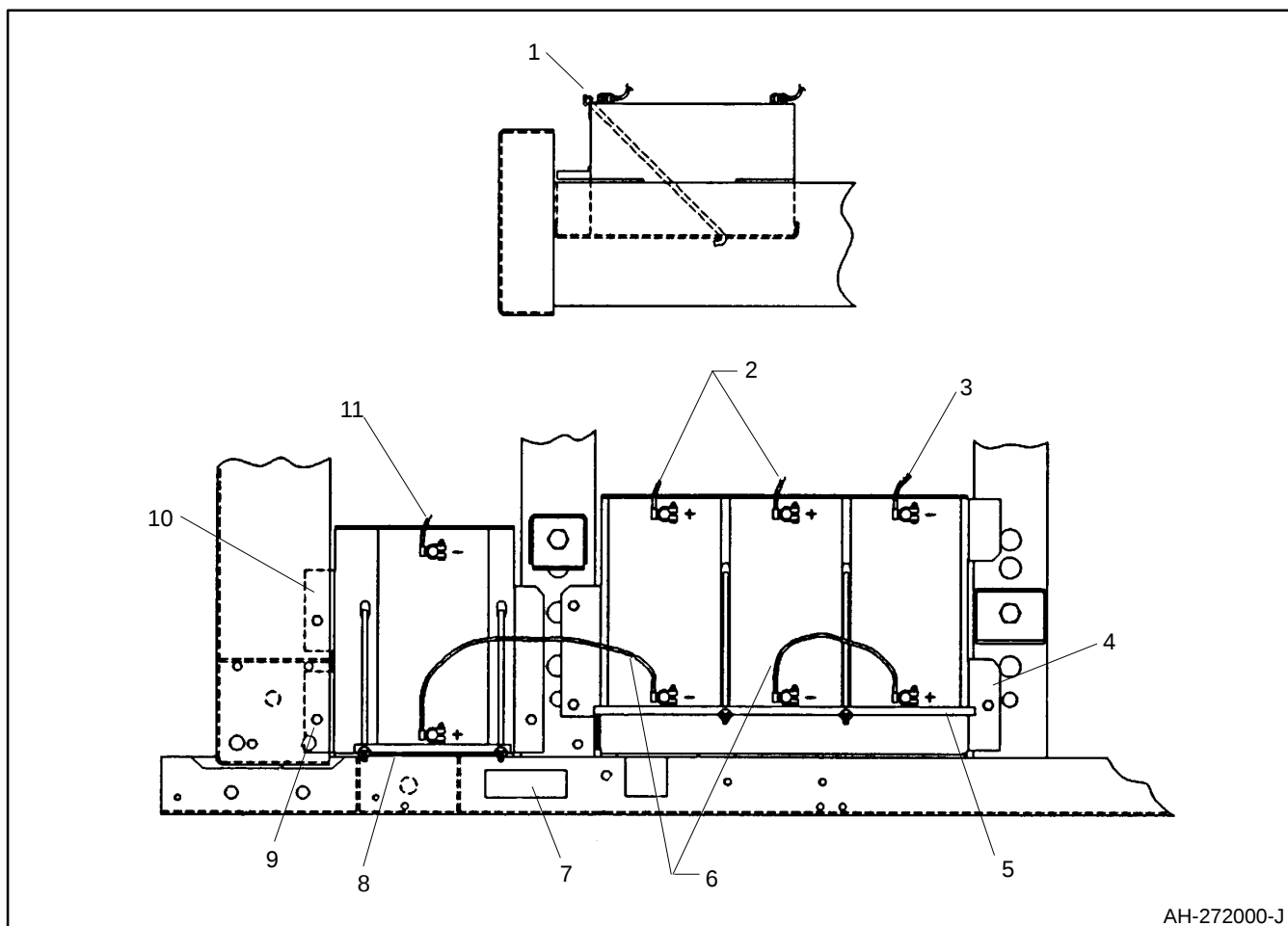
Explosion can cause severe injury or death. Battery gases can cause an explosion. Do not smoke or permit flame or spark to occur near a battery at any time, particularly when it is being charged. Avoid contacting terminals with tools, etc., to prevent burns and sparks that could cause an explosion. Remove 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.



Hazardous voltage can cause severe injury or death. Short circuits can cause bodily injury and/or equipment damage. Do not contact electrical connections with tools or jewelry while adjustments are made. Remove wristwatch, rings, and jewelry that can cause short circuits.

Installation

1. Move the generator set master switch to the OFF position. Disconnect generator set engine starting battery, negative (–) lead first.
2. Depending in the kW rating of the generator set the front battery rack may mount to the radiator support or front crossmember. Mount front battery rack (272660 or 274287) to left side of skid using three drill screws (X-794-1). If necessary, drill three 0.188 in. (4.78 mm) diameter holes. Locate battery rack between skid crossmembers, see Figure 1.
3. Mount large battery rack (272661) to left side of skid using three drill screws (X-794-1). If necessary, drill three 0.188 in. (4.78 mm) diameter holes. Locate battery rack between skid crossmembers.
4. Install batteries (not supplied). See Figure 1 for placement of polarity.
5. With surfaces clean and dry, attach adhesive insulator (274399) to inside surface of bent side of battery clamp (272695).
6. With surfaces clean and dry, attach adhesive insulator (274400) to inside surface of bent side of battery clamp (272696).
7. Install four angle bolts (288446) to battery racks and attach to battery clamps using four plain washers (X-25-85) and lock nuts (X-101-4). Torque nuts to 12-16 ft. lbs. (16-22 Nm).
8. Install two battery cables (X-545-71) between battery terminals located nearest to the outside of the skid. See Figure 1 for location.
9. With surfaces clean and dry, attach warning decal (273780) to skid. See Figure 1 for location.
10. Install two battery cables (X-545-24) to positive (+) side of battery terminals and positive lead of engine starter motor.
11. Check that generator set master switch is in the OFF position. Install two battery cables (X-545-60) to the negative (–) side of battery terminals and engine block (ground).



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| <ul style="list-style-type: none"> 1. Bolt (288446), washer (X-25-85), nut (X-101-4) 2. Battery cable (X-545-24) 3. Battery cable (X-545-60) 4. Battery rack (272661) 5. Battery clamp (272696), insulator (274400) 6. Battery cable (X-545-71) | <ul style="list-style-type: none"> 7. Warning decal (273780) 8. Battery clamp (272695), insulator (274399) 9. Drill screw (X-794-1) 10. Battery rack (230 kW 272660, 250-300 kW 274287) 11. Battery cable (X-545-60) |
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Figure 1. Battery Rack Installation

Parts List				
KITS PA-272712, PA-272712-SD, PA-274288, PA-274288-SD			Unique Parts	
Qty.	Description	Common Parts	PA-272712 PA-272712-SD	PA-274288 PA-274288-SD
4	Nut	X-101-4		
4	Washer, plain	X-25-85		
5	Tie, cable	X-468-1		
2	Cable, battery (red)	X-545-24		
2	Cable, battery (black)	X-545-60		
2	Cable, battery (two clamps)	X-545-71		
6	Screw, drill	X-794-1		
1	Rack, battery (front)		272660	274287
1	Rack, battery (large)	272661		
1	Clamp, battery	272695		
1	Clamp, battery	272696		
1	Decal,warning	273780		
1	Rack, battery (front)	274287		
1	Insulator	274399		
1	Insulator	274400		
4	Bolt, angle	288446		