

## INSTALLATION INSTRUCTIONS

Original Issue Date: 3/91

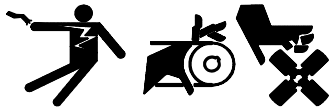
Model: 20-300 kW

Market: Industrial

Subject: Generator Strip Heater Kits PA-253213, PA-253213-SD

The generator strip heater kit heats the unit in cold climates and helps prevent condensation from forming in the generator. Observe the following safety precautions while installing the kit.

### **⚠ WARNING**

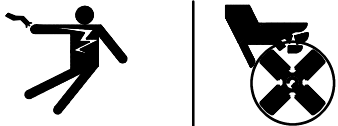


**Accidental starting.**  
**Can cause severe injury or death.**

Disconnect the battery cables before working on the generator set. Remove the negative (-) lead first when disconnecting the battery. Reconnect the negative (-) lead last when reconnecting the battery.

**Disabling the generator set. Accidental starting can cause severe injury or death.** Before working on the generator set or connected equipment, disable the generator set as follows: (1) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

### **⚠ WARNING**



**Hazardous voltage. Moving rotor.**  
**Can cause severe injury or death.**

Operate the generator set only when all guards and electrical enclosures are in place.

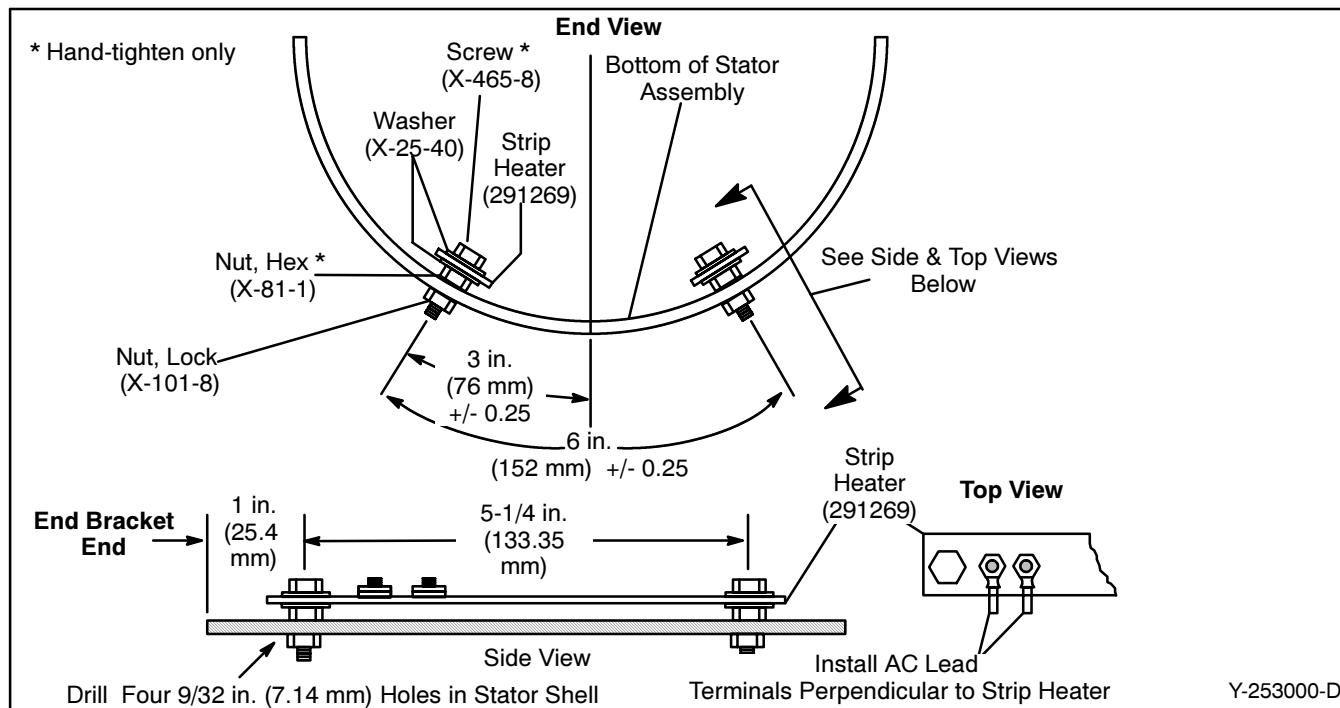
**Grounding electrical equipment. Hazardous voltage can cause severe injury or death.** Electrocutation is possible whenever electricity is present. Open the main circuit breakers of all power sources before servicing the equipment. Configure the installation to electrically ground the generator set, transfer switch, and related equipment and electrical circuits to comply with applicable codes and standards. Never contact electrical leads or appliances when standing in water or on wet ground because these conditions increase the risk of electrocution.

**Disconnecting the electrical load. Hazardous voltage can cause severe injury or death.** Disconnect the generator set from the load by opening the line circuit breaker or by disconnecting the generator set output leads from the transfer switch and heavily taping the ends of the leads. High voltage transferred to the load during testing may cause personal injury and equipment damage. Do not use the safeguard circuit breaker in place of the line circuit breaker. The safeguard circuit breaker does not disconnect the generator set from the load.

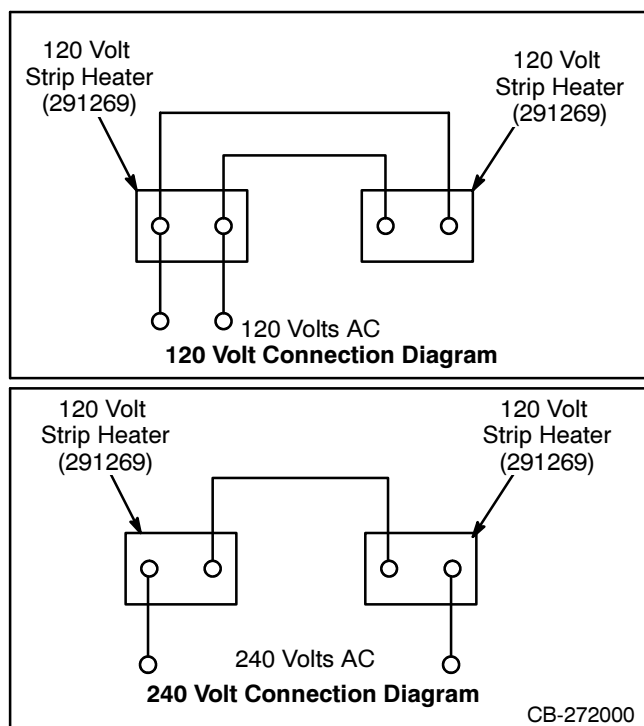
## Installation

1. Disconnect engine starting battery, negative (-) lead first.
2. Disconnect generator set from load by opening line circuit breaker or disconnecting output leads from transfer switch and heavily taping end of leads.
3. Remove junction box panels to expose end bracket and stator.
4. Connect AC leads to strip heaters. Position lead terminals perpendicular to strip heater. See Figure 1.
5. Assemble strip heaters (291269), screws (X-465-8), washers (X-25-40), and spiral lock nuts (X-6210-2) as shown in Figure 1. Install spiral lock nuts so the flange is against the stator shell when assembly is installed. Strip heater terminals must be on the same side as the screw heads. Assemble components hand-tight to allow strip heater expansion and contraction.

6. Secure strip heater assemblies to stator with lock nuts (X-101-8). Position strip heaters with the AC terminals closest to the end bracket of the generator set. See Figure 1.
7. Open circuit breaker to AC power source. With customer-supplied leads and terminals, connect strip heaters to AC voltage source using appropriate wiring diagram in Figure 2.
8. Replace junction box side panels.
9. Close circuit breaker to AC power source.
10. Reconnect generator set to load by closing line circuit breaker or reconnecting output leads to transfer switch. Reconnect engine starting battery, negative (-) lead last.



**Figure 1.** Generator Heater Installation



**Figure 2.** Heater Kit Wiring Diagrams

## Parts List

KITS: PA-253213/PA-253213-SD		
Qty.	Description	Part Number
8	Washer, plain	X-25-40
4	Nut, elastic stop	X-101-8
4	Screw, 1/4-20 x 1 1/4	X-465-8
4	Nut, spiral lock	X-6210-2
2	Heater, strip	291269