

## *Instructions for replacing the 22-68007 Circuit breaker on M673 and NL673 models:*

As of this year, the 30 amp, 2 pole AC output circuit breaker previously used on the M673 and NL673 models has been discontinued by the manufacturer. A new replacement breaker has been selected for all new production units. It has a different mounting, panel cutout and terminal configuration. Due to these changes, a new side panel must be installed on the generator junction box. In addition to the new AC output breaker, we have included provisions for earlier units to upgrade the DC circuit breaker to an improved version as well.

There are several kits that may be used, based on base model specs:

**22-68005** is for older M673 units that have a snap-in DC circuit breaker. It includes all the parts needed to upgrade circuit breaker.

**22-68010** is for newer M673 units that have a screw mounted DC circuit breaker. No circuit breaker upgrade is required.

**22-68015** is for NL673 units with a large junction box (5 mounting screws on side plate). It includes all the parts needed to upgrade circuit breaker.

**22-68020** is for NL673L4E units with a large junction box (5 mounting screws on side plate). No circuit upgrade is required.

**22-68025** is for NL673L4E units with a large junction box (5 mounting screws on side plate) and a screw mounted DC circuit breaker. No circuit breaker upgrade is required.

**22-68030** is for NL673L4E units with a large junction box (5 mounting screws on side plate) and a snap-in DC circuit breaker with fault indicator lights. It includes all the parts needed to upgrade circuit breaker.

**22-68040** is for NL673 with a small junction box (4 mounting screws on side plate) and a snap-in DC circuit breaker. It includes all the parts needed to upgrade circuit breaker.

### *Retrofit Procedure:*

1. Disconnect the lower crimp lug (black wire) from the existing regulator circuit breaker and remove the mounting screws (keep for reinstallation) and let the breaker rest in the junction box. Leave the upper crimp lug attached.
2. Remove the 3 mounting screws from the existing AC output circuit breaker and tilt up the breaker to allow all the wires to be disconnected. One by one remove the load lead ring terminals and reinstall on the new AC circuit breaker in their corresponding locations. See schematic on page 2.
3. Disconnect the aux contact ring terminal on wire #4 from the ac circuit breaker and remove the breaker from the junction box.
4. Tape together the 3 large red DC wires that connect to the DC circuit breaker. Repeat this for the 3 smaller red wires.
5. For snap-in circuit breakers, disconnect the spade lug adaptors from the dc breaker terminals and remove the spade lug adaptors from the red wire ring terminals. Remove the existing side plate.
6. For screw mounted DC circuit breakers, remove the mounting screws from the DC breaker and remove the existing side plate. Do not disconnect the red wires at the DC circuit breaker.
7. If removed, reconnect the red wires to the new DC circuit breaker terminals. See attached schematic below.



## *Retrofit Procedure (continued):*

8. Attach the new side plate to the junction box with the M4 x 8 mm screws provided.
9. Attach the new DC circuit breaker to the new side plate with the 10-32 x 7/8" screws and lock nuts provided.
10. Attach the new AC circuit breaker to the new side plate with the M3 x 6 screws provided.
11. Attach the regulator circuit breaker to the new side plate with the existing screws removed above.
12. Cut off the ring terminal from the #4 wire and crimp on the new spade terminal. Tug test the crimped terminal and then attach it to the center auxiliary contact lug on the AC output circuit breaker.
13. Attach the crimp lug that is on the wire that came with the new AC output circuit breaker to the lower terminal of the regulator circuit breaker. Secure wires with cable ties provided, as in photos below.



*Photo showing connections on DC circuit breaker, AC output circuit breaker and regulator breaker*

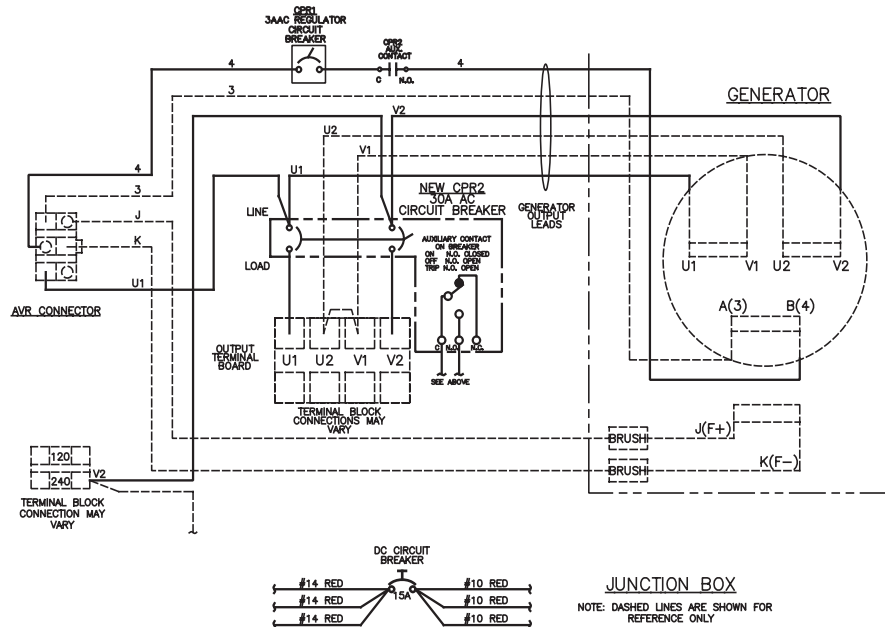


*Photo showing completed side panel with regulator breaker, AC output circuit breaker, DC circuit breaker and warning label.*



### **Kit 22-68005:**

Includes junction box side plate, AC circuit breaker with aux. contact lead, (4) M3 x 6 mm mounting screws, (4) M4 x 6 terminal screws, DC circuit breaker and (2) 10-32x7/8" mounting screws and lock nuts, 1/8" crimp lug, M4 x 8 plate mounting screws, cable ties and a warning label.



**NORTHERN LIGHTS**

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