



INSTRUCTIONS

PRELIMINARY GEK-24991

HEATSINK REPAIR AND REPLACEMENT for

DC-3062 POWER CONVERSION MODULE

SMALL

MEDIUM

LARGE

THREE PHASE FULL WAVE

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company

GENERAL  ELECTRIC

WARNING

HIGH VOLTAGE. ELECTRIC SHOCK CAN CAUSE SERIOUS OR FATAL INJURY. WHETHER THE AC VOLTAGE SUPPLY IS GROUNDED OR NOT, HIGH VOLTAGES TO GROUND WILL BE PRESENT AT MANY POINTS WITHIN THE SCR DRIVE.

SMALL POWER CONVERSION MODULE (DG-3062)

1. With Stud Mounted SCR's

To replace a stud mounted SCR in the Conversion Module, proceed as follows:

- a. Open all electrical circuits to the case in which the Conversion Module is located.
- b. Remove Conversion Module from case.
- c. Remove fan bracket and fan from module, if a fan is supplied.
- d. Remove the front cover from the module.
- e. Remove printed circuit card cover from heatsink assembly.
- f. Take heatsink assembly from its' mounting bracket.
- g. Remove the 2 nuts securing the heatsink with the failed SCR.
- h. Remove the failed SCR from the heatsink.
- i. Clean the heatsink at the SCR mounting surface with a lint-free cloth.
- j. Apply a thin coat of General Electric G322L Versalube*Plus (or equivalent thermal compound) to the replacement SCR mounting surface.
- k. Install SCR with the same orientation of its' leads as in the original assembly. Tighten the SCR stud nut with a torque wrench to 30 in. lbs.
- l. Reassemble the module and reinstall it in the case.

2. With Press Pak SCR's

To replace a Pres Pak SCR in the Conversion Module, proceed as follows:

- a. Open all electrical circuits to the case in which the Conversion Module is located.
- b. Remove Conversion Module from case.
- c. Remove fan bracket and fan from module.
- d. Remove the front cover from the module.

- e. Remove printed circuit card cover from heatsink assembly.
- f. Remove Heatsink assembly from its' mounting bracket.
- g. Remove the 2 nuts from the heatsink clamp containing the failed SCR.
- h. Remove failed SCR.
- i. With a soft lint-free cloth clean the aluminum plate and both heatsinks where both the failed SCR and the good SCR mount. Inspect all SCR mounting surfaces to make sure they are smooth.
- j. Apply a small dab of General Electric G322L Versalube Plus (or equivalent thermal compound) to each side of the two SCR's being installed so that under pressure the compound will cover only the raised center SCR surfaces.
- k. Place the two SCR's in the same orientation as the original assembly.
- l. The clamp parts should be assembled in the original manner and the two nuts tightened finger tight so that the number of threads showing are the same on both clamp rods.
- m. Check to see the cell holes are still over the heatsink roll pins.
- n. With the nuts finger tight use a wrench to tighten each nut alternately in 1/4 turn steps, until the nuts have completed 2-1/3 turns each.
- o. Reassemble the module and reinstall it in the case.

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MEDIUM POWER CONVERSION MODULE (DC-3062)

Pres Pak SCR's

To replace a Pres Pak SCR in the Conversion Module, proceed as follows:

- a. Open all electrical circuits to the case in which the Conversion Module is located.
- b. Remove the front cover from the module.
- c. Remove the pulse transformer card (red cover) from the heatsink assembly with the failed SCR.
- d. Remove the heatsink assembly with the failed SCR from the module.
- e. Remove the black insulating channel from the heatsink assembly.
- f. Remove the 2 nuts from the heatsink clamp containing the failed SCR.
- g. Remove the failed SCR, and clean the heatsink surfaces with a soft lint-free cloth. Inspect the surfaces to make sure they are smooth.
- h. Apply a small dab of General Electric G322L Versalube Plus (or equivalent thermal compound) to each side of the replacement SCR so that under pressure the compound will cover only the raised center SCR surfaces.
- i. Place the SCR in the same orientation as the original assembly, and place the SCR center hole over the heatsink roll pin.
- j. The clamp parts should be assembled in the original manner and the two nuts tightened finger tight so that the threads showing are the same on both clamp rods.
- k. Check to see that the SCR center hole is still over the heatsink roll pin.
- l. With the nuts finger tight use a wrench to tighten each nut alternately in 1/4 turn steps until the nuts have completed 2-1/6 turns each for the 1/2" thick SCR or 2-1/3 turns for the 1" thick SCR.
- m. Reassemble the heatsink, reinstall it in the module, and replace all covers.

WARNING

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LARGE POWER CONVERSION MODULE (DC-3062)

The Large Power Conversion Module contains three heatsink assemblies with two SCR's per assembly.

In general, factory equipment is required to properly replace an SCR in the large module heatsink assembly. Accordingly, an SCR should be replaced by exchange of the heatsink assembly containing a bad SCR with a factory supplied assembly.

To remove a heatsink assembly in the Conversion Module, proceed as follows:

- a. Open all electrical circuits in the case in which the Conversion Module is located.
- b. Remove the front cover (air baffle).
- c. Remove two bolts to disconnect the ac power bus from the heatsink assembly.
- d. Disconnect the control wire near the ac power connection.
- e. Remove the two control wires to each SCR and the current transformer.
- f. Hold the heatsink assembly in place and remove the 2 nuts and conical washers at each end of heatsink assembly.
- g. Remove the heatsink assembly from the Conversion Module.
- h. Remove the plastic cover by removing 6 screws at the rear of the heatsink assembly.
- i. Remove the 3 control leads at the heatsink assembly that connect to the resistor-capacitor cover.
- j. Reassemble, with the replacement heatsink assembly used in place of the original heatsink assembly.

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