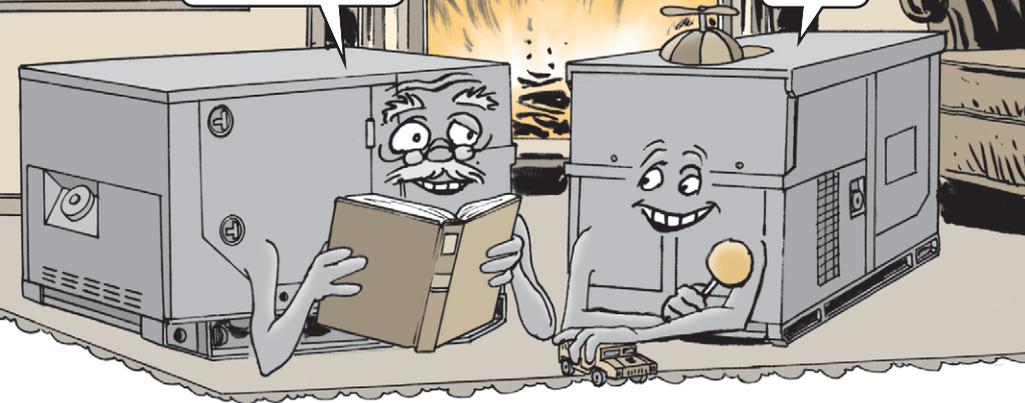


A Shot Stator Story

THIS IS THE STORY OF A REPLACEMENT STATOR AND WHAT CAUSED IT TO FAIL...

ARE THERE NINJAS?



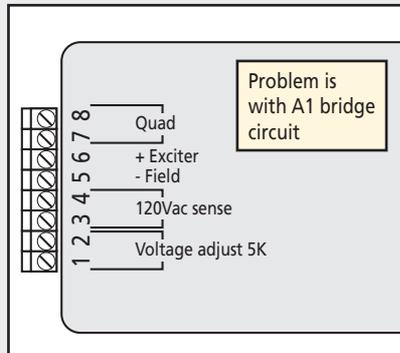
Dear MSG Half-Mast,

We're replacing the main stator on 5- and 10-KW generators far too often. No sooner do we replace a failed stator than the replacement fails. What's going on and how do we stop it?

SGT S.O.S.

Dear Sergeant S.O.S.,

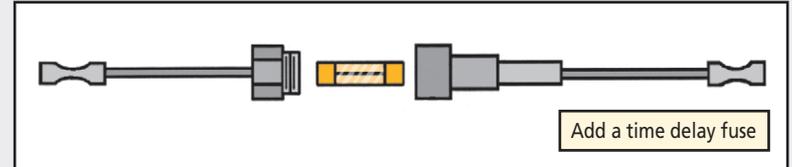
The problem is with the A1 bridge rectifier circuit. The 5- and 10-KW TQGs use a quad winding circuit to provide a no-load voltage source to the voltage regulator (A1). Voltages that develop across the quad winding circuit during an engine start can peak at well over 400 VAC, exceeding the A1 full-wave bridge rectifier circuit diode peak reverse voltage (PRV) rating. When that happens, the diodes short out and cause catastrophic failure of the quad winding circuit. Now the generator set won't work and you have to replace the entire stator and the A1.



When you replace a stator but don't solve the circuit problem, you can kiss the new stator goodbye.

Solve the circuit problem by installing a fuse between terminal 8 of the A1 voltage rectifier and the Q1 of the quad winding circuit.

To do the job, you'll need one fuse holder, NSN 5920-00-816-6892; one 3-amp/250VAC, time delay, MDL-3 fuse, NSN 5920-01-322-6986; two crimp-type splices, NSN 5940-00-478-0037; and three wire ties, NSN 5975-00-727-5153.

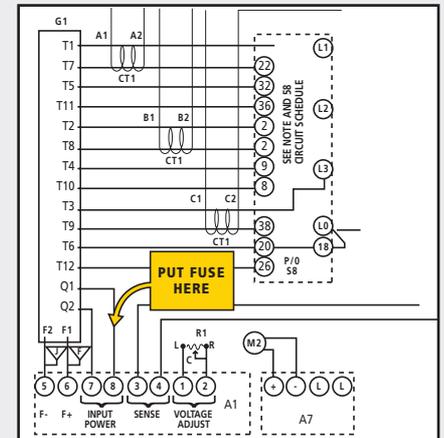


Here's how to install the fuse:

1. Make sure the generator set is completely shut down, then disconnect the cable from the negative battery terminal.
 2. Find the A1 rectifier—it's mounted right-center on the inside back wall inside of the generator set control cabinet—and locate terminal 8 and wire number 106B.
 3. Cut the wire six inches from terminal 8.
 4. Strip off about 1/4-in of the insulation on both ends of the wire. Then use a crimp splice to join a lead of the fuse holder to each end of the wire. The fuse holder should now be wired in line of wire 106B.
 5. Put the fuse in the fuse holder and secure the fuse holder with the screw and lock washer and get the leads out of the way using wire ties as needed.
 6. Reconnect the cable to the negative battery terminal and you have made the modification!
 7. Check your job by running the generator and verifying the correct voltage and frequency. Check it twice and then bring the generator up to load and check it again.
- If the fuse blows while you are making these checks, the A1 is already shot and must be replaced or the stator is bad and must be replaced. You'll need to use a multimeter to determine which of these is bad.

If you need help with this troubleshooting or making the modification, contact CE-LCMC at:

@us.army.mil,
DSN 992-4748 or (732) 532-4748.



Half-Mast