

**GATE DRIVER PC BOARD REPLACEMENT****BACKGROUND**

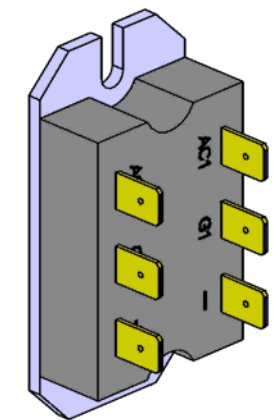
The AT10.1 Group I (6-25A dc) Gate Driver PC Board (referenced as component "A3") accepts signals from the Main Control PC Board (A1), and triggers the SCR module (A16) to fire. The manufacturer's internal part number for the Gate Driver PCB is **EN5011-00**. It is recommended (by the manufacturer) to replace this component as part of the larger Rectifier Heatsink Assembly (p/n EJ5085-00). However, the pc board (*only*) may need to be replaced on occasion. If so, refer to the following instructions, in conjunction with the Rectifier Heatsink Assembly *Service Instructions* ([JD5009-00](#)).

**NOTICE**

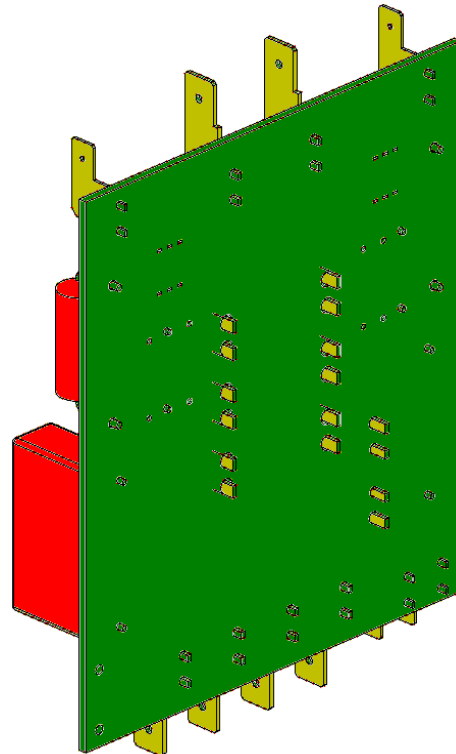
*Printed circuit boards are sensitive to damage from static discharges. Leave replacement boards in their anti-static bags until you are ready to install them. Ground yourself before handling the board, by touching the ground stud on the back of the door. Always handle printed circuit boards by their edges.*

**REFERENCE IMAGE**

(left side internal view of charger assembly)



SCR module (A16)



EN5011-00 PC Board (A3)

**REFERENCE DOCUMENTATION**

- 1) AT10.1 G1 Rectifier Assembly (A6) Replacement *Service Instruction* ([JD5009-00](#))
- 2) AT10.1 G1 Style-586/594 Internal Component Layout Drawing ([JE5027-00](#))
- 3) AT10.1 G1 Connection Diagrams ([JE5033-00](#) & [JE5033-99](#))
- 4) AT10.1 G1 Series battery charger *Operating and Service Instructions* ([JA0102-01](#))
- 5) AT101. G2 standard drawings, featured online (<http://www.ATSeries.net/>)

**GATE DRIVER PC BOARD REPLACEMENT****TOOLS REQUIRED**

- 1) standard hand tools
- 2) ground strap

**PREPARATION**

**NOTICE** Only qualified service technicians should perform this procedure. Follow all site and employer standard safety protocols.

**PROCEDURE**

1. Shut down and lock out all power to the AT10.1.

**⚠ WARNING** Remove ALL ac power to the AT10.1, disconnect the batteries, and remove all signal contacts. Any optional filter capacitors (C1/C2) inside the charger store powerful electrical potential. Wait several minutes, then test for zero voltage at I/O panel (TB1) and capacitors (C1/C2).

2. Refer to the supplied Rectifier Heatsink Assembly Field Service Instructions ([JD5009-00](#)).
3. Follow Steps 1-4 (on Page 1 of 2), and remove the *entire* Rectifier Heatsink Assembly.
4. Follow Step 5 (on Page 2) and remove all slip-on wires from the Gate Driver PC Board (A3).
5. Wiggle and *pull* the Gate Driver PC Board (A3) off the plug-in SCR module (A16).
6. Discard the removed pc board.
7. *Gently* place the replacement EN5011-00 Gate Driver PC Board (A3) onto the plug-in SCR module (A16) with the same orientation.
8. **NOTICE** Make sure all six (6) tabs on the SCR module (A16) *precisely* line up with the replacement EN5011-00 Gate Driver PC Board (A3).
9. *Carefully* insert the A3 pc board onto the A16 module, and press until it is *fully* seated.
10. Reconnect all wires (from Step 4 above) onto the new EN5011-00 Gate Driver PC Board (A3).
11. Check your work! Make sure the pc board is properly mounted and wiring is secure.
12. Follow Steps 7-10 (on Page 2 of 2 [JD5009-00](#)) to reinstall the Rectifier Heatsink Assembly.
13. Reconnect the battery, dc loads, and ac power to the AT10.1.
14. Replace the acrylic safety shield.
15. Close the AT10.1 front panel door.
16. Re-energize the AT10.1 by closing the dc output circuit breaker (CB2) *first*, followed by the ac input circuit breaker (CB1) *second*. See Section 2.1 of the O&SI manual for details.
17. Installation of the AT10.1 G1 Gate Driver PC Board (A3) is now *complete*!