

**Serial Numbers:** 

Machines/Models: SB60 - Gas

1102-1258

THIS BULLETIN IS A SERVICE ADVISORY TO BE CARRIED OUT AT THE NEXT MONTHLY SERVICE INTERVAL.

**DATE:** October 11, 1999

PURPOSE: Improve Starting and Charging performance.

OPERATION REQUIRED: Add wires to Alternator and Governor and add Relay to help

distribute amperage.

PARTS REQUIRED: Kit SB99.11 includes the following:

1. 1 ea. #030948-002 16 awg x 54" Yellow wire assembly

2. 1 ea. #030948-001 16 awg x 18" Red/Black wire assembly with Diode

3. 1 ea. #030948-003 16 awg x 3" Diode Connector Assembly

4. 1 ea. #067662-002 Relay Assembly Double

5. 15 ea. Tie Strap

6. 1 ea. #029610-002 Fork Connector

REIMBURSEMENT: UpRight will reimburse the owner of record for 1 1/2 hours of labor at \$35.00 per hour. Reimbursement will be made upon receipt by UpRight of your completed warranty claim form. Please reference SB99.11 on your warranty claim form.

PROCEDURE: If your machine has a Generator Option STOP and call UpRight Product Support at 800-926-5438. Read all instructions thoroughly and refer to Figures 1-5 before starting.

- 1. Remove the negative battery cable from battery (under radiator).
- 2. Swing engine tray out and install engine tray lock.
- 3. Cut and remove the plastic tie straps from protective wire cover starting at the alternator to the starter then to the Barber Coleman governor control. Note location of Tie Straps before removal as new Tie Straps will be installed later. See Figure 2.
- 4. Attach Diode Connector Assembly (#030948-003) to #1 terminal of alternator. See Figure 2.
- 5. Locate and remove the Red/White wire at #2 terminal on the alternator and attach it to the Diode Connector Assembly (#030948-003) installed in Step 4. See Figure 2.
- 6. Attach the push connector of the Yellow Wire Assembly (#030948-002), to terminal #2 of alternator. See Figure 2.
- 7. Route unattached end of newly installed Yellow Wire Assembly (#030948-002) through the protective plastic cover to the starter and attach to large terminal (bottom) of the solenoid (where battery cable is connected). See Figure 5.
- 8. Attach #10 Ring Connector of the Red/Black Wire Assembly with Diode (#030948-001) to the start position (small post) of the starter solenoid. Do not remove existing wires. See Figure 5.



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- - **NOTE:** Failure to Install Red/Black Wire Assembly with Diode (#030948-001) as described will damage starter.
- 10. Install Tie Straps to protective wire cover in same location as pre-existing Tie Straps.
- 11. Locate R16 relay inside lower control box (bottom row 7th from left) and remove from socket. This will eliminate the need to re-identify the relay socket in the following steps. See Figure 1.
- 12. Loosen the din rail locking end block located on the right side of the relays and terminal blocks, using a small flathead screwdriver in the center hole, and slide the terminal blocks and relays (from the R16 relay) over to the right end of the din rail without sliding off. See Figure 1.
- 13. Remove wires from the R16 relay socket and remove socket from din rait by pulling down latch on bottom (use a small straight seal pick). See Figure 4.
- 14. Using Double Relay Socket (#067662-002) attach the two red wires (separated), one on terminal #9 and the other on terminal #12 (bottom) with the red jumper wire already there. Do not remove the red jumper wire. Attach Red/Black/White wire to terminal #14. Attach the two Black wires to terminal #13. Attach Red wire to terminal #8 (top). See Figure 4 for terminal locations.
- 15. Locate terminal block #23 (See Figure 1). Remove and discard the diode by inserting a small seal pick into the square holes between the diode wires. Remove the Red/White wire on the *left* side of same terminal block #23 in the same manner. The Red/White wire on the *right* side of the same terminal block will remain.
- 16. Locate Relay R12 (bottom row 3rd from left) to find the other end of the same Red/White wire removed in Step 15, and pull loose end free. Leave the wire connected to the R12 Relay. The loose end of this wire goes to terminal #5 on the newly installed R16 Relay socket so cut it to length, install the supplied Fork Connector (#029610-002) to it and attach it to terminal #5 as described. The wires on terminal #5 and #8 (top two) can be swapped if wire length prohibits installation.
- 17. Install the relay socket onto the din rail by hooking the top of the socket over the top of the rail and simply push the bottom in until it "clicks" into position. Reinstall battery cable and swing engine back into position. Install engine tray bolt.
- 18. Start engine noticing an increase in engine RPM. This should aid in starting cold or flooded engines.
- 19. Use a multi-meter to check voltage at the battery. It should be between 13 and 14.5 volts after a five minute run time.
- 20. Perform a pre-operation and safety inspection as described in your SB60 Operator Manual.



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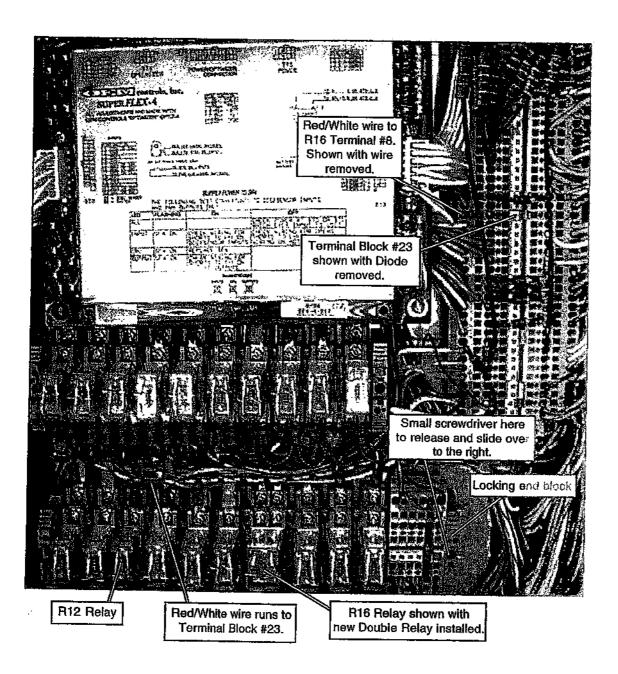


Figure 1



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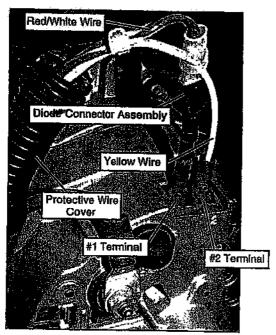


Figure 2

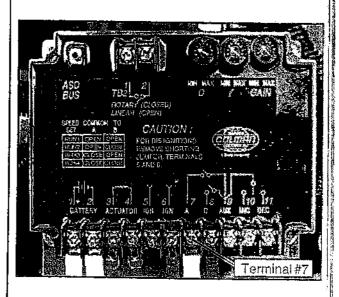


Figure 3

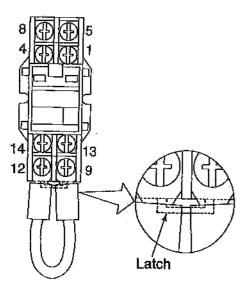


Figure 4

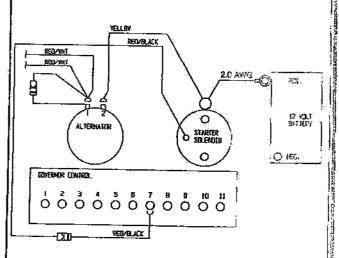


Figure 5