

### 21SI & 22SI "I" TERMINAL RETROFIT KIT

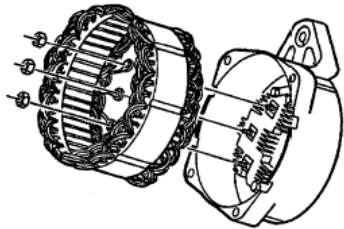
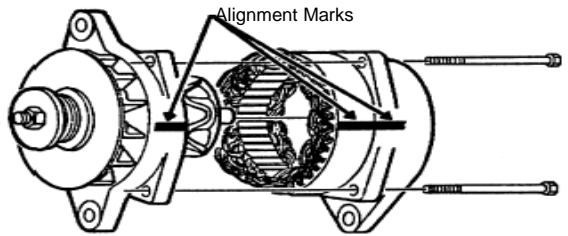
**WARNING!!!** ALWAYS USE PROPER EYE PROTECTION WHEN PERFORMING ANY MECHANICAL REPAIRS TO A VEHICLE – INCLUDING, BUT NOT LIMITED TO, ANY INSTALLATION AND OR REPAIRS TO THE DELCO REMY ALTERNATOR. FAILURE TO USE PROPER EYE PROTECTION CAN LEAD TO SERIOUS AND PERMANENT EYE DAMAGE.

Only perform the mechanical functions that you are properly qualified to perform. Mechanical repairs that are beyond your technical capabilities should be handled by a professional installation specialist.

**DANGER!!!** To avoid injury or damage, always disconnect the negative cable at the battery before removing or replacing the alternator. The alternator output terminal is always live ("hot"). If the battery is not disconnected, a tool accidentally touching this terminal and ground can quickly get hot enough to cause skin burn or damage to the tool and surrounding parts.

The parts in this kit are supplied to add an "I" terminal to a 21SI Alternator that does not have such a terminal. The kit includes a diode that must be installed in the external wire that is attached to the terminal. The diode must be installed as described in the instructions to allow current to flow into the terminal from a switched B + source during start-up, but will block current flow in the opposite direction under other conditions.

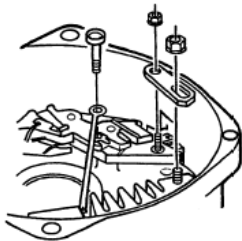
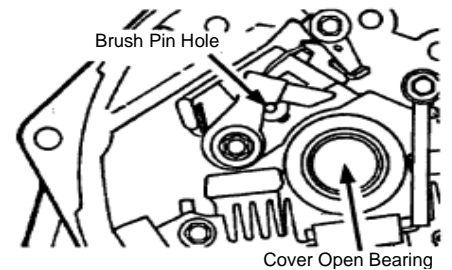
1. Mark side of alternator for alignment when reassembling alternator. Remove four thru-bolts and separate drive end frame (with rotor) from slip ring end housing (with stator).



2. Remove three rectifier bridge nuts, then separate stator from slip ring end housing.

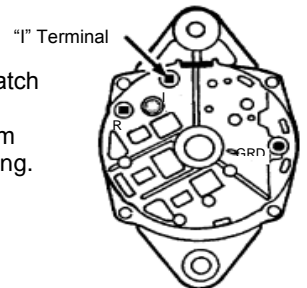
3. Locate brushes inside slip ring end housing, push into retracted position and insert pin

through holes in housing and brush holder to hold. Be sure pin will be removable from outside of housing during reassembly. Cover open end of bearing with tape to prevent dirt entry.

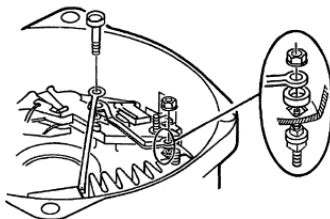


4. Remove regulator stud connector from inside slip ring end housing by removing regulator stud nut and inside output (BAT) terminal nut. Note that output (BAT) terminal may fall out when nut is removed. Also remove insulated regulator attaching screw.

5. Locate "I" Terminal hole in slip ring end housing. Select new square or round "I" terminal insulator to match hole shape. (Note: If round, use file to round corners of smaller square shank on new terminal stud to fit easily into round insulator.) Insert "I" terminal into new insulator and then install assembly through hole from outside, seating insulator in housing. Place new insulating washer over terminal threads on inside of housing. Place new "I" terminal connector and nut loosely onto threads.

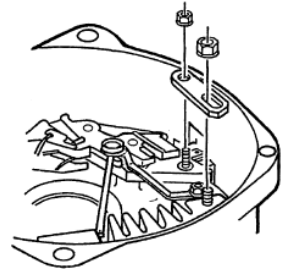
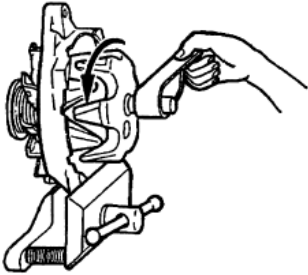


6. Position other end of "I" terminal connector over mounting hole on regulator, then reinstall insulated regulator mounting screw through diode trio connector, "I" terminal connector, and regulator. Tighten screw to 2.0 Nm (20 lb in). Tighten inside nut on "I" terminal to 2.5 Nm (22 lb in). **Note:** If hole in housing is round, hold large square shank on terminal as anti-turn while tightening.



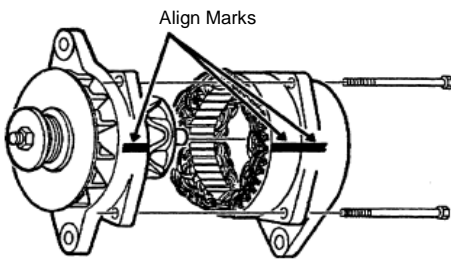
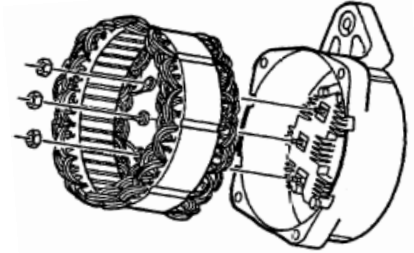
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7. Reassemble alternator stud connector to alternator stud and inside of output (BAT) terminal with nuts removed earlier. Be sure (BAT) terminal is properly seated in housing from outside. Tighten inside (BAT) terminal nut to 5.5 Nm (50 lb in) and alternator stud to 2.5 Nm (22 lb in).



8. Clean slip rings on rotor by spinning in 400 grain polishing cloth. Wipe contact ends of brushes with soft cloth to remove any grease and then remove protective tape from open end of bearing in slip ring end housing.

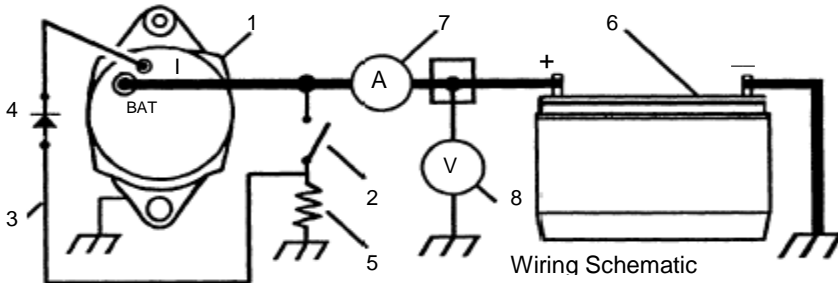
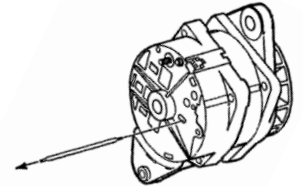
9. Assemble stator to housing, aligning stator leads with rectifier bridge terminals. Install 3 rectifier bridge nuts over stator leads. Tighten to 2.5 Nm (22 lb in).



10. Align marks on outside of alternator and assemble drive end and slip ring end together. Install 4 thru-bolts and tighten to 5.5 Nm (50 lb in)

11. Pull brush-retaining pin out of unit to release brushes onto slip rings. Install generator to engine per vehicle or engine manufacturer instructions.

12. Be sure that ignition switch is in the "off" position. See wiring schematic below. Route new lead wire (min. 18 AWG, not supplied in kit) from B+ source that will be switched off when the ignition switch is "off". Install ring connector (to fit over 10-24 terminal thread, not supplied in kit) to end of lead wire at alternator. Attach connector to "I" terminal with new lock washer and nut. Hold square shank on terminal as anti-turn and tighten nut to 2.0 Nm (20 lb in). Add suitable connector or splice to end at switched B+ source.



1. Alternator
2. Ignition
3. New Lead Wire
4. New Diode
5. System Loads
6. Battery
7. Ammeter (If Used)
8. Voltmeter (If Used)

13. Find location in new lead wire where diode can be installed and wire can be supported by taping to existing wiring harness. Be sure ignition switch is in "off" position. Cut and strip wire, then use butt splice connectors or other suitable method to install diode so that colored band around diode is positioned TOWARD alternator. This will assure that current will flow from the B + source to the alternator "I" terminal, but will be blocked from flowing in the other direction. Wrap connections and diode with tape to insulate, then support by taping to existing wiring harness.

Technical support: USA 800 854 0076, Mexico 01 800 000 7378, Brazil 0800 703 3526, South America 55 11 2106 6510 or visit [delcoremy.com](http://delcoremy.com)

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