

## 40SI™ & 55SI™ ALTERNATOR INSTALLATION INSTRUCTIONS

### HIGH OUTPUT FEATURES WITH REMOTE SENSE™ TECHNOLOGY

**40SI™** : 12 Volt 240 - 275 - 300 Ampere Ratings

**Three Mounting Options:** Pad, Delco Remy® Standard Hinge  
 198mm (7.8 inch) & Long Hinge 216mm (8.5 inch)

**55SI™** : 12 Volt 420 Ampere Rating

**24 Volt** 250 - 275 Ampere Ratings

**Mounting Option:** Pad

**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® ALTERNATORS. 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 burn skin or damage tools and surrounding parts.

**FOLLOW ENGINE OR VEHICLE MANUFACTURER’S INSTRUCTIONS FOR REMOVING THE OLD ALTERNATOR FROM THE ENGINE AND INSTALLING THE NEW ALTERNATOR.**

**NOTICE!** These are extremely high amperage output Alternators. Always ensure your application is equipped with the appropriate size and gauge of cable. See “Recommendation for Determining Appropriate Cable Size” with the wiring diagram in Figure 2 to determine if installation is acceptable.

### REMOVAL & INSTALLATION INSTRUCTIONS

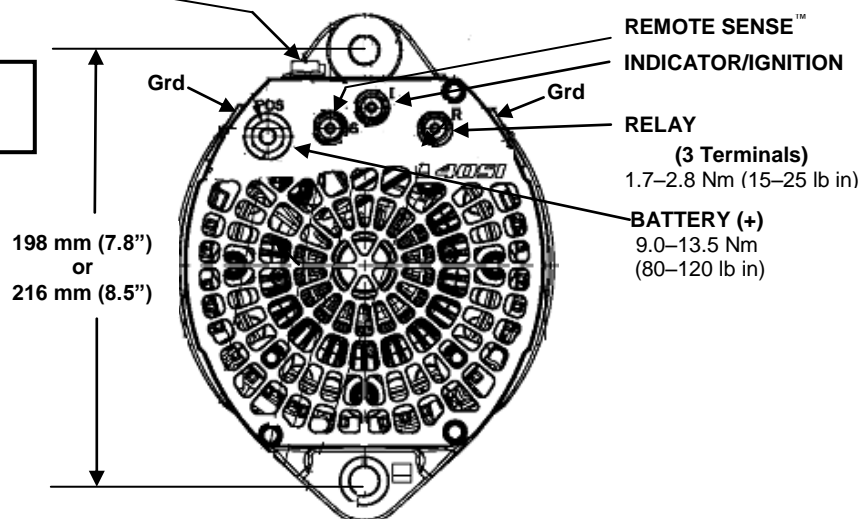
- ◆ Disconnect the negative (-) cable at the batteries.
- ◆ Identify and tag all leads when removing the old alternator and install them on the same terminals of the new alternator.
- ◆ Insure all leads are reconnected or contained where they cannot ground.
- ◆ **Torque all fasteners to values labeled in Figure 1 below.**
- ◆ This alternator may have more terminals than the one being replaced had or used. It will charge properly with only the battery and ground leads connected. Use of the other terminals is optional based on need. See “TERMINAL DESCRIPTIONS”, Page 2.

**FIGURE 1 - 40SI™ & 55SI™ Alternator Torque Values**

**GROUND SCREWS (-)** (Three Locations)  
**40SI** 6.8 - 10.2 Nm (60 - 90 lb in)  
**55SI** 5.8 - 6.8 Nm (50 - 60 lb in)

**USE PULLEY FROM OLD ALTERNATOR**  
 (SEE PULLEY INSTRUCTIONS BELOW)

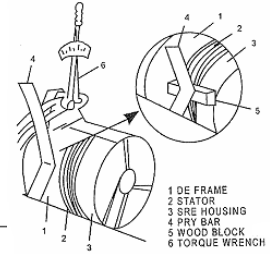
**40SI AVAILABLE IN DELCO  
 REMY® STANDARD HINGE &  
 LONG HINGE MOUNTING SIZES**



**PULLEY INSTRUCTIONS:** Use pulley from old alternator if this alternator does not have a pulley or pulley supplied is different from the one on alternator being replaced. **NOTICE!** When changing the pulley, keep the alternator shaft in a horizontal position and do not apply any pressure to end of the shaft. Internal damage may occur if the shaft is pushed back and turned. If there were spacers when the fan and pulley were removed, make sure all spacers are replaced when installing the fan and pulley on this alternator. Hold the shaft by placing a hex wrench in the hexagonal hole in the shaft while removing or installing the pulley. **Tighten the pulley nut to 95-108 Nm (70-80 lb ft).**

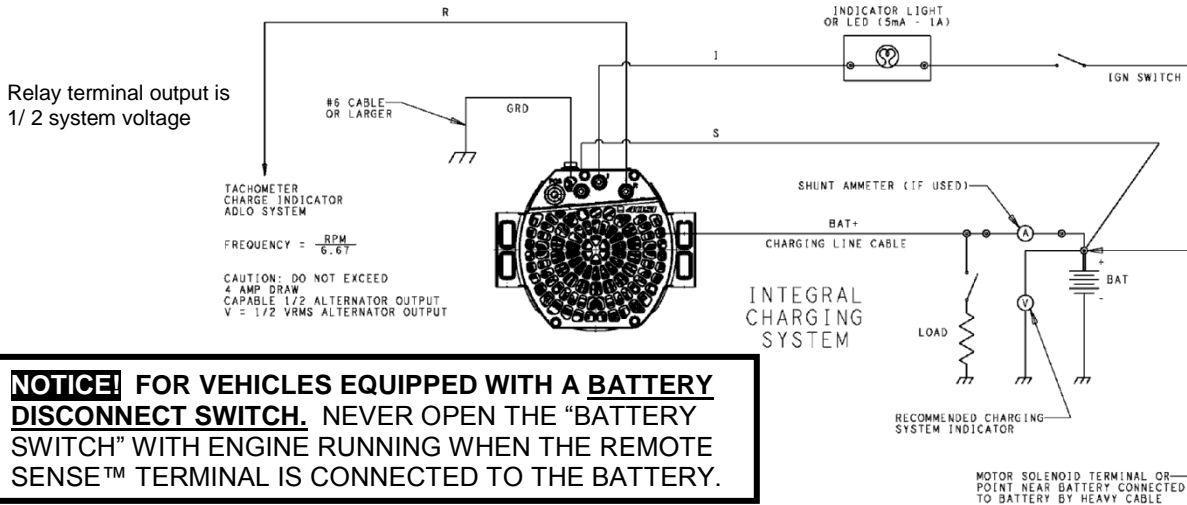
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**BELT TENSIONING INSTRUCTIONS:** Improper belt tension can cause premature alternator failure. If the belt must be tightened manually, place a wood block between the alternator and pry bar, as illustrated below. Pry as close to the center of the unit as possible. Use a torque wrench to tighten mounting bolts to the proper torque as specified in vehicle or engine manufacturer's specifications for belt tension and mounting bolts torque. **DO NOT OVER TIGHTEN BELT!**



**FIGURE 2 – TYPICAL WIRING DIAGRAM**

**Note:** Alternator will function without connecting the **S, I & R** terminals



See note below for determining the appropriate cable size

**NOTICE!** FOR VEHICLES EQUIPPED WITH A BATTERY DISCONNECT SWITCH. NEVER OPEN THE "BATTERY SWITCH" WITH ENGINE RUNNING WHEN THE REMOTE SENSE™ TERMINAL IS CONNECTED TO THE BATTERY.

**RECOMMENDATION FOR DETERMINING APPROPRIATE CABLE SIZE**

CHARGING LINE CABLE DROP SHOULD NOT EXCEED **0.5 VOLTS** (ALTERNATOR OUTPUT [B+] TERMINAL TO BATTERY POSITIVE TERMINAL AT FULL OUTPUT). FOR OBTAINING ADDITIONAL WIRING INSTALLATION INFORMATION, SEE HEAVY DUTY APPLICATION MANUALS OR CONTACT A REMY INC. REPRESENTATIVE.

**REMOTE SENSE™ TECHNOLOGY** senses the voltage level at the batteries or similar location where battery system voltage can be read and adjusts alternator output. A direct connection from the alternator's **Remote Sense™** terminal to the battery provides improved system voltage readings and optimizes state of charge. (Go to [www.delcoremy.com](http://www.delcoremy.com) for a more descriptive explanation of Remote Sense™ technology)

**TERMINAL DESCRIPTIONS** (Alternator will function without connecting the **S, I** or **R** terminals):

- “**POS**” Terminal - Output terminal connects to the positive (+) battery terminal.
- “**R**” Terminal - Relay terminal carries half system voltage and may be used for certain types of control relays, charge indicators, tachometers or similar devices. The current draw should not exceed four (4) amperes. Frequency =  $RPM/6.67$ .
- “**I**” Terminal - The Indicator lamp/ignition terminal carries full system voltage. Current draw should not exceed one (1) ampere. It is recommended that current is not drawn from this terminal.
- Ground Screw** – Ground lead ensures alternator is grounded and is strongly recommended for optimum performance.
- “**S**” **Remote Sense™** Terminal - Monitors battery system voltage at the battery or a common distribution point.

**Notice!** Do not connect anything but the Remote Sense™ terminal line to this terminal. **The “R” Terminal is not the Remote Sense™ terminal.**

- ◆ If installing this alternator with **Remote Sense™** terminal in a vehicle that does not have a sense line, **connect a fused (5 Amp) insulated wire** from the Alternator Voltage Sense terminal to the positive (+) battery terminal or the common distribution point at the starter solenoid battery (+) terminal. Connection of this terminal is best for optimum performance; however, the alternator will function without being connected.
- Use a **#16 gauge red insulated wire**, preferably with a 1/4” ID Convuluted Polyethylene Conduit. Also install a **standard inline fuse holder with a protective cap**. Use a low voltage automotive standard blade style fuse, 5 Amp.
- ◆ Only connect the Remote Sense™ terminal line to the Remote Sense™ terminal. **The “R” and “I” Terminals are Not the Remote Sense™ Terminal!**

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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