C.E. Niehoff & Co.

C540 Alternator with Regulator and External Rectifier

Installation Instructions

C540 Alternator

1. Install alternator on pad mount per vehicle manufacturer's instructions, including hardware specifications and torque.
2. Units are shipped with shaft collar, Belleville washer and nut. Remove and discard shaft collar. Install pulley and furnished Belleville washer. Torque nut to 135 Nm/ 100 lb. ft.

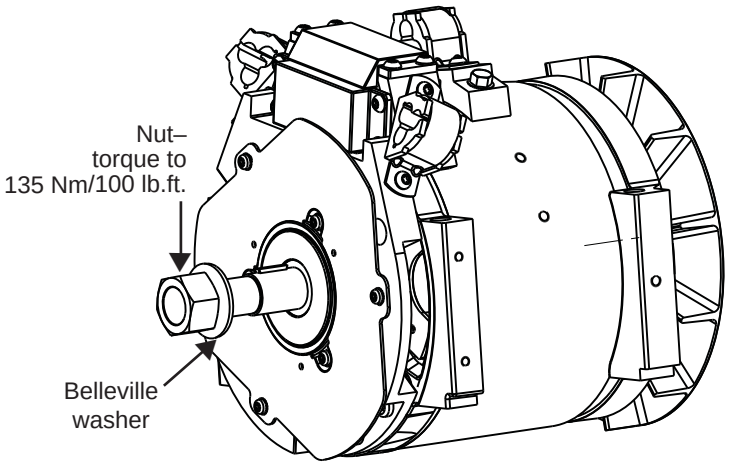

Figure 1 - C540 Alternator Installation

External Rectifier and Bracket

1. Mounting location of rectifier and bracket should provide proper cooling and protect rectifier from direct water, road debris, or chemicals.

   Rectifier can be mounted up to 6 feet away from alternator. Harnesses cannot be strung together to create different lengths.
2. Use hardened washers between aluminum surfaces and bolt heads and nuts. Bracket mounting bolts must have minimum .50 in. thread engagement. See Figure 2 for torque values.
3. Use a suitable adhesive such as Loctite® 222 or equivalent on screws. Follow manufacturer's instructions.

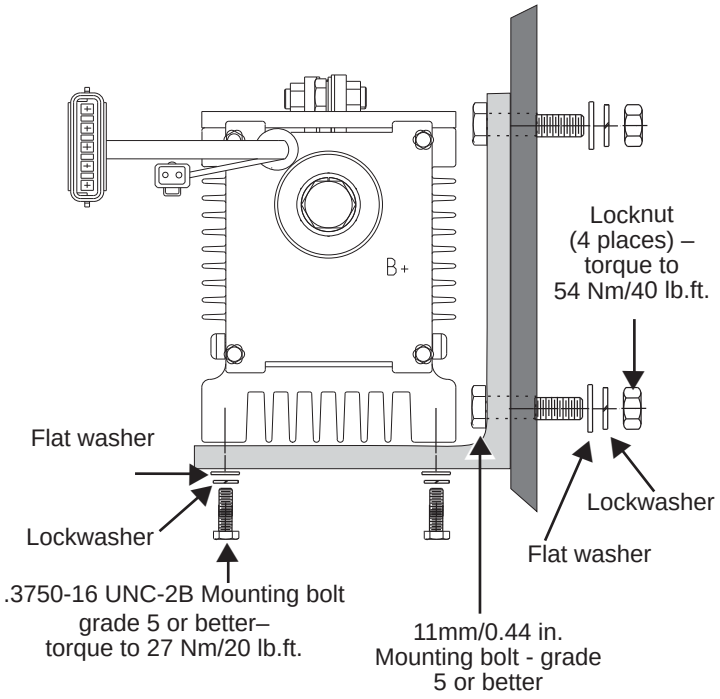

Figure 2 - Rectifier and Bracket Installation

Regulator

1. Mounting location of regulator must provide protection from water, road debris, or chemicals.

   Regulator can be located up to 18 inches away from the rectifier. If extension harness CEN A9-448 is added, the regulator can be moved an additional 43 in. away.
2. See Figure 3 for torque values.

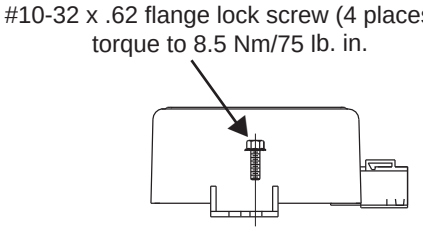

Figure 3 - Regulator Installation

Wiring Connections

1. Connect alternator phase cable into terminal block on top of alternator:
   a) Run phase cable through cable bracket mounted in one of three locations (LOC. A, B, or C). See Figure 4.
   b) Torque screws to 9 Nm/80 lb. in. to fasten cables to terminal block.
   c) Coat terminals with Dow Corning®1-2577 Low VOC RTV coating or equivalent. Do not use coating containing acetic acid (vinegar smell) on electrical components.
2. Connect remaining harnesses between components as shown in Figure 4. Use torque values shown.
3. Choose wire gauge for B+ and B– cables capable of handling maximum alternator output with minimum voltage drop.
4. Connect IGN terminal on regulator to ignition source through oil pressure switch, using #10 ring terminal. Torque #10-24 terminal nut to 3.4 Nm/30 lb. in.
5. If required, connect P terminal to tachometer or relay, using 1/4 in. ring terminal. Torque terminal nut to 3.4 Nm/30 lb.in.

Sealing Wiring Connections

1. On ALL metallic electrical connections to rectifier (including B+ and B– connections), alternator, regulator, and their harness connectors, apply Dow Corning® 1-2577 Low VOC RTV coating or equivalent. Do not use coating containing acetic acid (vinegar smell) on electrical components.
2. At regulator harness connections, apply coating as described in step 1, then wrap connection in electrical tape from sleeve to sleeve.

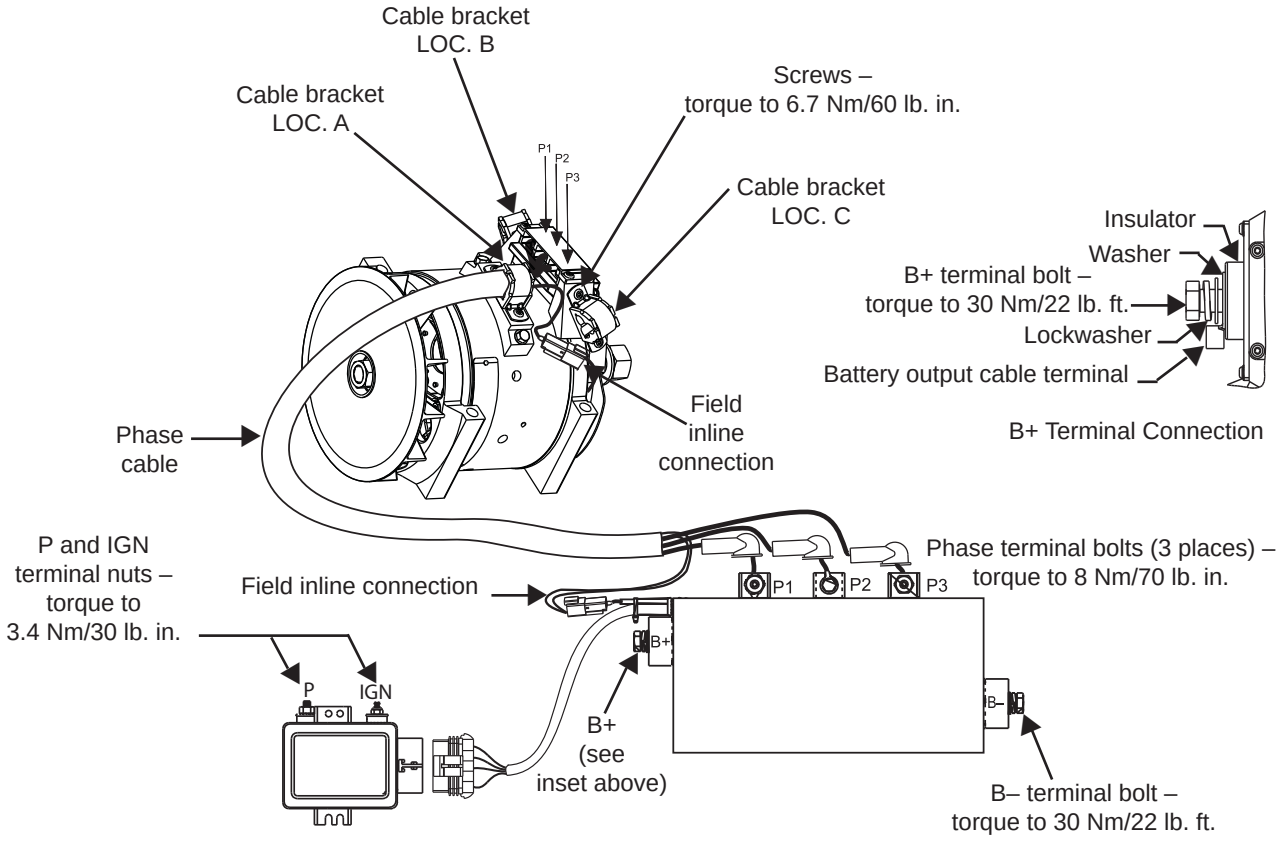

Figure 4 - Electrical Connections