The CEN C811 alternator is a 28 volt, 525 amp alternator. Follow these instructions to ensure proper installation.

1. If alternator does not include a factory-installed pulley, remove factory-installed shaft collar, disc spring washer and pulley nut. Discard shaft collar. Make sure Woodruff key is securely wedged in slot in shaft.

2. Install pulley on shaft and secure with disc spring washer and flange nut. Torque nut to 63 Nm/120 lb ft.

**CAUTION** Do not hammer pulley when installing it on shaft. Carefully slip-fit pulley to prevent shaft from moving out of place.

3. Install alternator on mount according to vehicle manufacturer specifications. Use hardened flat washers between mounting surfaces and bolt heads or lock washers. Mounting bolts should be Property Class Grade 5, minimum.

4. Tension belt to vehicle manufacturer recommendation. If an automatic belt tensioner is used, 80–120 lbs. of tension is normal.

5. Connect B+ battery cable from vehicle to B+ terminal on alternator as shown in Figure 1. Secure it with mounting hardware in stacking order shown in Figure 2. Torque mounting hardware to 30 Nm/22 lb ft.

6. Connect B- battery ground cable to ground terminal on alternator as shown in Figure 1. Secure it with mounting hardware in stacking order shown in Figure 3. Torque mounting hardware to 15 Nm/11 lb ft.

**CAUTION** All cables and wires must be supported within 300 mm in (12 in.) or terminals to prevent rotation, loosening, and damage to terminals.

7. If replacing regulator, or if regulator was supplied separately, install regulator according to instructions on page 2.

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**Figure 1: C811 Alternator Installation**

**Figure 2: B+ Terminal Hardware Stacking Order**

**Figure 3: B- Terminal Hardware Stacking Order**
Regulator Installation

The A2-336 is a conventional regulator. A2-368 and A2-379 are smart regulators. Smart regulators automatically optimize charge voltage for battery type, based on temperature if connected to a J1939/temperature-voltage sense harness. If a J1939/temperature-voltage sense harness is not connected to a smart regulator, regulator will operate at a fixed voltage determined by set point of voltage selection switch located on bottom of regulator. See Figure 4. Conventional regulators do not have 1939/temperature-voltage sense capability.

**CAUTION**

All cables and wires must be supported within 300 mm in (12 in.) to prevent rotation, loosening, and damage to terminals.

1. Before installing regulator, turn it over and make sure set point of voltage switch on bottom of regulator is appropriate for type of battery used. If necessary, change switch set point. See column 2 in Table 1 for set point options. Factory set point is position 1.

| Table 1: Regulator Voltage Selection Switch Settings |
|-----------------|-----------------|-----------------|
| Switch Setting  | Voltage (Remote Sensing Not Connected) | Battery Type (Remote Sensing Connected) |
| Position 1      | 27.5V           | Maintenance (8D) |
| Position 2      | 28.0V           | Maintenance-Free (Group 31) |
| Position 3      | 28.5V           | AGM             |
| Position 4      | 29.0V           | **DO NOT USE POSITION #4** |

2. Connect alternator-to-regulator harness to regulator. See Figures 5 and 6.

3. Mount regulator on alternator and secure with 4 flange lock screws. Torque screws to 8.5 Nm/75 lb. in.

4. Connect switchable ignition to IGN terminal to energize regulator.

**NOTICE**

Voltage should be present at IGN terminal when ignition is on or engine is running. No voltage should be present when ignition is off or engine is not running.

5. Connect D+ wire to D+ terminal, if required (DC voltage source 5A, maximum).

6. If used, connect tachometer to P terminal. P terminal taps AC voltage, typically half of charge voltage (3A max).

**NOTICE**

If using a controller, controller relay coil must be diode-protected and properly rated.

7. Plug alternator-to-regulator harness into regulator receptacle.


**TORQUE REQUIREMENTS**

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Torque Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGN stud</td>
<td>4.5 Nm/40 lb. in.</td>
</tr>
<tr>
<td>D+ stud</td>
<td>4.5 Nm/40 lb. in.</td>
</tr>
<tr>
<td>P stud</td>
<td>4.5 Nm/40 lb. in.</td>
</tr>
<tr>
<td>Mounting screws</td>
<td>8.5 Nm/75 lb. in.</td>
</tr>
</tbody>
</table>

If you have questions about your alternator or any of these instructions, or if you need to locate a Factory authorized Service Distributor, please contact us at:

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