



C633 Alternator Installation

CEN model C633 is a dual voltage, hinge mount, negative ground alternator rated at 28V/220A and 14V/50A. Follow these instructions to ensure proper installation.

1. Alternators not shipped with pulley are shipped with shaft collar, disc spring washer, and nut installed. Remove and discard shaft collar. Make sure Woodruff key is securely wedged in slot in shaft.
2. Install pulley with furnished flat washer and locknut. Torque pulley nut to 163 Nm/120 lb. ft. See Figure 1.

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

3. Install alternator on mounting bracket according to vehicle manufacturer's specifications. Use hardened flat washers between mounting surfaces and bolt heads or lockwashers. Mounting bolts should be Grade 5 (Metric Grade 8.8), minimum.
4. Tension belt to vehicle manufacturer's specifications.

5. Connect vehicle 28V battery positive cable to alternator +28V terminal. Install hardware on +28V terminal in stacking order shown in Figure 2. Torque to 15 Nm/11 lb. ft.
6. Connect vehicle 14V battery positive cable to regulator +14V terminal (if dual voltage 28/14V operation is required). Install hardware on +14V terminal in stacking order shown on page 2, Figure 5. Torque to 5.7 Nm/50 lb. in.
7. Connect vehicle B- cable to alternator B- terminal. Install B- hardware in stacking order shown in Figure 3. Torque to 9 Nm/7 lb. ft.

NOTICE Wire gauge must be capable of handling maximum alternator output with minimum voltage drop. All cables must be supported within 300 mm (12 in.) to prevent twisting, loosening, and damage to terminals.

8. Connect alternator-to-regulator harness and AC harness to regulator as shown in Figure 1.
9. If regulator was supplied separately, install regulator according to instructions on page 2.

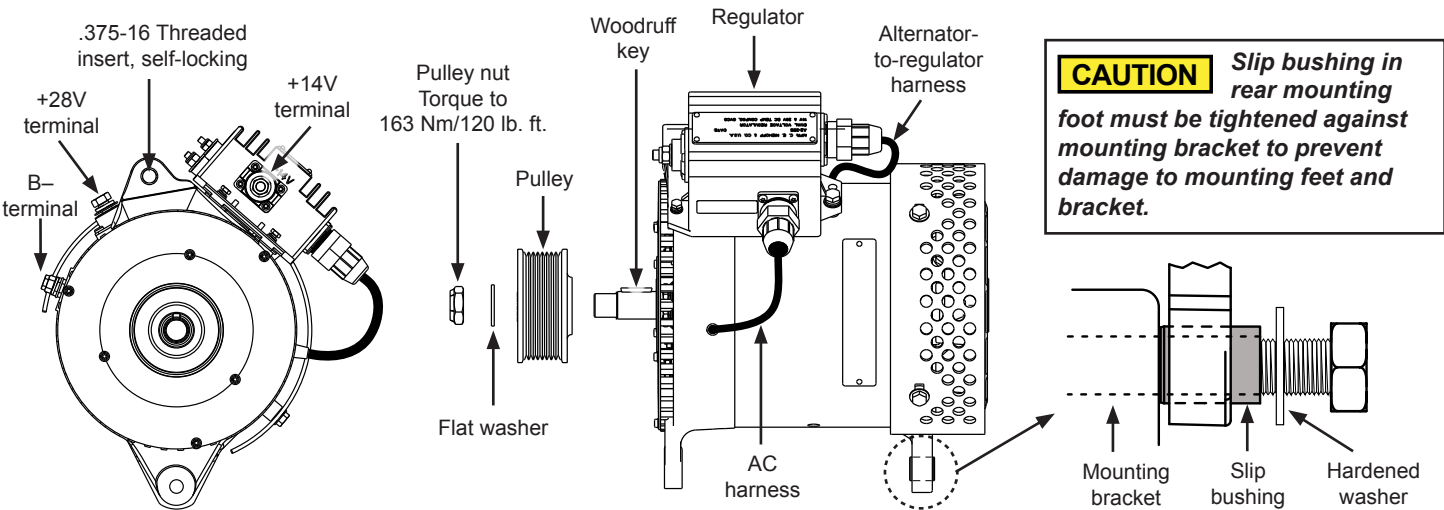


Figure 1: C633 Alternator Connections

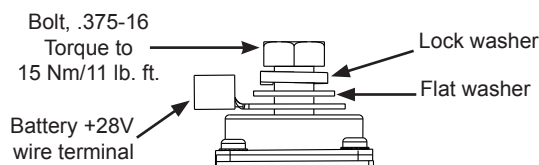


Figure 2: +28V Terminal Hardware Stacking Order

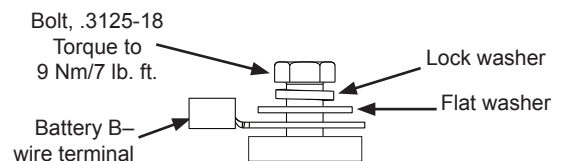


Figure 3: B- Terminal Hardware Stacking Order

Regulator Installation

Voltage regulator can be used for dual voltage 28/14V applications by connecting +14V terminal of regulator directly to +14V battery post in a 28V battery bank. Leave +14V terminal of regulator disconnected if using with 28V only system.

1. Mount regulator on alternator with included hardware and spacer as shown in Figure 4.
 - Torque the two 10-32 hex screws with lock washer and flat washer on alternator drive-end housing to 3.4 Nm/30 lb. in.
 - Place spacer between regulator housing and alternator shell and torque .25-28 hex screw with lock washer and flat washer to 8.5 Nm/75 lb. in.
2. Securely plug alternator-to-regulator harness into receptacle on regulator. See Figure 4 for receptacle location.
3. Connect regulator terminals as required by vehicle:
 - **+14V terminal** (if required) can be connected to the +14V battery terminal in the same battery string that the alternator +28V terminal is connected. This allows the charging system to equalize battery charging for dual voltage systems. See Figure 4 for terminal location. Install hardware on +14V terminal in stacking order as shown in Figure 5. Torque to 5.7 Nm/50 lb. in.

NOTICE

Wire gauge must be capable of handling 50 amps output with minimum voltage drop. All cables must be supported within 300 mm (12 in.) to prevent twisting, loosening, and damage to terminals.

- **IGN terminal** (required) must receive voltage from vehicle switched DC ignition source or multiplex in order to energize regulator. Torque to 3.4 Nm/30 lb. in. See Figure 4.

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.

- **P/AC terminal** (if required) taps AC voltage from alternator, typically half the charge voltage (3A maximum). P/AC terminal provides alternator RPM frequency at 10:1 ratio for use with tachometer. Torque terminal hardware to 3.4 Nm/30 lb. in. See Figure 4.

NOTICE

If using relay for R/P/AC circuit, coil must be diode-protected and properly rated.

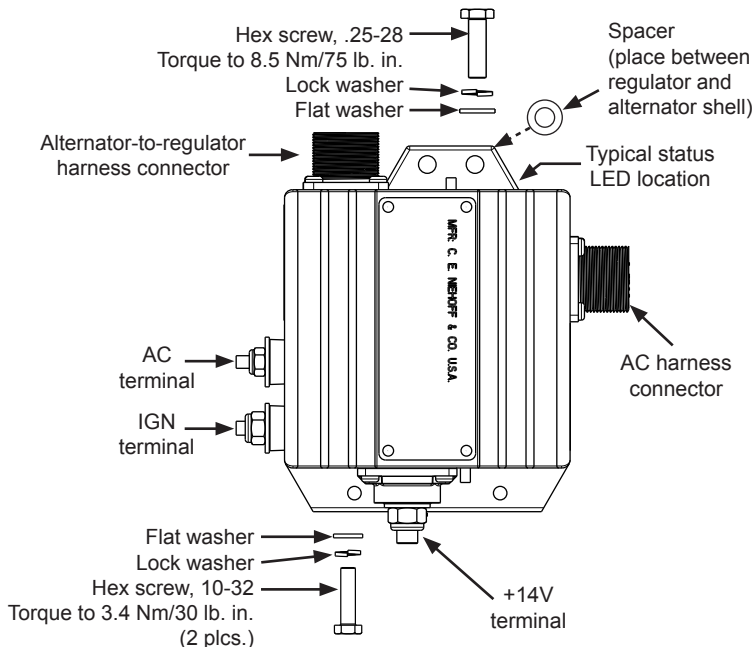


Figure 4: Typical Regulator Connections

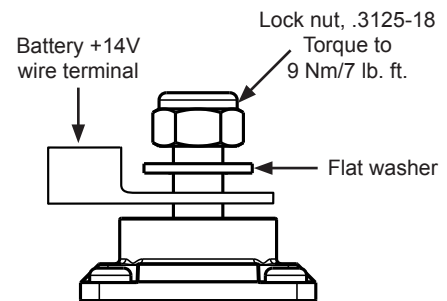


Figure 5: +14V Terminal Hardware Stacking Order

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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