



The C630 alternator is a negative ground, hinge mount alternator rated at 14V/350A. C630 is compatible with A2-121 regulator and A3-291 12-groove pulley or equivalent.

NOTICE If upgrading to C630 from N1221, N1222, A1-607, A1-608, or C619 with 12-groove pulley, original pulley must be replaced with A3-291. See CEN TB0016 for more information.

Follow these instructions to properly install model C630 alternator.

1. Alternators shipped without pulleys are shipped with a shaft collar, flat washer and lock nut installed on shaft. Remove nut and flat washer, then remove and discard shaft collar. Make sure Woodruff key is securely wedged in shaft channel.
2. Install pulley, flat washer, and locknut on shaft, in that order. See Figure 1. Torque pulley nut to 163 Nm/120 lb. ft.

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

3. Mount alternator on engine and torque mounting bolts to 88 Nm/65 lb. ft., or to engine manufacturer's specifications. Use hardened flat washers between mounting surfaces and bolt heads or lockwashers. Mounting bolts should be Grade 5, minimum.
4. Install belt on pulley and tension belt to engine manufacturer's recommendation (typically 80-120 lbs).
5. Mount regulator on alternator anti-drive end (ADE) and torque mounting screws to 8.5Nm/75 lb. in.
6. Connect harness from alternator into regulator until connector tab locks into place.

See page 2 for electrical connections

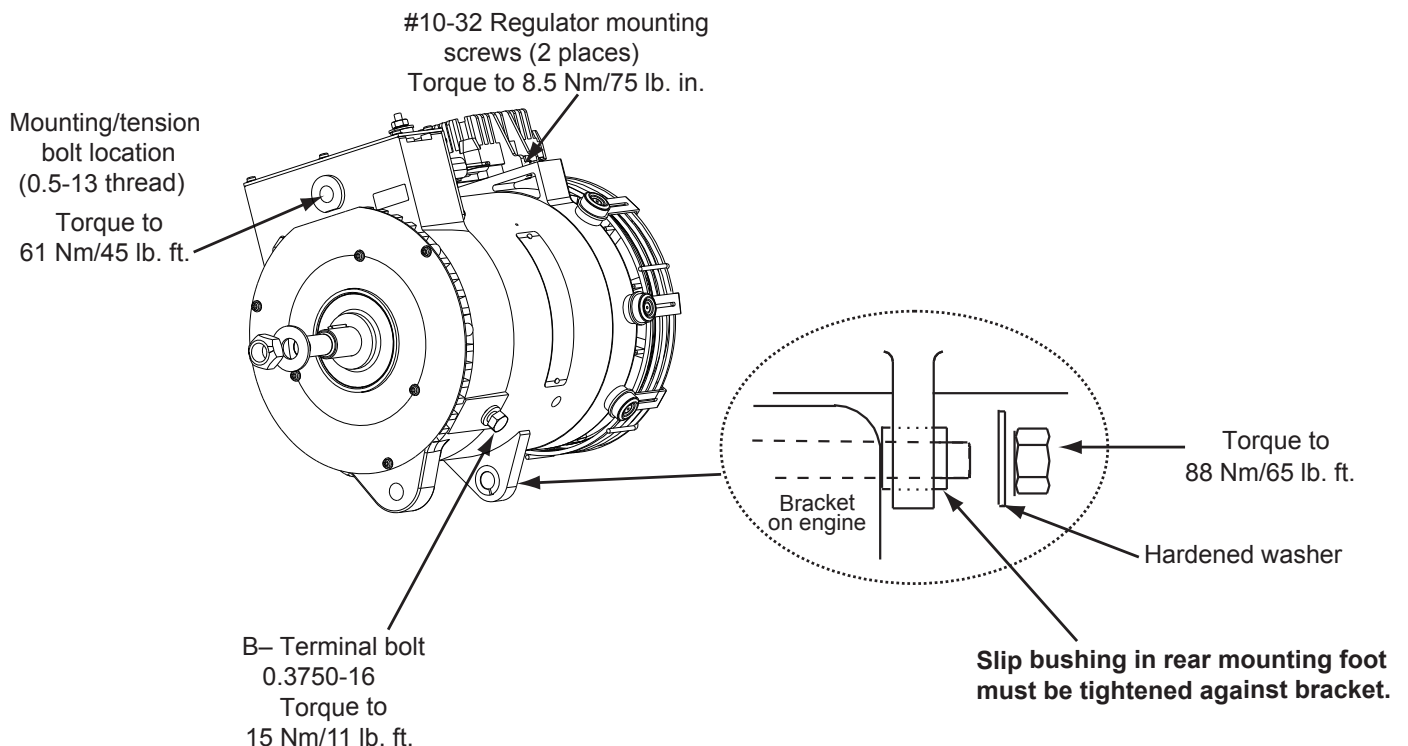


Figure 1: Alternator Installation Details

7. Connect vehicle B+ cable to alternator B+ terminal. Install hardware in stacking order shown in Figure 2. Torque B+ terminal bolts to 30 Nm/22 lb. ft.
8. Connect vehicle B- cable to alternator B- terminal. Install cable hardware in stacking order shown in Figure 3. Torque B- terminal bolts to 9 Nm/80 lb. in.

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

9. Connect the following terminals as required by vehicle:
 - **IGN terminal** (required) must receive voltage from vehicle DC ignition source, oil pressure switch, or multiplex in order to energize regulator. Torque to 2.3 Nm/20 lb. in. See Figure 4.

NOTICE Voltage should be present at regulator 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 8.5 Nm/75 lb. in. See Figure 4.

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

- **F+ terminal:** If using a battery isolator in the system, connect F+ terminal directly to main battery bank positive terminal using appropriate wire gauge for 15 amp maximum load. If NOT using a battery isolator, F+ may be fixed directly to alternator B+ terminal using minimum 14 gauge wire. See Figure 4.

NOTICE Failure to connect F+ terminal will create a no-charge condition.

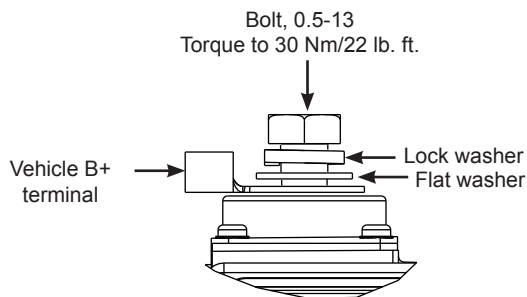


Figure 2: B+ Terminal Hardware Stacking Order

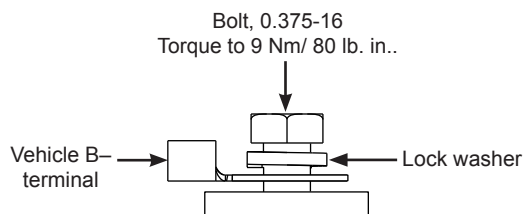


Figure 3: B- Terminal Hardware Stacking Order

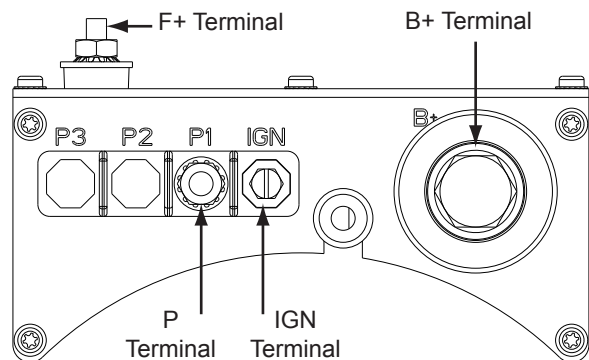


Figure 4: Vehicle Electrical Connections

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

C. E. Niehoff & Co. • 2021 Lee Street • Evanston, IL 60202 USA
 TEL: 800.643.4633 USA and Canada • TEL: 847.866.6030 outside USA and Canada • FAX: 847.492.1242
 E-mail us at service@CENiehoff.com