



N1618 Alternator Installation

CEN model N1618 is a custom flange mount, negative ground alternator rated at 28V/650A.

Follow these instructions to ensure proper installation.

1. Remove shaft collar, flat washer, and 0.5-13 UNC bolt from drive end of shaft.
2. Install drive coupling (not included) with furnished flat washer and bolt. Torque Bolt to 163 Nm/120 lb. ft. See Figure 1.

CAUTION Do not hammer drive coupling when installing on shaft. Make sure Woodruff key is fully seated and square, and carefully slip-fit coupling over shaft to prevent Woodruff key from moving out of place.

CAUTION Do not use fan nut or fan blades to keep shaft from spinning while fastening drive coupling. Damage to shaft and/or fan will occur.

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

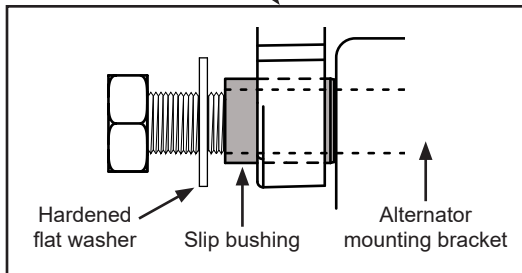
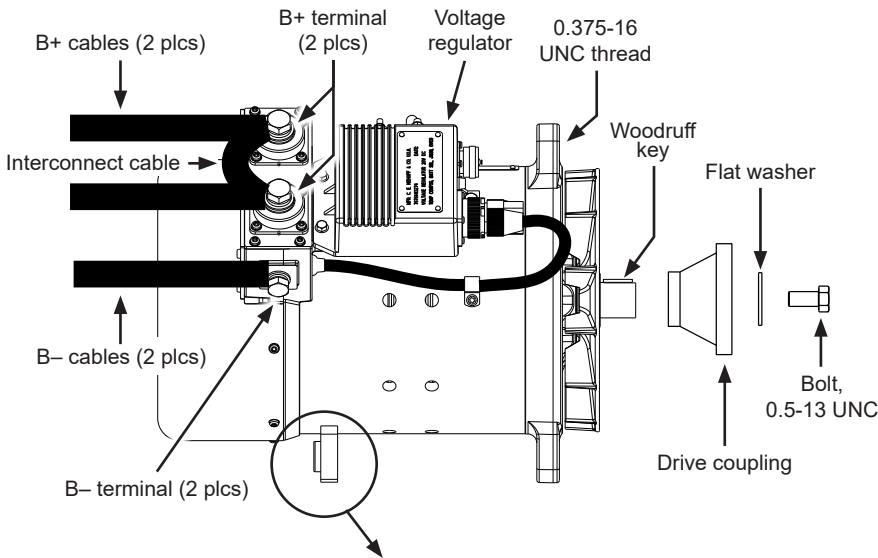


Figure 1: N1618 Alternator Installation

CAUTION Slip bushing in rear mounting foot must be tightened against mounting bracket to prevent damage to mounting feet and bracket. See detail in Figure 1.

4. Fasten drive coupling to engine according to engine/vehicle manufacturer's specifications.
5. Connect vehicle B+ cables to both alternator B+ terminals and install terminal hardware in stacking order shown in Figure 2. Torque hardware to 30 Nm/22 lb. ft.
6. Connect vehicle B- cable to both alternator B- terminal and install terminal hardware in stacking order shown in Figure 3. Torque hardware to 15 Nm/11 lb. ft.

NOTICE Wire gauge for alternator B+/B- cables must be capable of handling maximum alternator output with minimum voltage drop. All cables must be supported within 305 mm (12 in.) of termination to prevent twisting, loosening, and damage to terminals.

NOTICE Interconnect cable is required between positive output terminals. Both positive leads must be connected together at battery potential when alternator is installed in vehicle and during operation.

7. Install regulator according to instructions on page 2.

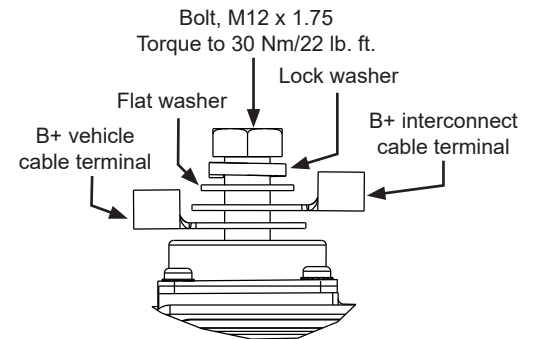


Figure 2: B+ Terminal Hardware Stacking Order

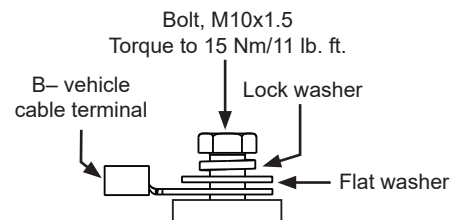


Figure 3: B- Terminal Hardware Stacking Order

Regulator Installation

Voltage regulator for N1618 has two negative temperature compensating charge profiles for SLA batteries only or SLA batteries combined with silent watch Li-ion batteries. Charge profiles are selected via J1939 and have continuously variable voltage range of 26.6-28.5 \pm 0.2V. See regulator model-specific characteristics drawings for more detailed information. Follow instructions below for proper regulator installation where required.

NOTICE Switch on bottom of regulator is not used.

1. Mount regulator on alternator anti-drive end housing and shell as shown in Figure 1 on page 1, using included hardware and spacer shown in Figure 4 below. Torque all mounting screws to 8.5 Nm/75 lb. in.
2. Securely plug alternator-to-regulator harness into receptacle on regulator. See Figure 5.
3. Connect regulator terminals as required by vehicle:
 - **Regulator IGN terminal** (required) must receive voltage from vehicle DC ignition source or multiplex system in order to energize charging system. Alternatively, this signal can be connected via pin K on J1939/IGN connector. See Figure 5.

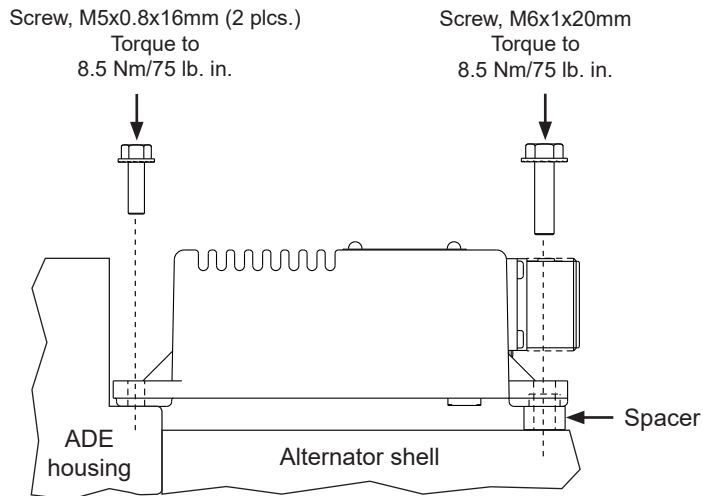


Figure 4: Install Regulator

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

- **Regulator R/P/AC terminal** (if required) taps AC voltage from alternator, typically half the charge voltage (3A maximum). R/P/AC terminal provides alternator RPM frequency at 10:1 ratio for use with tachometer. Torque terminal hardware to 4.5 Nm/40 lb. in. See Figure 5.

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

4. Connect vehicle J1939/IGN communication harness to J1939/IGN connector. See Figure 5.

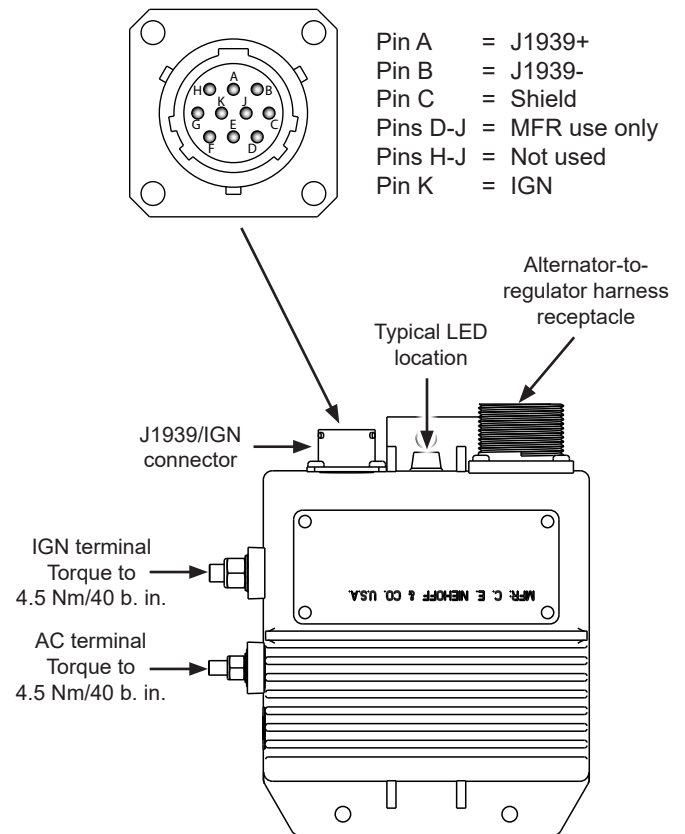


Figure 5: Regulator Physical Features

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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