C.E. Niehoff & Co.
CHARGING AND POWER MANAGEMENT SOLUTIONS

N1624 Alternator with N3298 Regulator Installation Instructions

N1624 Alternator Installation

The N1624 alternator is a 28 volt, 550 amp alternator. Follow these instructions to ensure proper installation.

1. Alternators without pulleys are shipped with a shaft collar, disc spring washer and nut installed on shaft. Remove flange nut and disc spring washer, then remove and discard shaft collar. Make sure Woodruff key is securely wedged in shaft channel.
2. Install pulley on shaft and secure with disc spring washer and flange nut. Torque nut to 163 Nm/120 lb. ft.

   CAUTION ***Do not hammer pulley when installing it on shaft. Damage to alternator may occur. Slip-fit pulley over shaft to prevent shaft from moving out of place.***
3. Install alternator on engine mounting bracket according to 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 vehicle manufacturer's recommendation (typically 80-120 lbs.).

   CAUTION ***All cables and wires must be supported within 300 mm in (12 in.) or terminals to prevent rotation, loosening, and damage to terminals.***
5. Connect battery B+ cable to alternator B+ terminal. Install terminal hardware in stacking order shown in Figure 2. Torque hardware to 30 Nm/22 lb ft.
6. Connect battery B– cable to alternator B– terminal. Install terminal hardware in stacking order shown in Figure 3. Torque hardware to 15 Nm/11 lb ft.
7. Install regulator according to instructions on page 2.

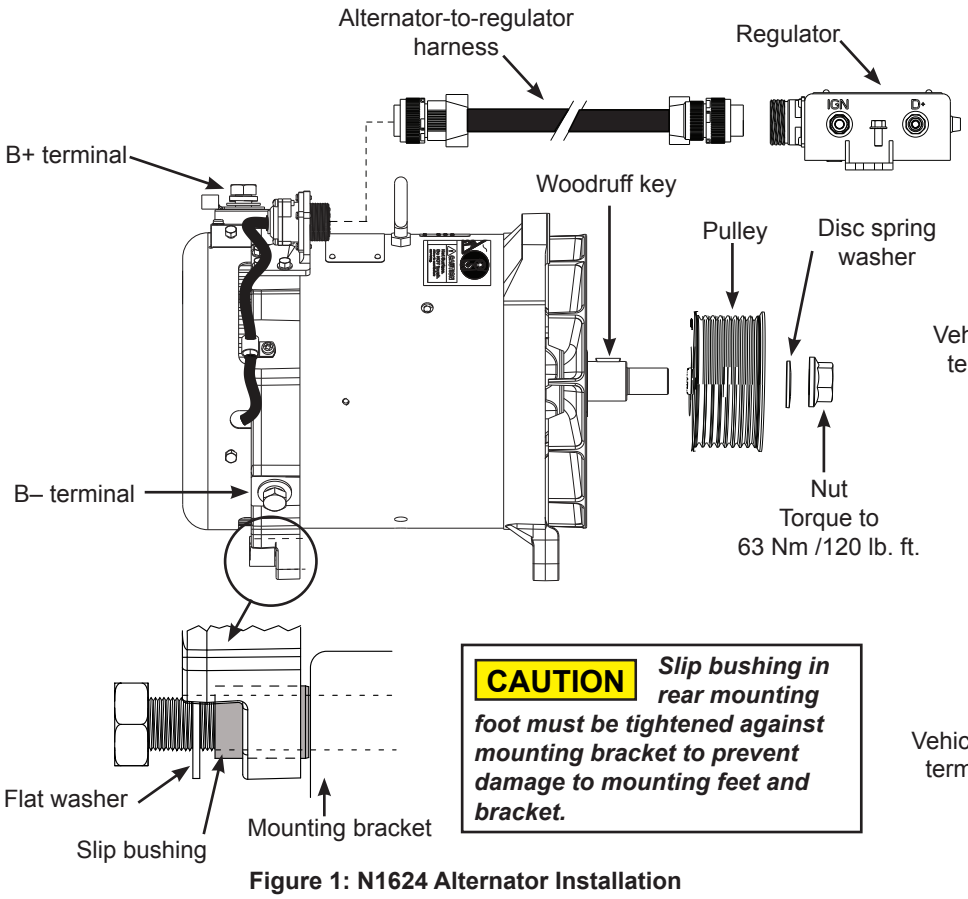

Figure 1: N1624 Alternator Installation

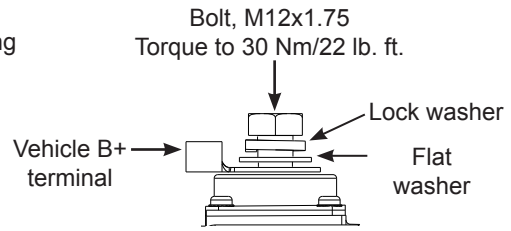

Figure 2: B+ Terminal Hardware Stacking Order

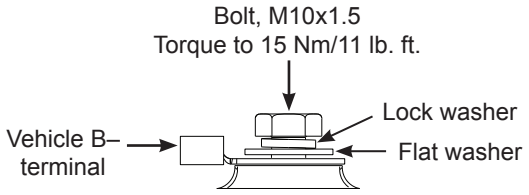

Figure 3: B– Terminal Hardware Stacking Order

N3298 Regulator Installation

The N3298 is a smart regulator that automatically optimizes charge voltage for battery type, based on temperature if connected to a J1939/temperature-voltage sense harness.

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 switch on back of regulator is set for battery type used. If necessary, change switch setting. See Table 1 for settings. Factory setting is position 1.

Switch Setting	Temperature Compensation For
Position 1	Hawker Battery in engine compartment
Position 2	Hawker Battery outside engine compartment
Position 3	6TMF Battery in engine compartment
Position 4	6TMF Battery outside engine compartment

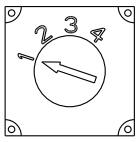

Figure 4: Temperature Compensation Switch (Factory setting is 1)

2. Remote mount regulator and secure with 4 hex screws. Torque screws to 8.5 Nm/75 lb. in. .
3. Connect regulator to charging system as follows:
   a. Connect switchable ignition to regulator IGN terminal, if required to energize regulator.

   NOTICE Ignition 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.

   b. Connect D+ wire to D+ terminal, if required (DC charge voltage source, 5 A maximum).
   c. Connect tachometer to P terminal, if required. P terminal taps AC voltage, typically half the charge voltage (3A maximum).

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

   d. Plug alternator-to-regulator harness into receptacles on regulator and alternator.
   e. If used, plug J1939/temperature-voltage sense harness into J1939 receptacle on regulator. Harness sold separately.

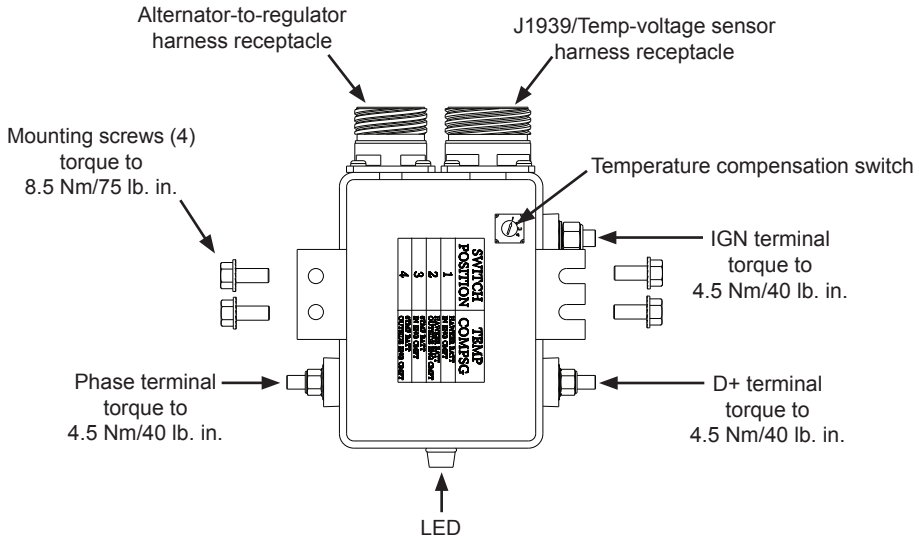

Figure 3: N3298 Regulator

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