



### Alternator Installation

The N1609 alternator is a 28 volt, 570 amp alternator. Follow these instructions to properly install a N1609 alternator:

1. Remove nut and disc spring washer from shaft, then remove and discard shaft collar.
2. Make sure Woodruff key is securely wedged in shaft slot.
3. Install pulley, disc spring washer, and nut 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. Carefully slip-fit pulley over shaft to prevent shaft from moving out of place.

4. Mount alternator on engine and torque mounting bolts to 88 Nm/65 lb.. ft., or to engine manufacturer's specifications.

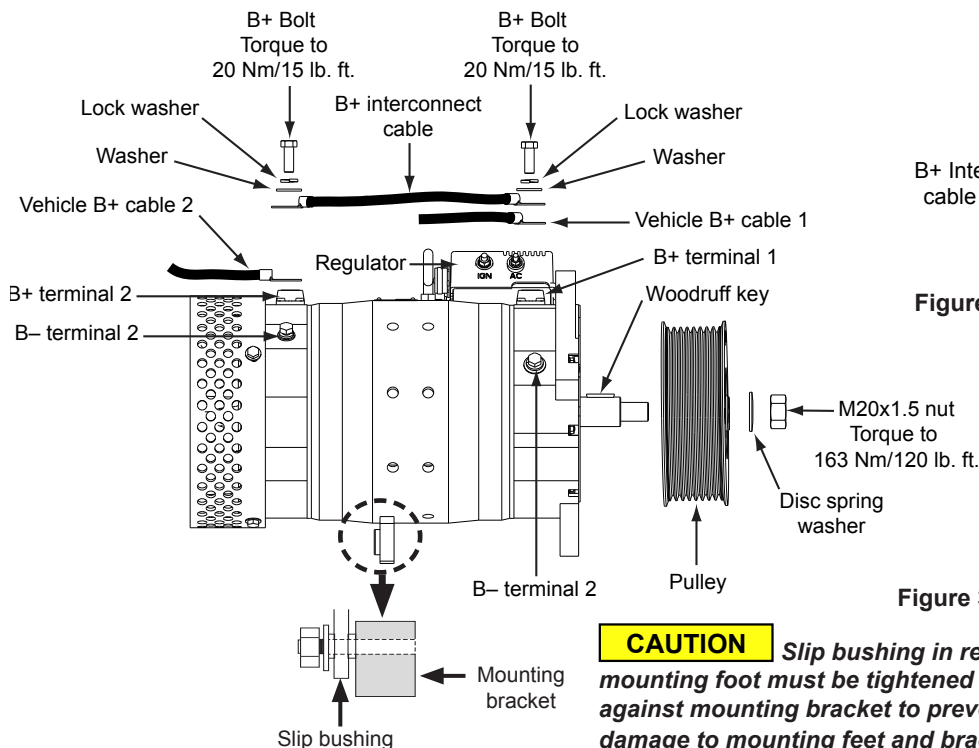


Figure 1: N1609 Alternator Installation

**CAUTION** Slip bushing in rear mounting foot must be tightened against mounting bracket to prevent damage to mounting feet and bracket.

5. Install belt on pulley and tension belt to engine manufacturer's recommendation (typically 80-120 lbs.).

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

6. Connect vehicle B+ cables and interconnect cable to alternator B+ terminals as shown in Figure 1. See Figure 2 for B+ hardware stacking order. Torque B+ bolts to 20 Nm/15 lb. ft.

**NOTICE** Both B+ terminals on alternator must be linked by interconnect cables. Interconnect cables are not part of vehicle cabling.

7. Connect vehicle B- cables to alternator B- terminals. Install cable hardware in stacking order shown in Figure 3. Torque B- terminal bolts to 20 Nm/15 lb. ft.

**NOTICE** Both vehicle B- cables must be connected to common ground.

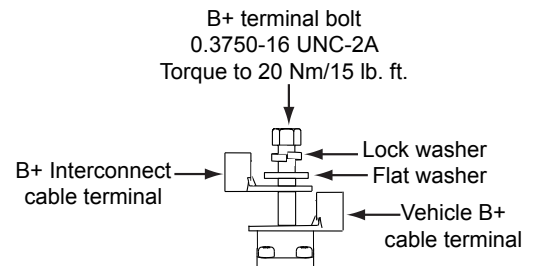


Figure 2: B+ Terminal Hardware Stacking Order

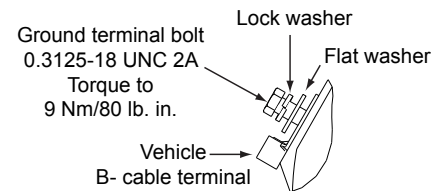


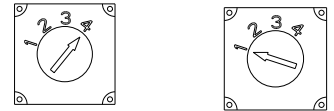
Figure 3: B- Terminal Hardware Stacking Order

## Regulator Installation

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

1. Before installing the regulator, turn it over and make sure set point of switch on bottom of regulator is appropriate for type of battery used. If necessary, change switch set point. See Table 1 for set point options. Factory set point for regulators N3240, N3256, and N3276 is position 4. Factory set point for regulator N3243 is position 1. See Figure 4.

SWITCH POSITION	TEMPERATURE COMPENSATING
1	Hawker Battery in Engine Compartment
2	Hawker Battery Outside Engine Compartment
3	6TMF Battery in Engine Compartment
4	6TMF Battery Outside Engine Compartment



N3240, N23256, N3276 N3243  
Figure 4: Factory Voltage Switch Settings

2. Mount regulator on alternator. Install washer, lockwasher, and #10-32 UNF-2 screw in rear mounting tab holes and torque to 3.4 Nm/20 lb. in. Install washer, lockwasher, and 0.2500-28A screw in front mounting tab hole and torque to 8.5 Nm/75 lb. in. See Figure 5.
3. Connect switchable ignition to IGN terminal, if required to energize regulator. See Figure 5.

### 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.

4. If used, connect tachometer to AC terminal. AC terminal taps AC voltage, which is typically half the charge voltage (3A maximum).

### NOTICE

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

5. Plug alternator-to-regulator interconnect harness into receptical on regulator and alternator.
6. If installing a smart regulator with a J1939/temperature-voltage sense harness, plug harness into 10 pin J1939 receptical on regulator. J1939 harness sold separately.

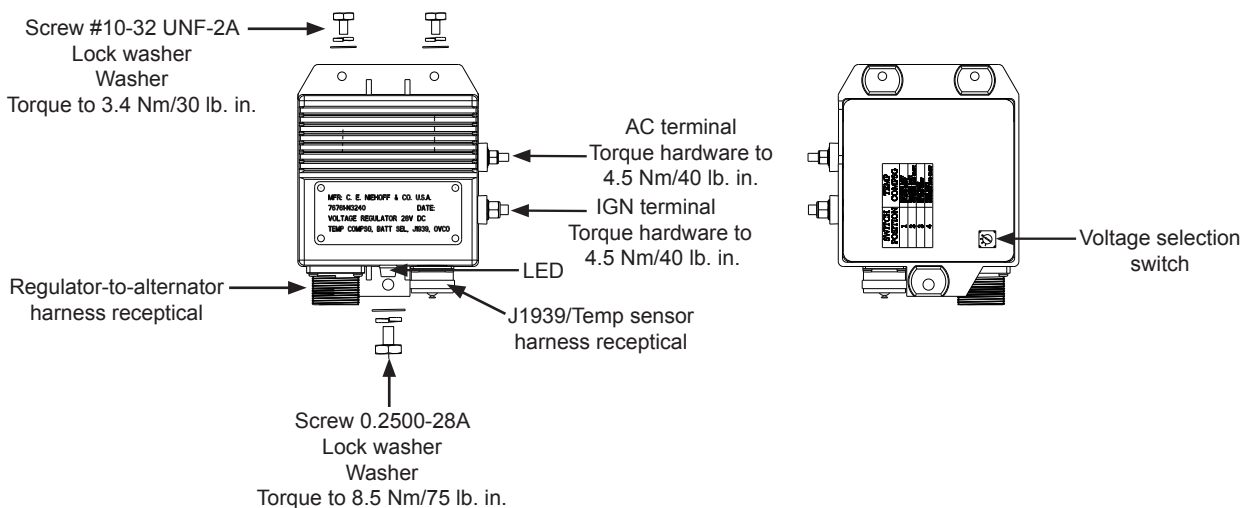


Figure 5: N3240 / N3243 / N3256 / N3276 Regulator

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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