



See CEN C130/C131/C132 Combo Guide SM40 for parts and service information. Available at www.CENiehoff.com.

WARNING This symbol is used to indicate presence of hazards that can cause severe personal injury, death or substantial property damage.

CAUTION This symbol is used to indicate presence of hazards that can cause minor personal injury or property damage.

WARNING This alternator contains no serviceable parts except pulley, fan, louvered end cover, and regulator. Manufacturer's hazardous location certification is void if repaired except for the pulley, fan, louvered end cover, and regulator which may be replaced with factory parts.

WARNING Explosion hazard—substitution of components may impair suitability for Class I, Division 2.

ADVERTISSEMENT Risque d'explosion—la substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Division 2.

WARNING Explosion hazard—do not replace any component unless power has been switched off or the area is known to be non-hazardous.

ADVERTISSEMENT Risque d'explosion—couper le courant ou s'assurer que l'emplacement est désigné non dangereux avant de remplacer le composants.

WARNING Explosion hazard—do not disconnect equipment unless power has been switched off or area is known to be non-hazardous.

ADVERTISSEMENT Risque d'explosion—avant de déconnecter l'équipement, couper le courant ou s'assurer que l'emplacement est désigné non dangereux.

Installation Instructions

WARNING Improper installation of alternator in an explosive environment can cause severe personal injury, death, or substantial property damage. Alternator must be installed by a qualified person trained in the installation of alternators in explosive atmospheres. For CSA and UL classifications and atmospheric conditions, see page 2 of these instructions.

- 1. Mount alternator on a suitable bracket and secure with hardware per alternator drawing on page 2 of these instructions.

- 2. Remove anti-drive end (ADE) louvered end cover from the alternator.
- 3. One of the following two alternator circuits described below is required to operate alternator.

a. If alternator is to be self-energized, be sure the link is connected between B+ stud and IGN terminal (as shipped). This alternator relies on residual magnetism to operate. Observe all applicable safety procedures when performing the following operation: If necessary, restore lost magnetism by connecting test light between B+ stud and R terminal for 1-3 seconds while alternator shaft IS NOT TURNING and battery is connected to illuminate test light. Check for magnetic field at pulley. If magnetized, remove test light, start alternator, and test.

b. If the alternator is to be energized through ignition key, connect energizing signal lead directly to IGN terminal and remove link between B+ stud and IGN terminal. Torque IGN terminal bolt to 2 Nm/18 lb. in. This alternator relies on residual magnetism to operate. Ensure battery voltage is present at IGN terminal. Observe all applicable safety procedures when performing the following operation: If necessary, restore lost magnetism by connecting test light between B+ stud and R terminal for 1-3 seconds while alternator shaft IS NOT TURNING and battery is connected to illuminate test light. Check for magnetic field at pulley. If magnetized, remove test light, start alternator, and test.

- 4. Connect B+ cable to B+ stud on alternator. See wire chart on page 3 for correct cable size and length. Torque terminal nut to 9 Nm/80 lb. in.
- 5. Connect R lead to R terminal on alternator if required for vehicle operation (optional connection). Torque R terminal bolt to 2 Nm/18 lb. in.
- 6. Connect B- cable to B- terminal stud on alternator (B- is an isolated ground). B- cable gauge should be same as gauge of battery positive cable. Torque terminal nut to 9 Nm/80 lb. in.

CAUTION Supply wires suitable for rated load at 90°C ambient shall not exceed 200°C.

ATTENTION Utiliser des câbles d'alimentation appropriée pour 200°C.

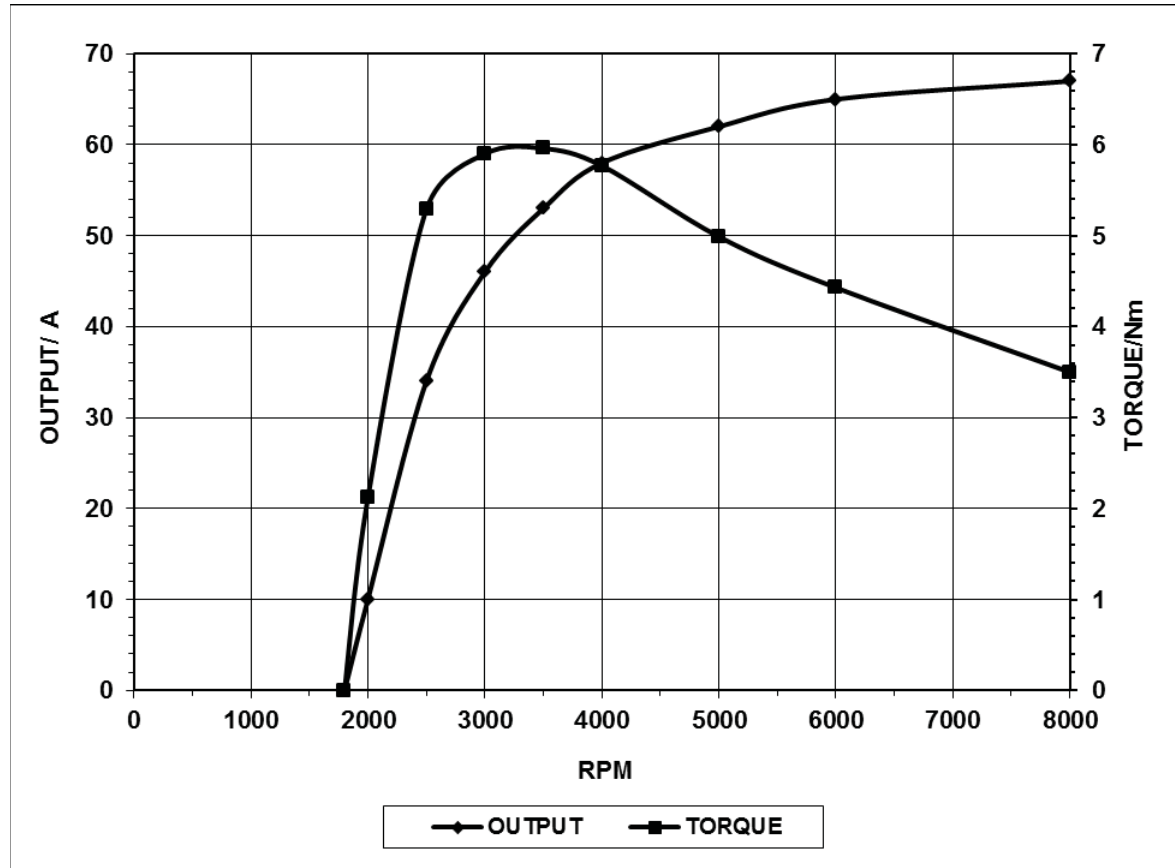
- 7. Perform a final inspection on the installation.
- 8. Re-install ADE louvered end cover on alternator. Position louvers consistent with deflection of rain or fluids during normal operating conditions. Fasten with screws and washers in four places. Use a suitable adhesive such as Loctite® 222. Follow manufacturer's instructions. Torque screws to 3.4 Nm/30 lb. in.
- 9. Install suitable alternator drive belt.
- 10. Start engine. Confirm operation of charging system meets specification.

ALTERNATOR CHARACTERISTICS FOR 28 VOLTS/ 60 AMPS:

APPLICABLE MODELS: C130, C132

OUTPUT CURVE: OUTPUT AMPERES VERSUS ALTERNATOR SHAFT SPEED IN RPM AT 28.0 VOLTS.

TORQUE CURVE: DRIVE TORQUE IN Nm VERSUS ALTERNATOR SHAFT SPEED IN RPM REQUIRED TO PRODUCE OUTPUT CURVE.



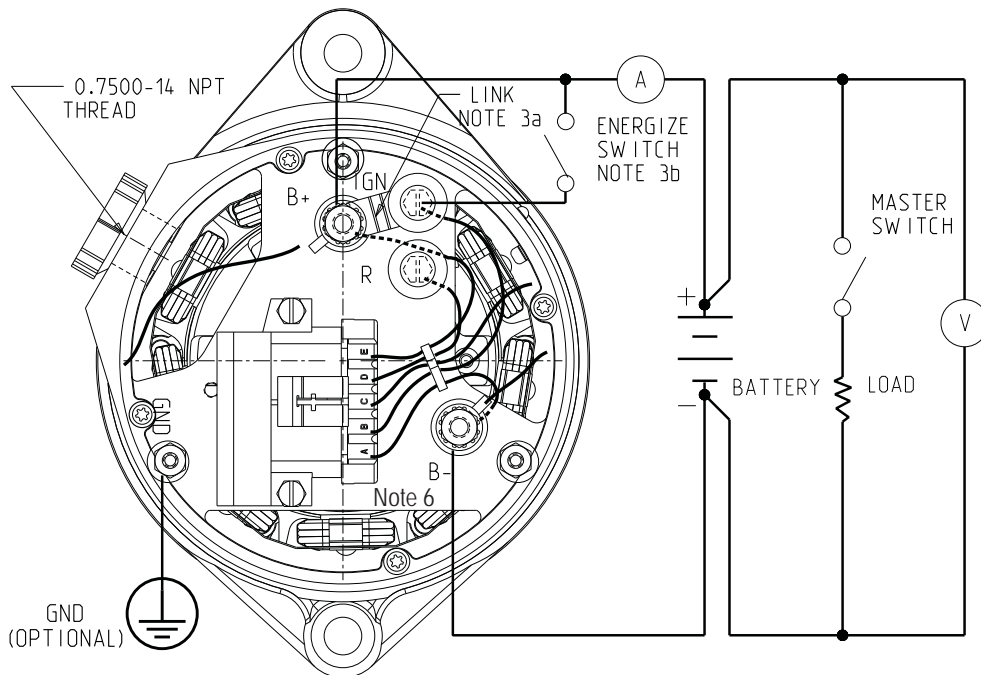
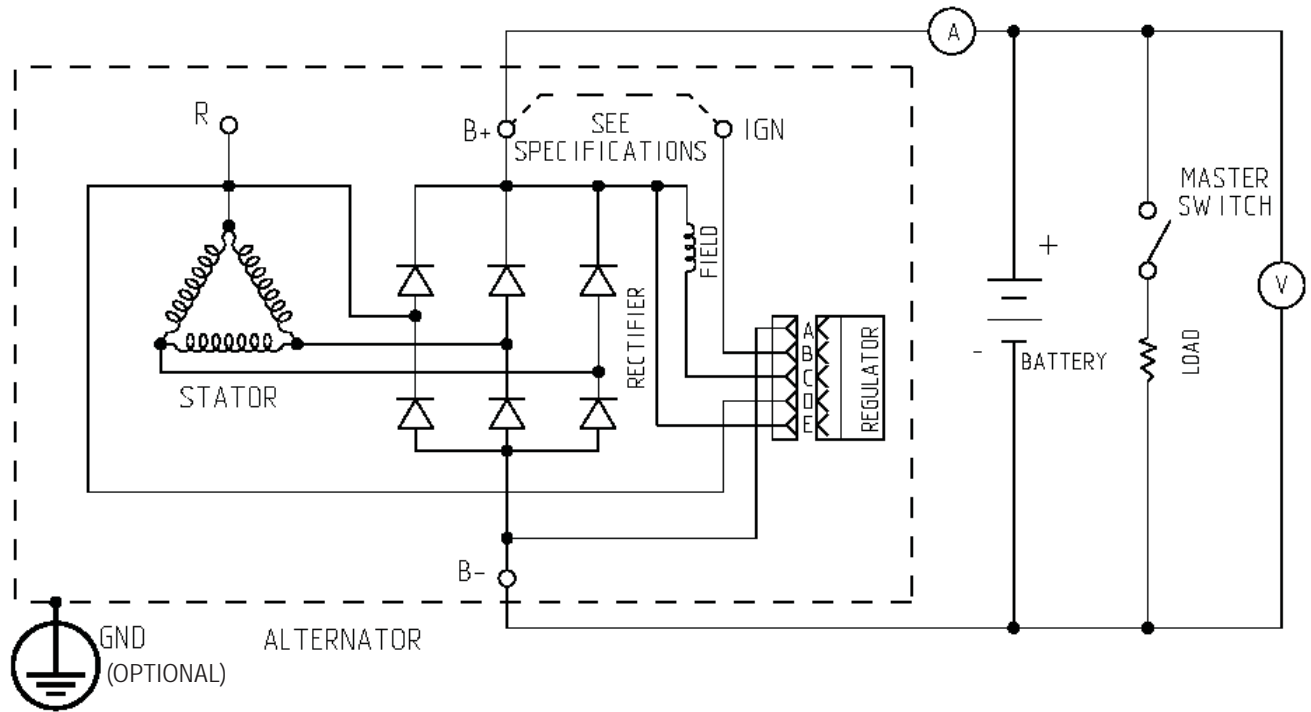
ALL MEASUREMENTS DEPICTED ON PERFORMANCE CURVES ARE TAKEN AT 22°C/72°F AMBIENT TEMPERATURE (UNLESS OTHERWISE SPECIFIED) AND A STABILIZED MACHINE TEMPERATURE AT MAXIMUM OUTPUT CURRENT WITH VOLTAGE CONSTANT AS SPECIFIED PER SAE J56/ISO 8854.

ABBREVIATIONS:

RPM REVOLUTIONS PER MINUTE

Nm NEWTON-METER

Conversion: 1 Nm = 8.85 Pound Inch (LBIN)



WIRE GAUGE/LENGTH TABLE (28V 60A ALTERNATOR) 0.4 VOLTAGE DROP AT 60A BETWEEN: ALT. B+ AND BAT B+ OR ALT B- AND BAT B-	
MINIMUM WIRE GAUGE AWG (mm ²)	MAXIMUM LENGTH OF WIRE FEET (METERS)
8 [8]	5 [1.5]
6 [14]	8 [2.9]
4 [20]	13 [4.0]
2 [35]	21 [6.4]
1 [40]	26.5 [8.1]
1/0 [60]	33.5 [10.2]
2/0 [70]	42.5 [13.0]
3/0 [95]	53.5 [16.3]

If you have questions about your alternator or any of these instructions, or if you need to locate a Factory Authorized Service Dealer, 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