



CAUTION

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

NOTICE

This symbol is used to indicate special instructions on installation, operation, or maintenance that are important, but not related to personal injury hazards.

- A2-357 regulator is flat-temperature compensated.

NOTICE

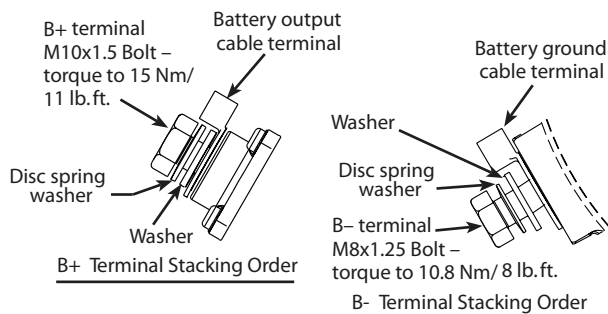
A2-357 28 V regulator can be used with or without temperature-voltage sense harness from the vehicle.

- When temperature-voltage sense harness is not connected, regulator will operate in fixed voltage setting determined by the select switch position on the bottom of the regulator. See column 2 in Table 1.
- When temperature-voltage sense harness is connected, regulator will automatically optimize the charge voltage for battery type based on temperature. See column 3 in Table 1 and select switch position based on battery type.

Regulator voltage selection switch is factory-set to Position 2. To change voltage setting, remove regulator, turn regulator over, and set switch to position that corresponds to desired voltage (see NOTICE above and refer to Table 1). Re-install regulator on alternator. Torque screws to 12.5 Nm/110 lb. in.

Table 1 — A2-357 Regulator Voltage/Battery Switch Position

Switch Position	T-VS Harness Not Connected (Voltage Select)	T-VS Harness Connected (Battery Select)
1	27.5 V	Maintenance (D Category)
2	28.0 V	Maintenance-free (Group 31)
3	28.5 V	AGM
4	29.0 V	DO NOT USE POSITION # 4



- Units are shipped with shaft collar, belleville washer, and nut. Remove and discard shaft collar. Make sure woodruff key is securely wedged in slot in shaft. Install pulley and furnished belleville washer. Torque nut to 135 Nm/100 lb. ft.

CAUTION

Do not damage pulley when installing it on the shaft. Carefully slip fit the pulley to prevent shaft from moving backwards.

- Install alternator on pad mount per vehicle manufacturer's instructions, including hardware specifications and torque.
- Follow vehicle manufacturer's recommendations for belt tension.
- Regulator electrical connections (see Figure 1):
 - Make sure alternator-to-regulator harness plug is secure in regulator receptacle.
 - P terminal can tap AC voltage, typically half the charge voltage. When required, connect P terminal to tachometer or relay. Use proper ring terminal. Torque terminal nut to 4.5 Nm/40 lb. in.
 - If not using temperature-voltage sense harness, keep cap on regulator. If using temperature-voltage sense harness, follow instructions provided with harness.
- Alternator electrical connections (Figure 1):
 - Connect battery positive cable from vehicle to alternator B+ terminal in stacking order shown.
 - Connect ground cable from vehicle to alternator B- terminal in stacking order shown.

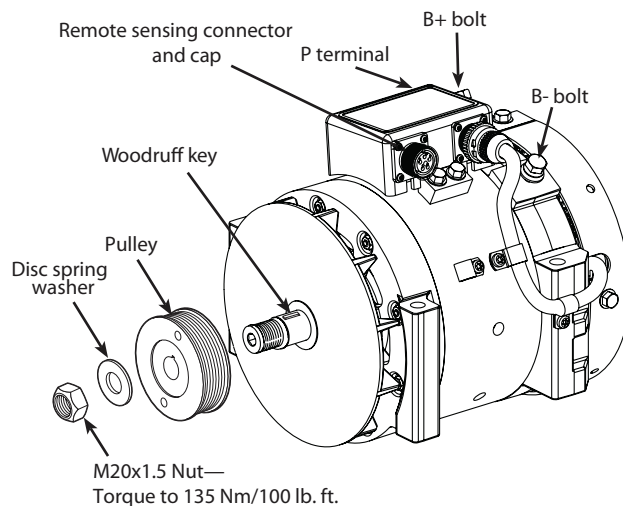


Figure 1—Alternator with Regulator Installation Details

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

A2-357 Regulator Installation

The A2-357 regulator is flat-temperature compensated and can be used with or without temperature-voltage sense/J1939 harness from vehicle.

When a temperature-voltage sense/J1939 harness is connected, regulator will automatically optimize charge voltage for battery type, based on temperature. See column 3 in Table 1.

When a temperature-voltage sense/J1939 harness is not connected, regulator will operate at a fixed voltage determined by setpoint of switch located on back of regulator. See column 2 in Table 1.

1. Regulator voltage selection switch is factory-set to Position 2. To change voltage setting, turn regulator over and select appropriate switch position.

NOTICE

For parallel operation, ensure that interconnect cable between both regulators is securely connected and voltage selection switch on both regulators is set to same setting.

Switch Setting	Voltage (Harness Not Connected)	Battery Type (Harness Connected)
Position 1	27.5V	Maintenance (D Category)
Position 2	28.0V	Maintenance-Free (Group 31)
Position 3	28.5V	AGM
Position 4	29.0V	DO NOT USE POSITION #4

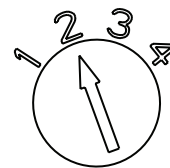
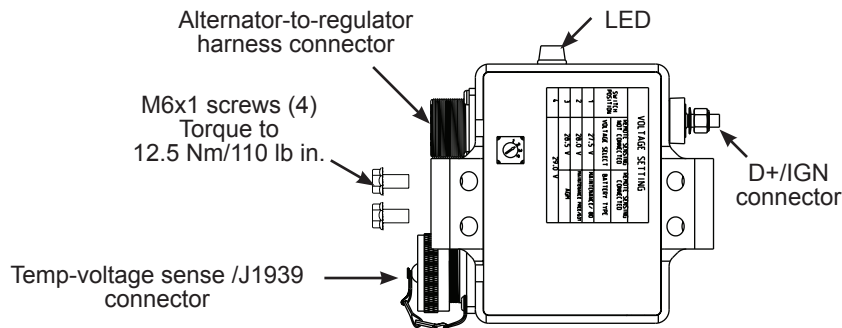


Figure 2 - Voltage Selection Switch

2. Reinstall regulator and torque mounting screws to 12.5 Nm/110 lb. in.
3. Make sure alternator-to-regulator harness is securely connected to alternator-to-regulator connector.
4. Regulator P terminal can tap AC voltage, typically half the charge voltage. When required, connect P terminal to tachometer or relay. Use proper ring terminal. Torque terminal nut to 4.5 Nm/40 lb. in.
5. If not using a temperature-voltage sense harness, keep cap on regulator. If using temperature voltage sense harness, follow instructions provided with harness.
6. If required, connect a D+ controller or vehicle ignition to D+/IGN connector on regulator. D+ pin on connector provides 28V sense voltage. Maximum current from D+ is 5A. Controller relay coil must be diode-protected and rated for 28V.

NOTICE

A2-357 regulator can function with or without vehicle ignition. When necessary, ignition signal can be connected through D+/IGN connector. Circuit should be off (no voltage present) when vehicle ignition is off or engine is not running.



A2-357 Regulator Connections

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:

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