



ALTERNATOR INSTALLATION INSTRUCTIONS

CAREFULLY READ THESE INSTRUCTIONS BEFORE ATTEMPTING ANY MODIFICATIONS!

Proper installation of this alternator is the responsibility of the installer. Improper modification or installation will void your warranty and may result in vehicle damage or personal injury. If you have any installation questions, refer to your factory shop manual or call our Tech Service personnel at 216-961-1800 from 7am to 4pm EDT.

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- 1 - Disconnect the ground cable from the battery.
 - 2 - Disconnect all wire connections from the alternator and label wires for future replacement. Remove belt.
 - 3 - Loosen mounting and tension arm bolts.
 - 4 - Hold the alternator securely while removing the mounting bolts and spacers. Remove old alternator.
 - 5 - Install new alternator and replace all mounting bolts and spacers. Do not fully tighten bolts.
 - 6 - Replace drive belts on pulleys and adjust belt tension. Belt should have $\frac{1}{2}$ " to $\frac{3}{4}$ " play as light pressure is applied at midpoint between pulleys.
 - 7 - Tighten all bolts and reconnect alternator wires and battery ground cable.
 - 8 - **Make sure battery is fully charged** before starting engine.

Note: 1-wire alternators require only 1-wire to operate. Reconnect only the main output wire to the positive lug and remove or tape off all other existing wires.

ALL ALTERNATORS REQUIRES A GOOD GROUND

In order for an alternator to charge properly, an alternator must be grounded to the engine block. If an alternator has paint or clear-coat on the mounting surfaces, it may not be grounded and will not charge. For these reasons, many Tuff Stuff alternators include a grounding tab that should be used to ground the alternator.

CORRECT WIRE SIZE IS CRITICAL

It is very important to use the correct wire size to connect the alternator to the battery. A wire size too small can allow the wire to overheat, melt the insulation and cause a fire or worse. Depending upon the maximum output of the alternator, use the following chart as a minimum wire size guide. Trunk mounted batteries require heavier gauge battery cables; contact Tech Service for recommendation.

AMPS@12V	1-5 FT	5-10 FT	10-15 FT	15-20 FT	20-25 FT	25-30 FT
60-100	6 AWG	4 AWG	1 AWG	0 AWG	0 AWG	2/0 AWG
100-150	4 AWG	2 AWG	0 AWG	2/0 AWG	2/0 AWG	3/0 AWG
150-190	4 AWG	1AWG	2/0 AWG	3/0 AWG	4/0 AWG	4/0 AWG
190-250	2 AWG	0 AWG	2/0 AWG	4/0 AWG	4/0 AWG	4/0 AWG