

ALTERNATORS

FITTING INSTRUCTIONS

Thank you for choosing this premium product.

This unit has been manufactured by fully trained specialists to OE-specifications.

Every unit is fully tested on state of the art computerized test equipment to simulate "on vehicle conditions" and ensure that all aspects of the OE-specifications are met.

For your information, a certificate is attached to your unit with the detailed results from this test compared to the OE-specifications.

For your complete assurance this unit is covered by a 24 months.

Note: Please return the old unit in the same box in which you received the new unit (Back-in-Box).



FAILURE TO FOLLOW INSTALLATION INSTRUCTIONS MAY INVALIDATE YOUR WARRANTY

Thank you for purchasing this premium product.
Please read the warnings and instructions to ensure a
successful installation.

COMPUTER TESTED ALTERNATOR

This specific unit was 100% load tested on automated
test equipment to ensure that it meets / exceeds OEM
specifications

Please read these instructions carefully

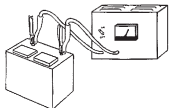
- **Never disconnect a battery cable with the engine running**

Removing a battery cable with the engine running causes voltage spikes which can damage the alternator, ECU and other electrical components in your vehicle..



- **Make sure you have a good, fully-charged battery**

Your alternator is not designed to recharge a weak or defective battery and may be damaged by doing so. Charge and load test battery prior to alternator installation.

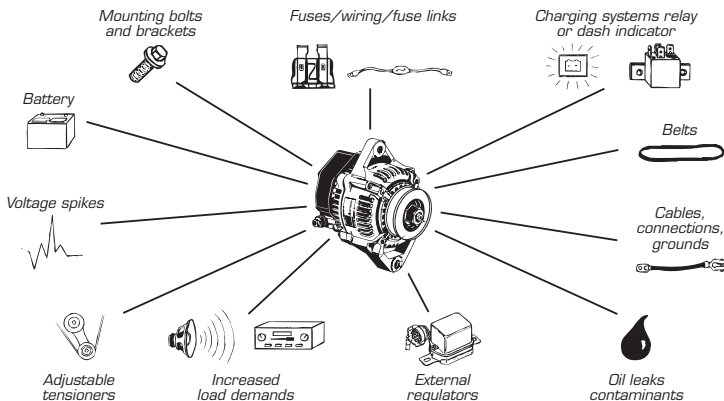


- **Do not overload the alternator**

Retro-fit high power stereo's, fog and driving lights, or other devices may exceed the capacity of the alternator, causing premature failure.

- **Check other components of the charging system**

Components that can cause charging problems:



Alternators - Installation

Perform these steps in the order shown

- 1. Review any additional technical bulletins supplied with this unit**

- 2. Remove negative battery cable**

This prevents accidental shorts during alternator replacement.



- 3. Charge and load test battery**

A weak or defective battery will damage your new alternator.

- 4. Remove wire connections from old alternator**

Make a note of each connection for the new alternator installation. On some vehicles, it may be easier to remove mounting bolts first to access wiring (Refer step 5)

- 5. Remove old alternator**

MANUAL BELT TENSIONERS

Remove adjusting ear bolt. Remove belt(s). Then, remove pivot bolt.

AUTOMATIC TENSIONERS

Remove belt first using proper tool to relieve belt tension. Belt will slip off. Remove mounting bolts. Save hardware for installation of new unit.

- 6. Make sure the pulley on the new and old unit match**

If necessary, exchange pulleys, noting spacer and washer locations. NEVER use V belts on serpentine pulleys or serpentine belts on V- pulleys. Always count the grooves in serpentine pulleys to assure an exact match. If you change the pulley, use a torque wrench and a ring spanner to ensure pulley nut is tight.

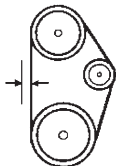


- 7. Install new starter motor**

INSPECT BELTS

Inspect belts for wear, cracks and glazing and replace, if necessary. On some vehicles, it may be easier to attach wiring before attaching mounting bolts. Do not overtighten electrical connections.

MANUAL TENSIONING



Alternators - Installation

Install mounting bolts loosely so belt can be adjusted. Position belts on pulleys. Apply leverage to alternator front housing only (end closest to pulley) until belt tension meets vehicle specifications. Tighten mounting bolts. Typically, belts will deflect approx. 3/8" to 1/2" when pressed midway between the two farthest pulleys. The tension on a new V-belt should be checked and reset after 15 minutes of operation.

AUTOMATIC TENSIONS

Install all alternator mounting bolts finger tight. Use proper tool to release tension and route belt around pulleys. Allow tensioner to tighten belt.

8. Check installation

Inspect wiring, connections and fuse links for worn insulation, breaks or corrosion. Repair broken or damaged connections. Make sure all wires have been connected correctly and there are no pinched wires or shorts to earth. Check and clean battery cable connections at battery, frame/chassis and engine block.

9. Connect negative battery cable last

10. Start engine

Check charging system light or gauge on instrument panel for proper system operation. Let engine idle for 10 minutes to allow voltage to stabilize. Refer to troubleshooting section if you have any problems or want to perform more detailed system tests.

DO NOT DISCONNECT ANY WIRING WHILST ENGINE IS RUNNING

11. Double check your work

STOP engine, verify belt tension and recheck mounting bolts.

Alternators - Troubleshooting

If the instrument panel or gauge indicates a problem, a voltmeter can be used to isolate faulty components in the charging systems.

If you do not have the equipment or skills necessary to perform these tests, your alternator supplier can test your system, or recommend a local facility to do so.

USE EXTREME CAUTION WHEN WORKING AROUND AN OPERATING VEHICLE ENGINE.

1. Perform ALL of the following tests with the ENGINE RUNNING at 2000 RPM with LIGHTS and HEATER FAN ON.

2. Voltage Test:

Measure from the POSITIVE BATTERY POST to the NEGATIVE BATTERY POST.

A good reading is BETWEEN 13.0 AND 15.3 VOLTS.



A higher reading may indicate a bad regulator. Do not operate vehicle if reading is higher than 15.3 volts. If the reading is lower than 13.0 volts, check the following: BATTERY: A weak or defective battery will cause other charging system components to appear faulty. BELTS: loose, worn, cracked or glazed belts will slip and cause low output from the alternator.

3. Negative battery cables and connections

Connections from the battery to the frame / chassis and engine block must be clean, tight and corrosion free.



To verify, measure from the ALTERNATOR CASE to the NEGATIVE BATTERY POST. A reading higher than 0.25 volts indicates a problem with the negative battery cable or connections to frame / chassis engine block.

4. Positive battery cables and connections

The connections from the positive battery post to the alternator output, including positive cable, fusible link and alternator output wire, should be clean and tight.

To verify, measure from the ALTERNATOR OUTPUT TERMINAL to the POSITIVE BATTERY POST. A reading higher than



0.35 volts indicates a problem with the positive battery terminal to alternator fuse block connections. If the reading is higher than 0.75 volts, look for blown fuses, swollen or discoloured fusible links or an open wire.