

## **Alternator charging problem and troubleshooting guide**

**Question:** The alternator will not charge and output voltage is the same voltage or lower than the battery voltage when the engine is running.

**Answer:** This can be several problems that need to be checked and resolved for correct charging.

First check the ground from the alternator case to the negative side of the battery in a negative ground vehicle. Next check alternator is connected securely to the + side of the battery and the excite wire in a two wire alternator application is connected to switched 12 volts, either to the key switch directly or plus side of ignition coil. In a 1 wire connection disregard the excite wire connection.

With engine off next test the voltage at the back of the alternator, this should be 12.6V fully charged battery voltage. If not, troubleshoot all connections and or charge the battery, damage will occur to alternator regulators if trying to charge a low or dead battery. Also bad grounds are a source of electrical charging problems in these older vehicles.

Next start the engine and increase the RPM, the alternator should start charging next measure the output with volt meter should measure 14.1 volts +/- . If not there is a wiring or battery problem.

A quick way to check if the alternator is charging without a meter, carefully place a pocket knife blade or similar on the rear alternator bearing, you will feel a small magnetic pull when charging.

**Question** How do I know if my battery is fully charged.

**Answer:** Check that the battery voltage with a good digital volt meter. Use the chart below to determine battery health. New batteries from the local store are not always fully charged.

Fully charged battery will read 12.6 volts

75% 12.4 volts

50% 12.2 volts

25% 12.0 volts

Discharged 11.6 volts

Use external battery charger to fully charge a battery, never try and charge a low voltage battery with the alternator or alternator damage will occur. A low voltage battery will cause problems with the alternator, starter, and starter solenoid