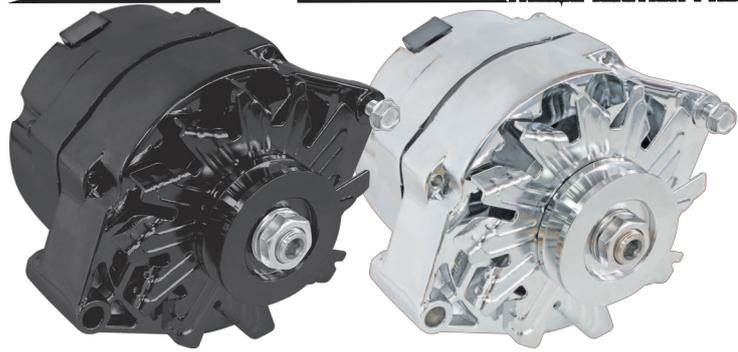




1-WIRE ALTERNATOR INSTALLATION INSTRUCTIONS



WARNING:

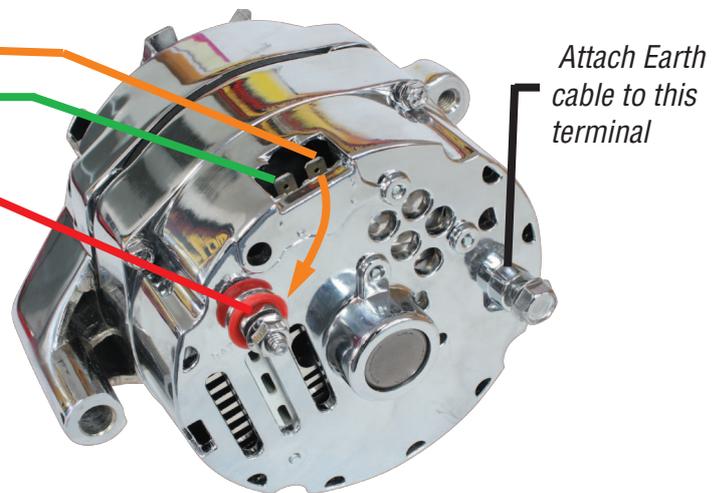
These instructions must be read and fully understood before beginning the installation. Failure to follow these instructions may result in poor performance, vehicle damage, personal injury or death. If these instructions are not fully understood, installation should not be attempted.

Optional 3 wire connection

F terminal connects to positive alternator terminal.
R terminal connects to warning light.

1 wire connection

Connect one wire from the positive battery terminal to the positive alternator terminal.



INSTALLATION:

To install a 1-wire alternator, disconnect the battery make sure to disconnect the negative cable first and then the positive cable. Unbolt and remove the original alternator, install the new Aeroflow 1-wire alternator and re-tension the drive belts. Then simply run one wire from the alternator "BATTERY" terminal to the positive battery terminal (Should already be existing please check wire gauge) OR to the starter solenoid main terminal if battery is located in the boot as this is connected to the positive battery terminal. **MAKE SURE THAT THE BATTERY IS FULLY CHARGED.** Reconnect the positive battery cable, start the engine and using a multi-meter, verify that the alternator is charging at least 13.6 volts @ 1,000 engine RPM.

1. 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 determines the wire you should be choosing. For the 100,120 amp we recommend a minimum of 8 gauge wire and the 140 amp we recommend a minimum of 6 gauge wire. This recommendation is based off your battery mounted in the engine bay of your vehicle with 1.2 meter length of battery cable. **BATTERIES MOUNTED IN THE BOOT REQUIRE THICKER GAUGE WIRE.** Contact an auto electrician for recommendations of wire thickness.

2. In order for an alternator to charge properly, an alternator must be earthed to the engine block. If the alternator or engine block has been painted or clear coated on the mounting surfaces, it may not be earthed out and will not charge. For these reasons we have a mounting point on the rear of the alternator to earth out the alternator.

Note: Earth cable should be at least the same gauge as the positive cable.

3. Alternators spin at approximately 2-1/2" time the crankshaft RPM, so an engine at 750 RPM would spin the alternator at approximately 1875 RPM. Note that the maximum rpm of any Aeroflow alternator should not exceed 15,000 RPM (6000 engine RPM). There is no need to worry about ignition regulator exiting and in most cases underdrive pulleys with Aeroflow alternators. Please see other side for information regarding underdrive pulleys.

4. Aeroflow alternator's have a terminal that may be used for a warning light. To wire the warning light using one of these alternators, simply remove the terminal plug cover and connect the R (left terminal) looking from the back of the alternator) to the warning light wire.

Crankshaft Pulley Selection Guide

In a typical application an alternator will be spun at 2.5 x engine speed, Aeroflow alternators have a maximum alternator speed of 15000rpm which typically allows for a maximum of 6000 engine rpm. For engines that turn past 6000rpm it is recommended to check pulley sizes carefully to ensure the alternator stays under the 15000rpm maximum at all times. The alternator pulley supplied is 1.75" / 44.45mm diameter.

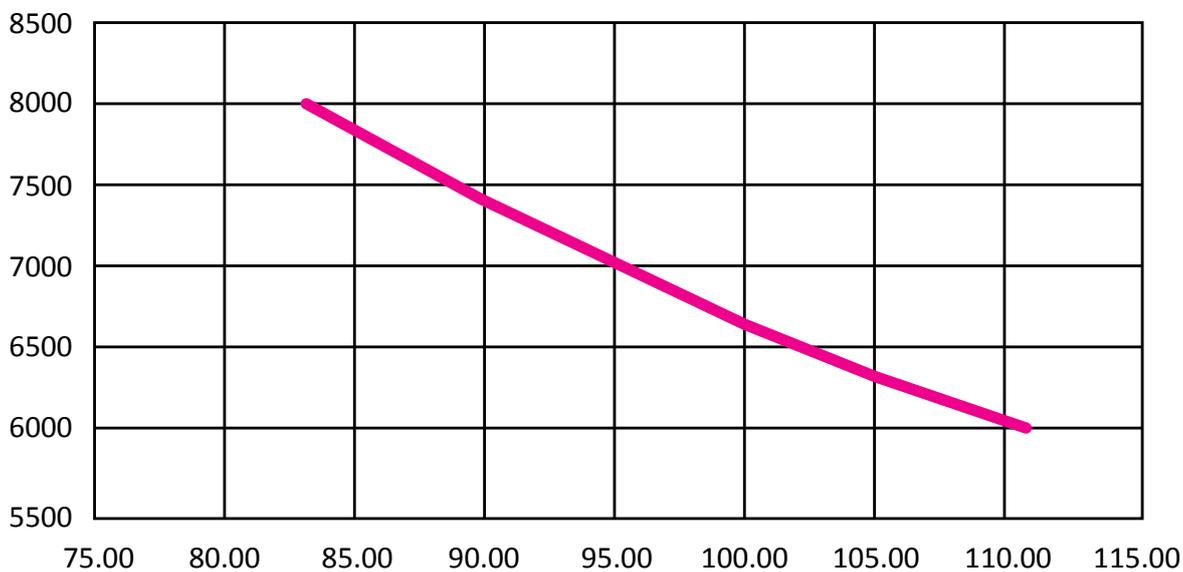
To calculate maximum alternator rpm

With V pulleys

Crank pulley diameter divided by alternator pulley diameter multiplied by maximum engine rpm = maximum alternator rpm.

Alternator Pulley (Diameter)			Crank Pulley (Diameter)		
Inch	mm	RPM	Inch	mm	RPM
1.75	44.45	15000	4.38	111.13	6000
1.75	44.45	15000	4.04	102.58	6500
1.75	44.45	15000	3.75	95.25	7000
1.75	44.45	15000	3.28	83.34	8000

ENGINE RPM TO MAXIMUM CRANK PULLEY DIAMETER (mm)



With toothed pulleys

Crank pulley number of teeth divided by alternator pulley number of teeth multiplied by maximum engine rpm = alternator maximum rpm

Aeroflow Gilmer drive kits come with a 39 tooth crank pulley and a 21 tooth alternator pulley which gives an approx. ratio of 1.86 to 1 and allows for a maximum engine speed of approximately 8000rpm.

$$(39 / 21) \times 8000 = 14857$$