

## **The Preventive Maintenance Series**

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### **Checking Alternators off of the Car and on the Car**

The '65 Shop Manual has a very good explanation of testing alternators and adjusting regulators, however most of the text and photographs are from a full size Chevy, so keep that in mind. I have tried to condense the information and add some personal experience to create a "quick check".

Checking Alternators off of the car (such as at a swap meet) can be done with an ohm meter. The following is a pretty reliable test that I have used, but there can always be something new so do some research if this guide does not cover your situation.

The following checks were done while looking at the end opposite the fan.

#### **Alternators with external regulators (OEM):**

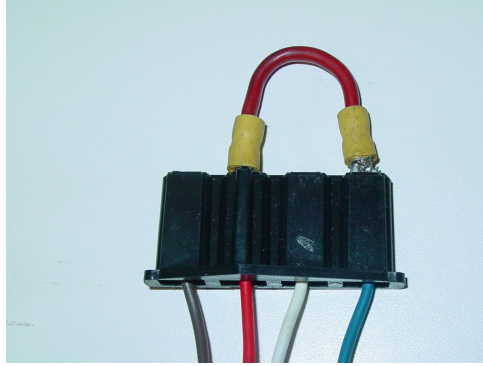
Output Stud to Case: Open  
Right Spade to Case: Closed  
Left Spade to Case: Open  
Spade to Spade: Open  
Stud to Either Spade: Open

#### **Alternators with Internal regulators:**

Output Stud to Case: Open  
Left Spade to Case: Closed  
Right Spade to Case: Closed  
Spade to Spade: Closed  
Stud to Either Spade: Open

#### **Checking an alternator with an external regulator while running:**

With engine warmed up, attach a voltmeter between the output stud and case, and run engine at 1500 rpm (top step of fast idle cam): charging voltage should be 13.5 to 15. If voltage is no higher than battery voltage, check the alternator by removing the four wire connector from the regulator and make a jumper (see below) between the red wire and the blue wire (full battery voltage to the field). The alternator should load and voltage output should jump. Do not let the voltage approach 20 or you will burn out miniature bulbs. If nothing happens, the alternator is bad. You have provided the alternator field with full battery voltage, bypassing the regulator.



Full Fielding an Externally Regulated Alternator

### **Checking an alternator with an internal regulator while running:**

With engine warmed up and running at 1500 rpm (top step of fast idle cam), attach a voltmeter between the output stud and the case; charging voltage should be 13.5-15. If the voltage is battery voltage you can full field the alternator (bypassing the regulator) by inserting a small pick or screwdriver straight through the hemispherical shaped hole opposite the output stud and ground the internal regulator tab against the case. The alternator should load and the voltage should jump. Do not exceed 20v or miniature bulbs will burn out. If the voltage jumps then you have a bad regulator. No adjustments to the regulator are possible but they can be replaced.



Full Fielding an Internal Regulated Alternator