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## Voltage Regulator Rectifier for 12 Volt Systems

Replaces selenium rectifiers, regulators, and zener diodes on positive and negative ground systems.

Note: Tympanium has a limited warranty on this regulator for 2 years from the date of purchase for defects in materials or workmanship only. If you think your Tympanium regulator has failed, return it postage paid and we will arrange for Tympanium to test the unit.

### NEGATIVE GROUND INSTALL

1. Disconnect battery ground.
2. Remove old regulator (zener diode) and remove or tape over wires.
3. Disconnect and remove old rectifier.
4. Bolt new Tympanium regulator so it is in some air flow or mounted to a heat sink.
5. Connect existing wires according to color code:

| <u>Tympanium</u> | <u>Function</u> |
|------------------|-----------------|
| BROWN            | B-, GROUND      |
| YELLOW           | AC ALTERNATOR   |
| YELLOW           | AC ALTERNATOR   |
| RED              | B+, BATTERY     |

6. Reconnect Battery Ground

### POSITIVE GROUND INSTALL

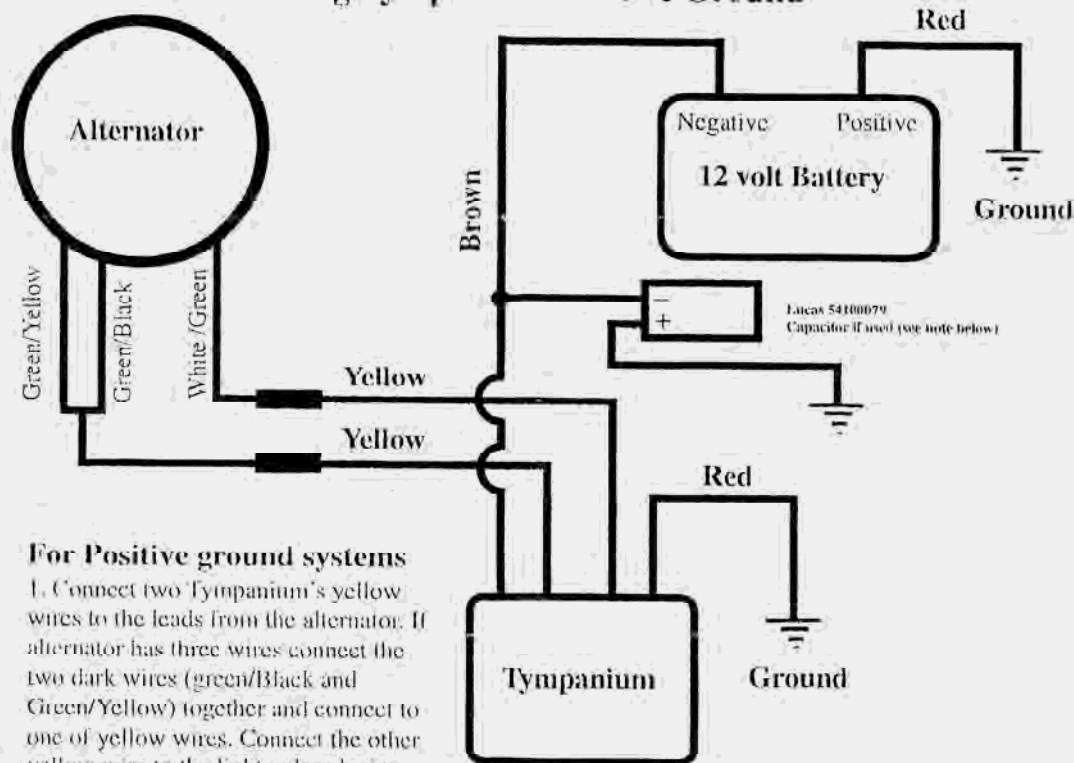
1. Disconnect battery ground.
2. Remove old regulator (zener diode) and remove or tape over wires.
3. Disconnect and remove old rectifier.
4. Bolt new Tympanium regulator so it is in some air flow or mounted to a heat sink.
5. Connect existing wires according to color code:

| <u>Tympanium</u> | <u>Function</u> |
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6. Reconnect Battery Ground

## Tympanium Single Phase 12 Volt

### Wiring Tympanium Positive Ground



#### For Positive ground systems

1. Connect two Tympanium's yellow wires to the leads from the alternator. If alternator has three wires connect the two dark wires (green/Black and Green/Yellow) together and connect to one of yellow wires. Connect the other yellow wire to the light colored wire (green/white).
2. Ground the Red wire to the motorcycle's frame.
3. Connect the Brown wire to the negative terminal of the battery.

#### For Negative ground systems

Switch the Brown and Red wire.

1. Connect the Tympanium's red wire to the positive battery terminal.
2. Connect the Tympanium's Brown wire to the motorcycle's frame.
3. Connect the negative terminal of the battery to ground.

#### Note:

The Tympanium box can power a bike without a battery. To do this a capacitor must be connected into the system as shown in diagram above.

#### Testing:

The alternator must be in good operating condition and the rotor must be fully magnetized for the regulator to put out the required voltage to charge the battery.

The Tympanium's output wire (brown in the case of positive ground systems) must be connected to a battery, capacitor or a 1 ohm load to be able to measure the charging rate. If a dc volt meter is attached directly to the brown wire that is not connected to a battery, capacitor or 1 ohm load, the meter will read less than 9 volts. This is normal.