

# I know you know a lot about electricity and Lucas generators, but STOP. Read this first!

This regulator will ONLY work if the generator is re-wired

## Model 6-NE 6 volt Negative Earth

These instructions are ONLY for a Lucas generator to be used with an electronic regulator with a Negative Earth system.

**STOP! READ ME FIRST!!!** This regulator is state of the art design, and uses state of the art components. We bench test them three times during production. The unit is designed to give years of dependable service.

**HOWEVER**, the unit can be permanently damaged if you connect the polarity of the battery, or the control box up, backwards. It takes less than a second to damage the unit if the unit is connected up backwards. **The unit does have a way of protecting itself from this, but a 15 amp fuse MUST be installed in the red wire between the battery and the unit as shown in the diagram below.** This is in addition to the regular fuse used between the battery and the wiring harness. You will note that the diagram calls for a 15 amp fuse in the red wire from the unit to the positive terminal of the battery.

Before connecting up the regulator check that you have the correct unit - 6-NE and the battery is wired up with the negative battery terminal going to the chassis (earth). If you connect the battery, or wire the unit, so that the ground polarity is not correct you can ruin the regulator. This is not covered under warranty. If you return the regulator and we find the protection diode was destroyed by reversed polarity, your warranty is null and void and the unit will not be replaced. You can protect yourself from this by installing a 15 amp fuse in the red wire between the battery and this unit.

Step 1. Disconnect the wire from the positive terminal of the battery.

Step 2. Disconnect the field wire marked #1 in illustration A from the "F" terminal and attach it to the "D" terminal.

Step 3. Disconnect the field wire marked #2 in illustration A from the earthing (ground) screw (be sure to replace screw and earthing brush lead). Attach this #2 field wire to the "F" terminal.

**BEFORE CONTINUING NOW YOU MUST POLARIZE THE GENERATOR! (Often called "Flashing" the field)**

Step 4. Take one of your jumper wires and make a temporary connection between the "F" terminal and Earth (ground).

Step 5. Take a second jumper cable and attach one end to the battery positive terminal.

Step 5. Touch the other end of the jumper wire to the "D" terminal a couple of times. When you do it you will know why they call it flashing the field.

### **Testing and Polarizing the Generator (Dynamo)**

1. Remove the generator from the motorcycle (or remove the drive gear so generator is free to turn).

2. Connect a temporary jumper between the "F" terminal and Earth.

3. Connect the negative terminal to the generator Earth (or motorcycle chassis if still in motorcycle).

4. Connect a wire from the battery positive terminal and touch the other end to the "D" terminal.

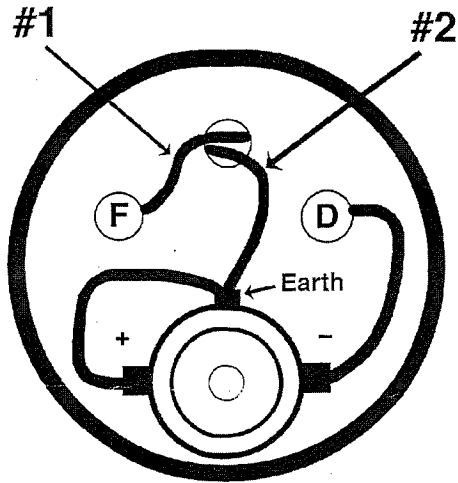
5. The generator should "motor" in the same direction as the arrow on the body (direction being turned by engine).

6. The generator should start motoring by itself. If it doesn't, or the rotation is "jerky," there is a possibility there is a short in the armature. The armature must be tested using a device referred to as a "growler."

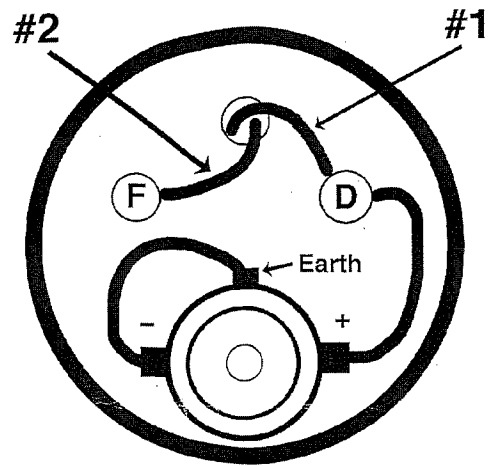
7. By doing this motor test you have:

a. Polarized the field and

b. Made sure the field wires are connected the right way round.



Illus. #A Typical Lucas Generator wiring for Positive Earth (Ground).



Illus. #B Modified wiring for Negative Earth (Ground) using PODtronic regulator.

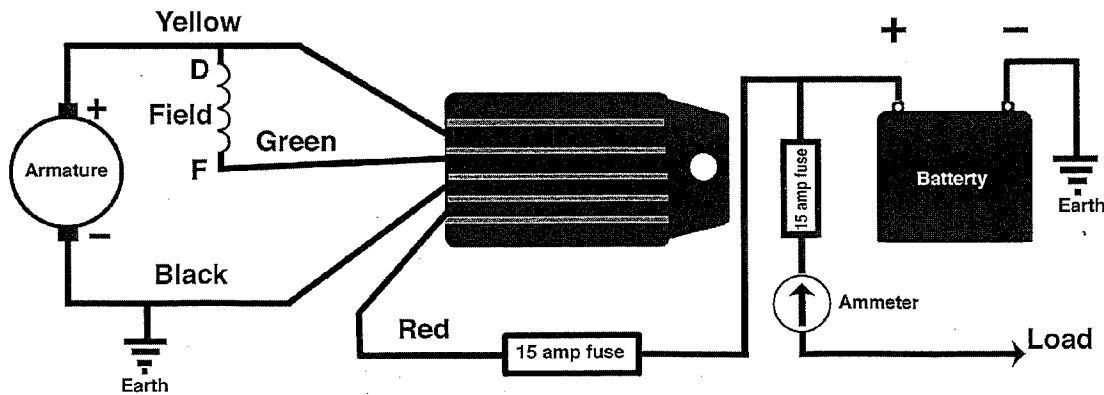
**Wiring Generator for Negative Earth:**

Step #1. Move wire #1 in illustration A from the "F" terminal and connect it to the "D" terminal.

Step #2. Move wire #2 in illustration a from Earth (ground) to the terminal "F".

Step #3. Attach a temporary jumper between the "F" terminal and Earth (ground). (to be removed after flashing field.

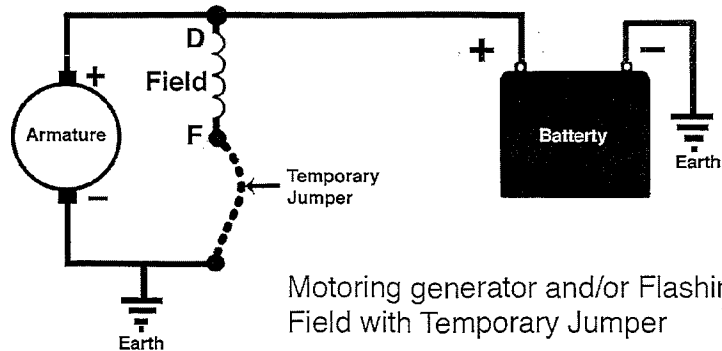
Step #4 With generator in the bike, and the battery negative terminal earthed (grounded) to the chassis, connect a jumper to the positive battery terminal. Take the other end of the positive jumper lead and "Flash" the "D" terminal. Do this by scraping the end of the jumper on the "D" terminal.



**Wiring For Negative Earth**

**Things you will need:**

1. Volt Ohm Meter (VOM).
2. Fuse box with 15 amp fuse.
3. Couple jumper wires preferably with aligator clips.
4. 6 volt battery.
5. PODtronics 6 volt Negative Earth regulator.



**Motoring generator and/or Flashing Field with Temporary Jumper**