

Figure 1

**Rewiring a Miller Generator
to
Lucas Specifications
Negative Ground**

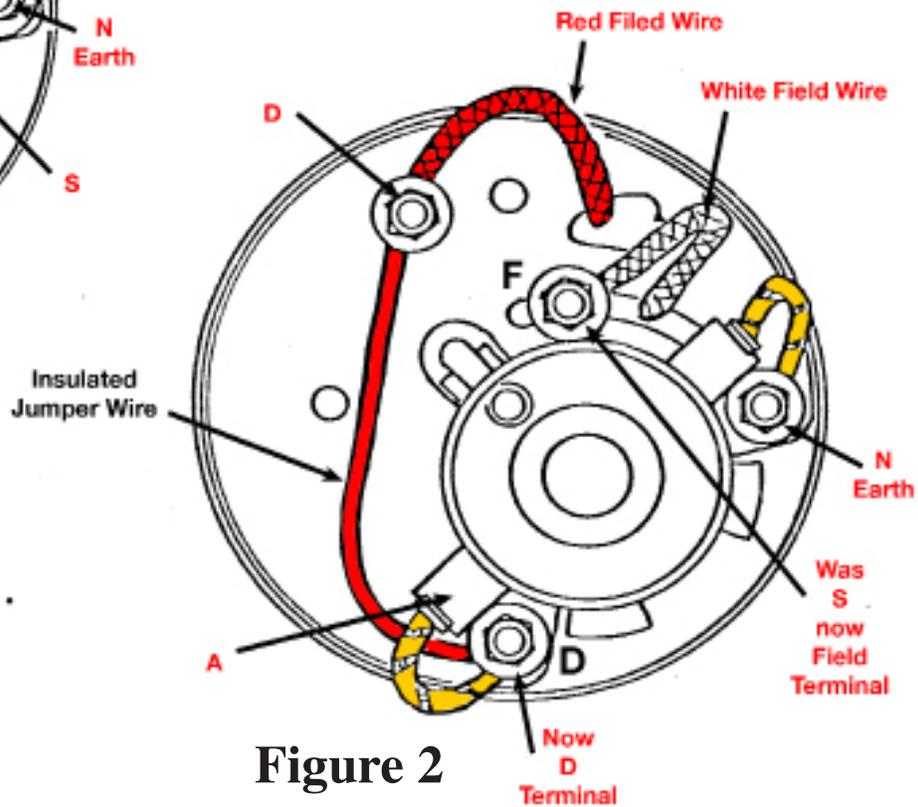


Figure 2

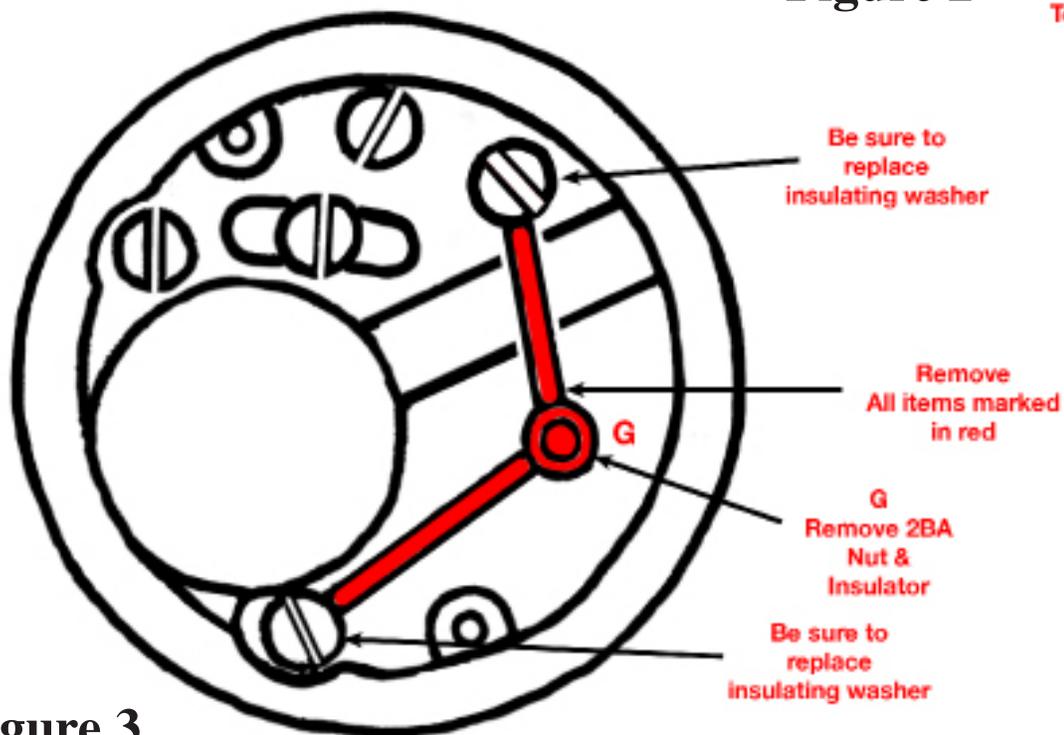


Figure 3

Converting Miller Generators to use Lucas Type Regulators - Negative Ground

To convert your Miller generator to use a modern Podtronics, or equivalent voltage regulator you will need to rewire your generator. You will be taking the cutout and the shunt field coil (green wires) out of the system

1. Disconnect all wiring from Miller generator and remove it from the motorcycle.
2. Take off end cover, remove brushes A and X (Figure 1).
3. Disconnect the four insulated leads (RED, White and 2 Green) at D, S and N. These pass through the end casting of the generator to the Field coil. (Figure 1).
4. Unscrew the two long through bolts that hold the two end casting to the generator body. With soft (brass or aluminum) metal punch, tap the end of the armature shaft at the commutator end (brush end) until the ball bearing at the commutator end is clear of the end casting. Carefully remove the end casting.
5. Remove the cut-out, and all the wires connected to it. Remove the B terminal as it will not be used. Disconnect the wire from the relay to terminal "F". Turn the end plate over (Figure 3) and remove the 2BA nut from "G" shown on figure 3. Be careful to save the small insulating washer under the strips.
6. Insert a 2BA x 1/2" screw through the hole left by the cutout stud. Replace the insulating washer, strip and 2BA nut at "G".
7. Cut off the green leads close to the field coil.
8. Re-assemble the generator, connecting the two filed Red and White leads as in Figure 2. The S terminal is now called the F terminal
9. Add an insulated wire jumper between A and D terminals.
9. Refit the generator to the motorcycle, but do not connect the drive to it yet.
10. Check the dynamo for correct rotation. Battery to be connected Negative Earth. Connect a jumper wire between the F terminal and Earth. Connect another jumper between battery Negative terminal and the Generator D terminal. The generator should rotate the same direction as it will be driven.
11. Connect PODtronics regulator red wire to ground.
Connect the PODtronics Green wire to the generator F terminal.
With a fused 15 amp link connect the Podtronics Yellow wire to generator D terminal.
Connect the PODtronics black wire to ammeter, if used, or directly to the battery negative terminal.