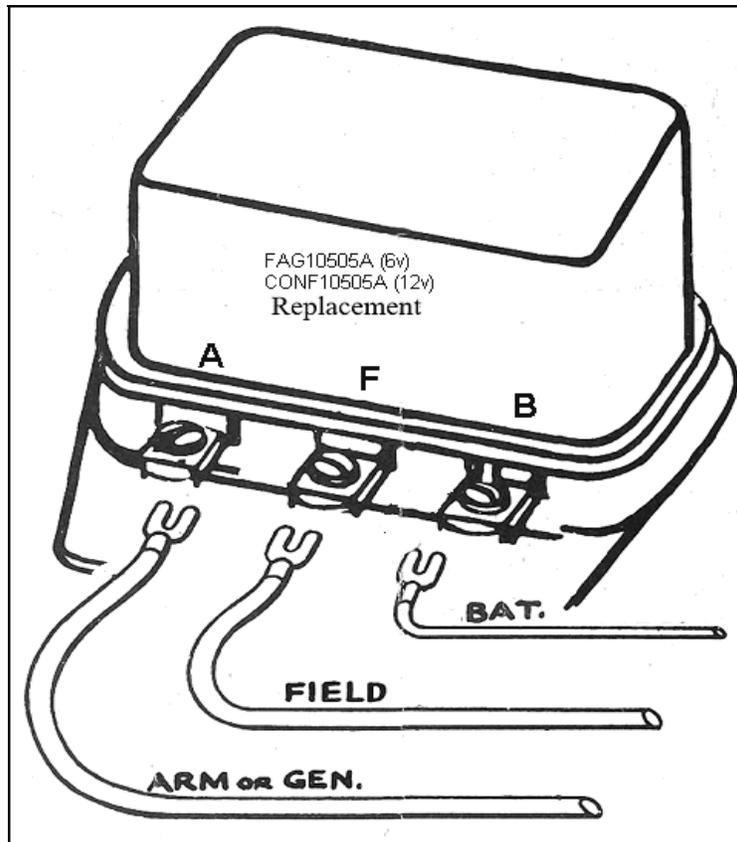


# Instructions for Testing and Installing a Voltage Regulator

## For Jubilee/NAA, Hundred series, "B-ckt" system

(Also known as "INTERNALLY GROUNDED FIELD")

**NOTE: does NOT apply to 9N, 2N, 8N systems**



Installing a regulator is easy - but wrong installation can ruin a new regulator in a few seconds.

**Read ALL instructions before proceeding.**

JMOR

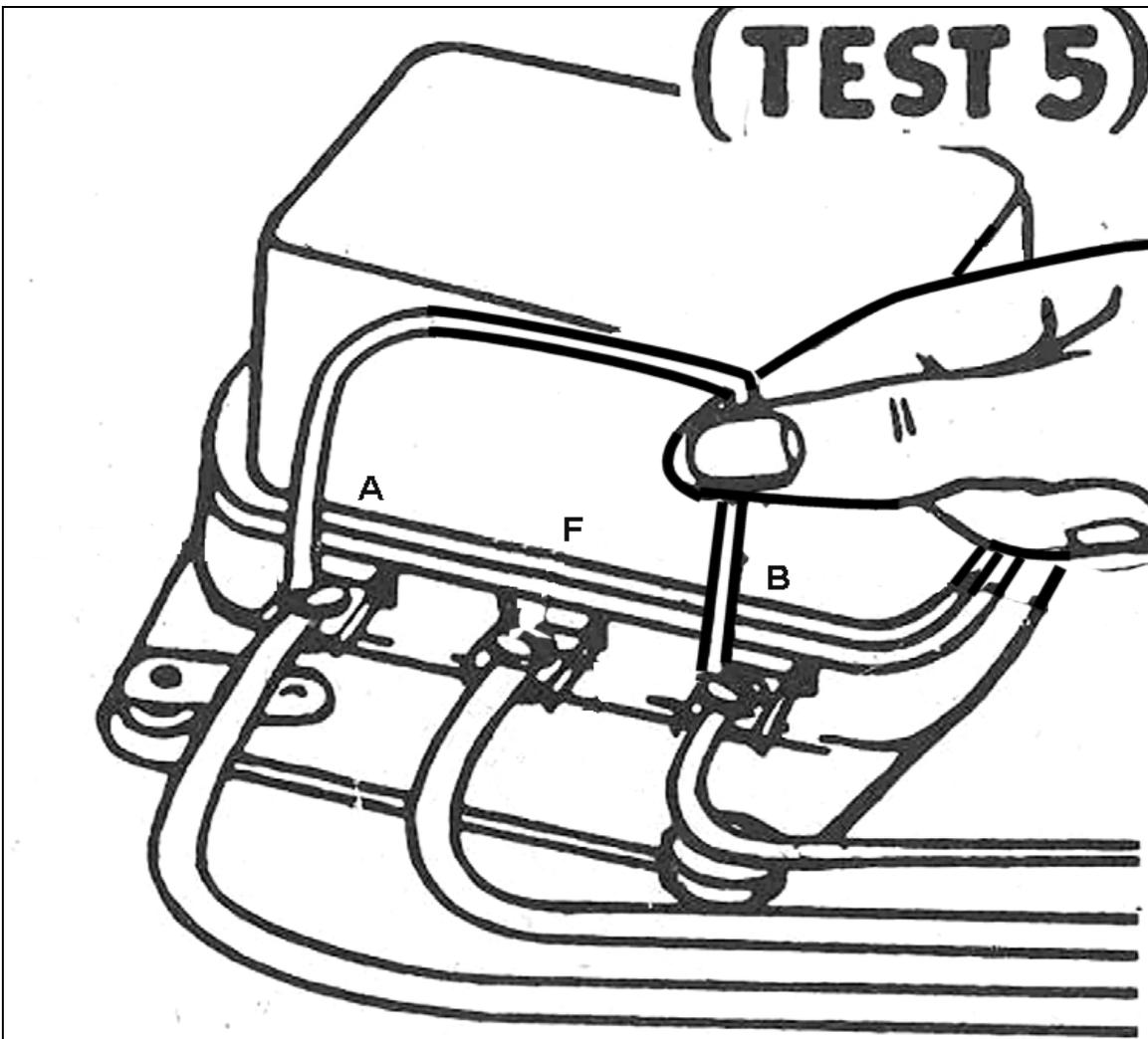
**Do not remove the old regulator until you make these tests.**

If the trouble is in the generator, battery or wiring, a new regulator will not correct the fault. Make these tests to determine whether or not a new regulator is needed.

**If Battery voltage is low and the charging rate is low, or there is no charge at all, make these tests:**

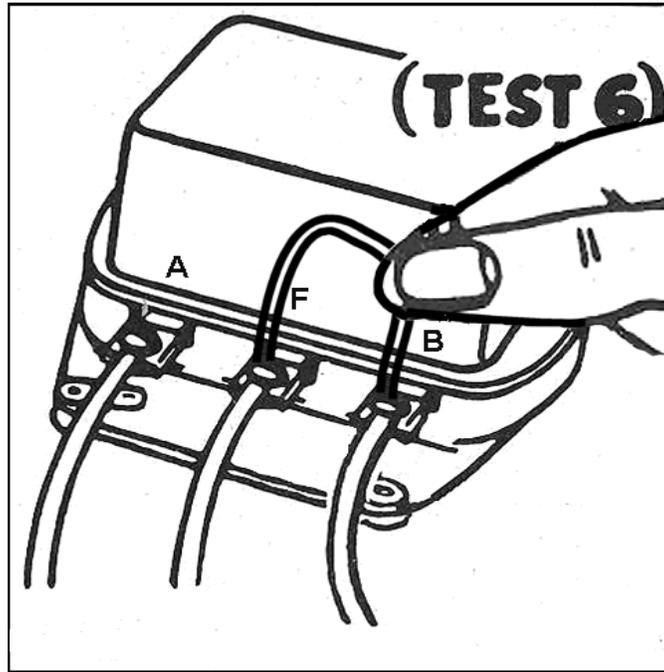
- (1) Check battery water levels and general battery condition to see if it will take and hold a charge.
- (2) Check wiring for damage - make sure all connections at generator, regulator and battery are tight and free of corrosion. Don't overlook grounds at generator & regulator.
- (3) Make sure fan belt is tight enough to drive generator at full capacity. The belt should have no more than a ½" of flex to it.
- (4) Run engine at medium, speed. Take a short length of wire and touch one end of it to the regulator base and the other end of it to a good ground. If this corrects the trouble, then the regulator is not properly grounded.
- (5) If test 4 does not correct trouble, make this test:

Connect a wire from regulator terminal marked "ARM" or "GEN" to regulator terminal marked "BAT" with engine running at medium speed. **If charging rate increases, replace old regulator.**



(6) If test 5 does not correct trouble, make this test.

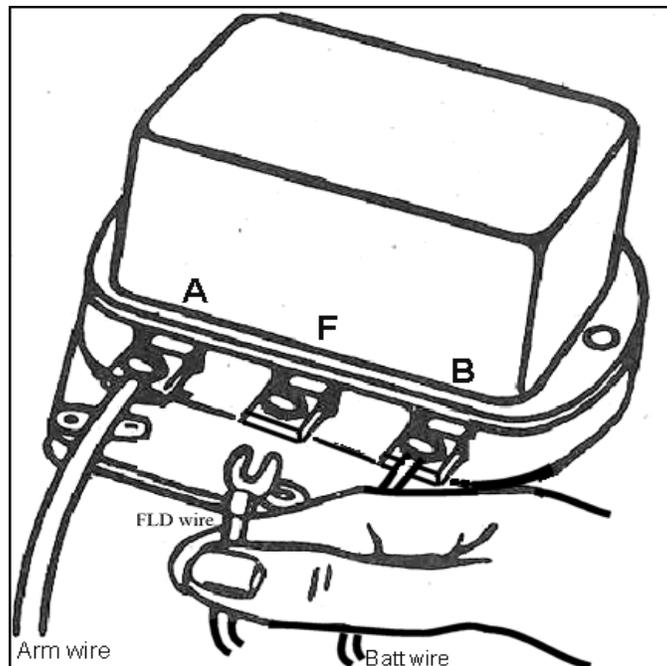
Connect a wire from the "FLD" terminal of the regulator to "BAT" terminal of regulator with engine running at medium speed. **If charging rate increases, replace old regulator.**



**If Battery is "overcharged" and charging rate remains high, make these tests:**

(1) Run engine at medium, speed. Take a short length of wire and touch one end of it to the regulator base and the other end of it to a good ground. If this corrects the trouble, then the regulator is not properly grounded.

(2) Run engine at medium speed. Disconnect wire from the "FLD" terminal of regulator. **If charging rate reduces, regulator IS faulty and should be replaced.**



**If above tests do not show old regulator to be defective, then trouble is probably in your generator, battery or wiring.**

### **HOW TO REMOVE OLD REGULATOR**

1. Disconnect "grounded battery cable" from battery.
2. Identify wires connected to regulator by labeling them.
3. Disconnect wires from regulator terminals.
4. Remove old regulator. Save mounting screws for use with new regulator.

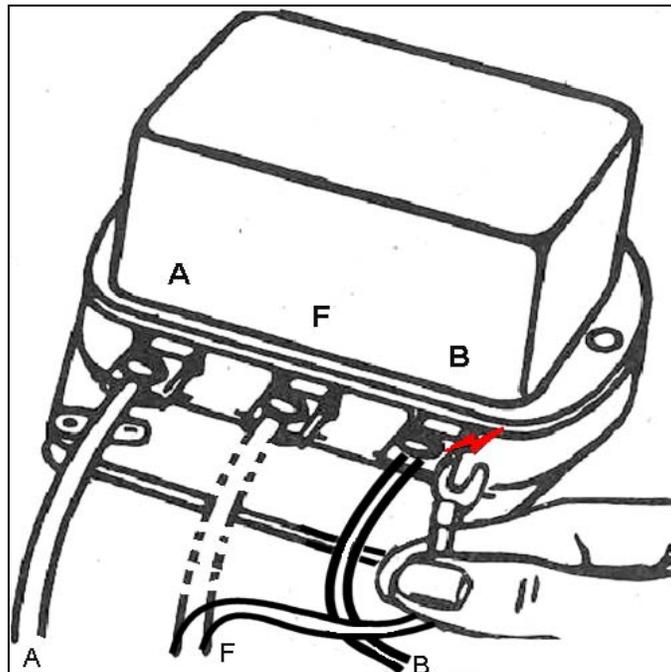
### **HOW TO MOUNT & CONNECT NEW REGULATOR**

1. Position new regulator in same place as original, and secure with mounting screws.
2. Connect wires to regulator terminals. Be sure to connect right wires to right terminals. One wrong connection or shorted wire can damage the new regulator or generator in a matter of seconds. **CAUTION: Make sure wires do not short to base. BE CAREFUL WHEN CONNECTING WIRES NOT TO PUT TOO MUCH PRESSURE ON TERMINALS CAUSING THEM TO BEND DOWN OR WORK LOOSE.**
3. Connect "grounded battery cable" to battery.

### **HOW TO POLARIZE THE GENERATOR**

After new regulator has been installed and "grounded battery cable" connected to battery, **BEFORE STARTING ENGINE POLARIZE GENERATOR TO MATCH BATTERY.**

**DISCONNECT THE FIELD WIRE FROM THE REGULATOR "FLD" TERMINAL AND MOMENTARILY TOUCH FIELD WIRE TO REGULATOR "BATT" TERMINAL, AND THEN REMOVE IT. A SPARK WILL OCCUR WHEN WIRE IS REMOVED. THIS IS NORMAL. RECONNECT FIELD WIRE TO REGULATOR "FLD" TERMINAL.**



## **START ENGINE:**

If trouble still exists, repeat tests shown on page one to locate fault.

THIS IS NORMAL OPERATION with lights, radio and heater turned **off**:

1. If battery is low - charging rate will be high.
2. If battery is fully charged - charging rate will be low.
3. After starting engine, charging rate may be high temporarily.



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