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Troubleshooting the JASCO alternator

## ALTERNATOR SYSTEM TEST

### 1. SYSTEMS VOLTAGE TESTS - HOW TO START!

To aid in troubleshooting the Jasco Alternator System or to check out a new installation, the following voltage measurements, monitored at application system locations, will define to the operator proper system performance prior to start-up. To insure reasonable results, the operator should use a voltmeter, which is within calibration limits.

The schematics in figures 2 and 4 depict the location of voltmeter in the system to monitor the applicable voltage levels. The voltage readings indicated are for reference purposes, as actual values are dependent upon the level or storage state of your battery.

Use figure 2 for all 12 volt JASCO Alternator Systems with internal spike protection Regulator J12M20SP.

Use figure 4 for all 24 volt JASCO Alternator Systems with internal spike protection Regulator J12M24SP.

**IF YOU HAVE AN OLDER MODEL REGULATOR CALL FOR DIFFERENT SCHEMATIC. 800-421-6846**

When performing the measurement tests listed on figures 2 & 4, the following conditions should exist: Engine stopped; Battery switch closed; Alternator/Field switch closed.

### 2. ADDITIONAL CHECKS - IS THE PROTECTOR DEFECTIVE?

Check for a shorted suppressor or protector. If you have an old style external protector (SVP-3, SVP-4) in line, disconnect the protector and observe system function. Proper operation indicates a defective protector. On units with combined Regulator/Protector systems, simply disconnect the orange lead from the regulator and measure resistance between the orange and black leads. Resistance for 24 Volt systems should be not less than 1500 OHMS and 12 Volt systems should not read lower than 1200 OHMS.

### 3. ADDITIONAL CHECKS - IS ALTERNATOR DEFECTIVE?

Isolate the alternator and check for output. Turn the master switch of the aircraft to the "OFF" position, disconnect the Voltage Regulator and external protectors (SVP-3 or SVP-4) if still in use. *To insure reasonable results, the operator should use a hand held voltmeter, which is within calibration limits.*

**Caution: Failure to disconnect the Voltage Regulator, Voltage Protector or the Voltage Controller (Regulator and Protector combined) will result in damage to these units and voids warranty.** This can be accomplished by disconnecting the green and red wire at the alternator post(s). **Turn off all accessory equipment (all electrical loads).** Connect a jumper wire from a battery voltage source directly to the field (green wire post/terminal) of the alternator -**alligator clamps recommended, do not hard wire; jumper should be connected after start of engine.** Be sure this connection makes a direct circuit to the alternator field terminal. You are now ready to operate the alternator in an un-regulated state. Turn the master switch to the "ON" position and start the engine. Increase engine RPM to ensure the alternator shaft speed is over 3000 RPM. Connect jumper -alligator clamp to field post. With hand held volt meter quickly take voltage measurements at auxiliary (red wire post) of alternator to ground.

**Caution:** System damage can result if the alternator is operated for over 45 seconds with the jumper wire connected during this troubleshooting test. Failure to comply with this requirement voids warranty.

Full current output rating of the alternator should occur, and 2 to 3 times the system voltage should occur. If not, then the alternator is defective. If full output is observed, the alternator is good and either the wiring or the regulator is probably defective.

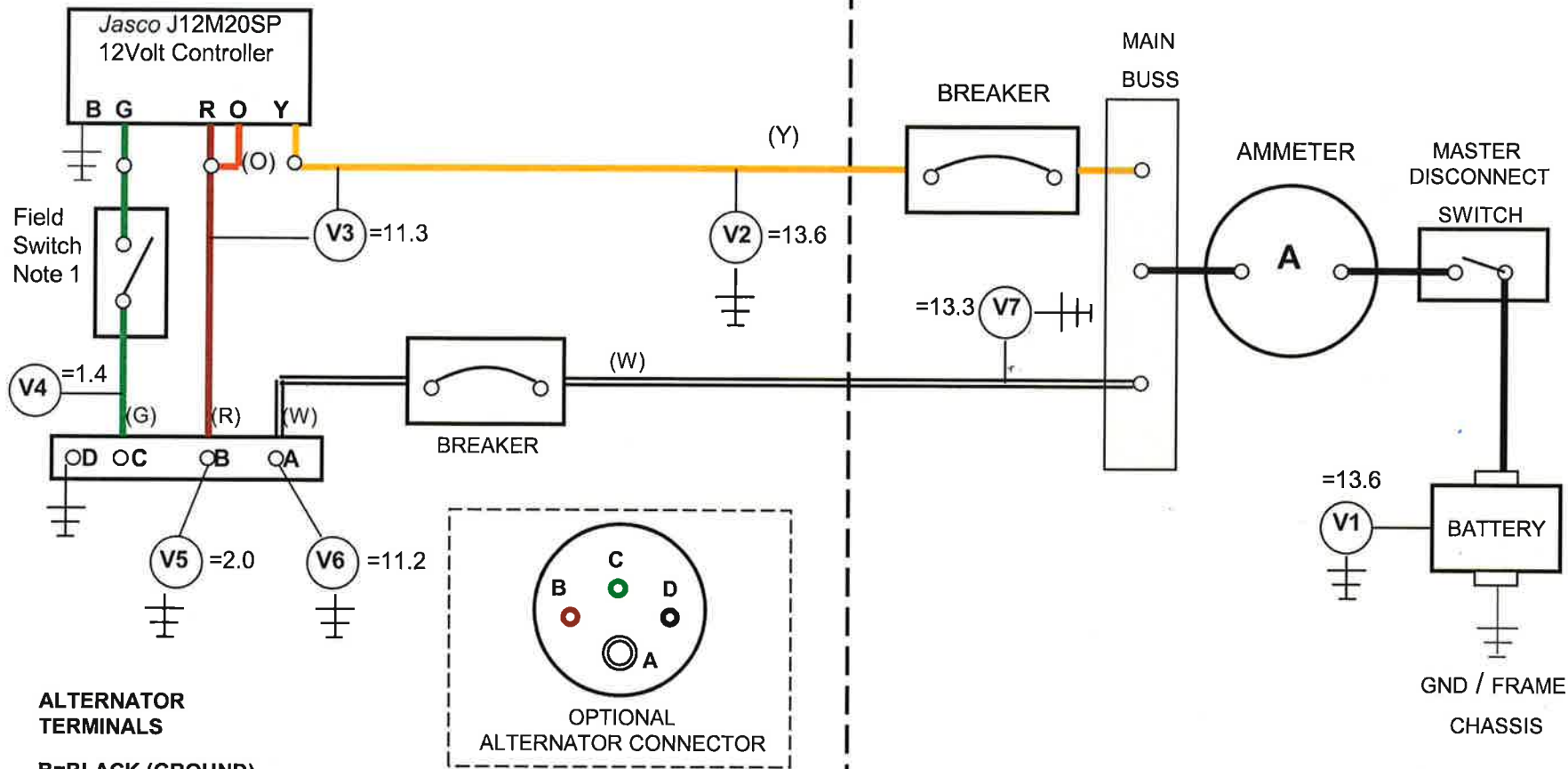
SKYTRONICS IS THE ONLY FAA AUTHORIZED REPAIR STATION FOR THE JASCO ALTERNATOR SYSTEMS. For further information please refer to diagram.

sales@skytronicsinc.com©

# 12 VOLT

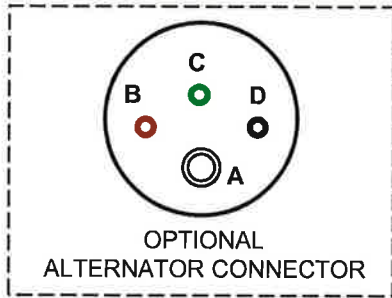
CIRCUIT REQUIRED FOR INSTALLATION  
(ALL 18 AWG EXCEPT OUTPUT)

TYPICAL EXISTING CIRCUIT



**ALTERNATOR TERMINALS**

- B=BLACK (GROUND)**
- G=GREEN (FIELD)**
- R=RED (AUXILLARY)**
- W=WHITE (OUTPUT)**
- Y=YELLOW (POWER WIRE)**
- O=ORANGE (SPIKE PROTECTOR)**
- V# =VOLT METER TEST LOCATIONS AND DESIRED READING AT V1 VOLT.**



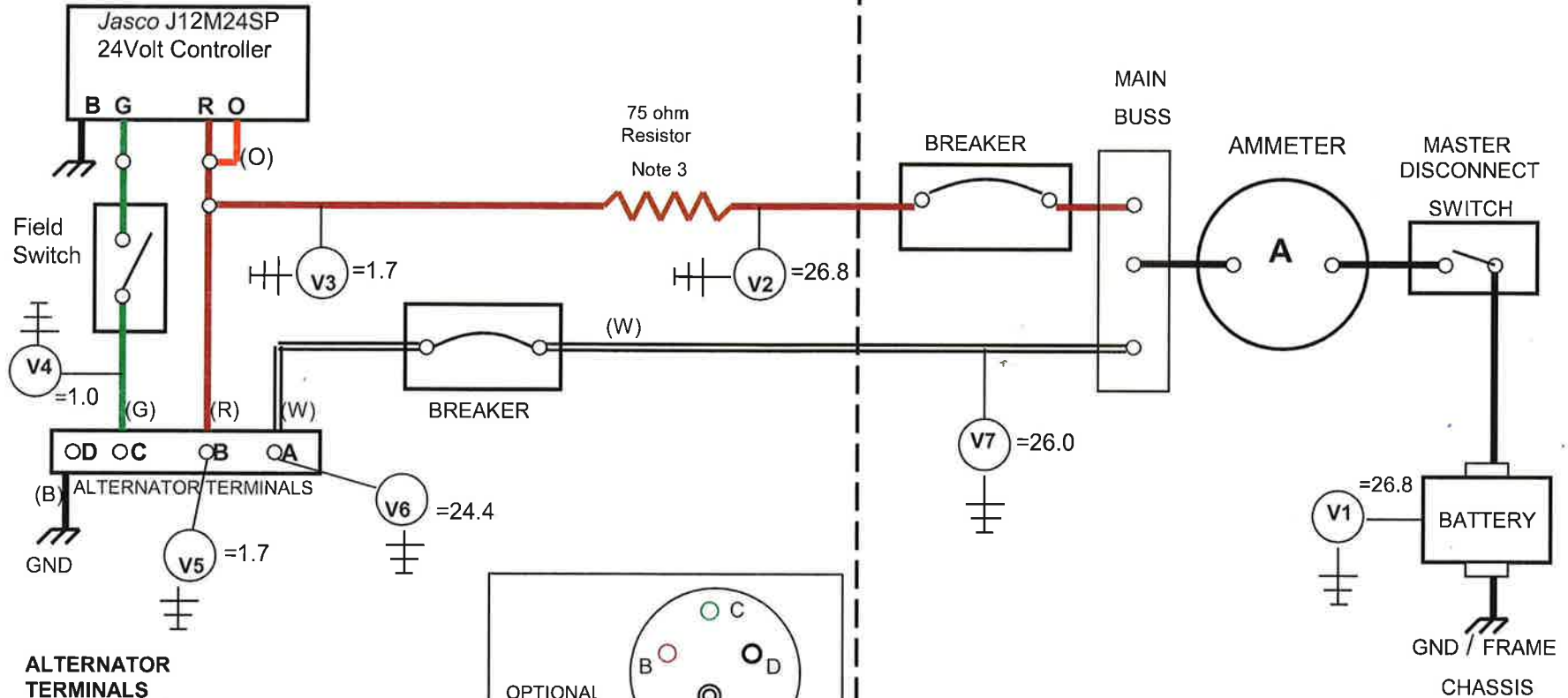
- A= OUTPUT (WHITE)**
- B= AUX (RED)**
- C= FIELD (GREEN)**
- D= GROUND (BLACK)**

**JASCO 12 VOLT TROUBLE SHOOTER**  
TROUBLE SHOOTING FOR 12 VOLT NEG. GND. ALTERNATOR **FIGURE 2**

# 24 VOLT

CIRCUIT REQUIRED FOR INSTALLATION  
(ALL 18 AWG EXCEPT OUTPUT)

TYPICAL EXISTING CIRCUIT



## ALTERNATOR TERMINALS

- B= GROUND (BLACK)**
- G= FIELD (GREEN)**
- R= AUX (RED)**
- W= OUTPUT (WHITE)**
- O= SPIKE PROTECTOR (ORANGE)**
- V#= VOLT METER TEST LOCATION AND DESIRED READING AT VI VOLTAGE**

## OPTIONAL CONNECTOR

- A= OUTPUT (WHITE)**
- B=AUX. (RED)**
- C=FIELD (GREEN)**
- D=GROUND (BLACK)**

## JASCO 24 VOLT TROUBLE SHOOTER

TROUBLE SHOOTING FOR 24 VOLT  
NEG. GND. ALTERNATOR

Figure 4