

B & C Specialty Products Inc

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Instructions for Continued Airworthiness for

B&C Specialty Products Model BC217-1A Standby Alternator Controller

The BC217-1A Standby Alternator Controller has solid state circuitry and has no required replacement interval. Voltage adjustment of the BC217-1A is not normally required. Deviation from the factory set point of 13.0 volts by more than 0.2 volts may indicate the need for repair or replacement. If this set point is in question, it should be checked using a calibrated digital voltmeter sensing directly between terminals 3 and 7 of the regulator with the engine at over 2000 RPM and Bus load under 3 amps.

The BC217-1A contains internal over-voltage protection. Grounding for both regulation and over-voltage protection is achieved through terminal 7 of the regulator, through the case mounting bolts and through the grounding stud provided under the terminal strip. At Annual inspections, check the security of the case mounting bolts and the wires attached to terminal 7 and the grounding stud. In addition, the over-voltage protection may be tested for correct operation in one of two ways:

1. Connection to terminal 6 may be isolated from the aircraft wiring at a convenient point and a 10 ohm, 10 watt resistor wired between terminals 6 and 4. Connect a current limited power supply with an output voltage adjustable between zero and 18 volts to terminals 6 and 7 with the positive lead on terminal 6. Limit the output current to 5 amps or less and gradually raise the power supply voltage until the controller shorts the output of the power supply. The power should be removed from terminal 6 within 5 seconds of achieving the shorted condition. The short should occur between 16.0 and 16.5 volts. No short indicates the failure of the over-voltage protection circuitry of the controller and necessity for repair or replacement of the controller. If the test is satisfactory, remove the 10 ohm resistor and reconnect terminal 6.

2. Connection to terminal 6 may be isolated from the aircraft wiring at a convenient point and a 10 ohm, 10 watt resistor wired between terminals 6 and 4. Connect a 5 amp in-line fuse from the aircraft bus to the negative terminal of a 6 volt lantern battery. Energize the aircraft Bus and momentarily connect the positive terminal of the lantern battery to terminal 6 of the regulator. The fuse should blow immediately. If the fuse does not blow, the over-voltage protection circuit has failed and the regulator must be replaced or repaired. If the test is satisfactory, remove the 10 ohm resistor and reconnect terminal 6.

Failure due to broken wires or damaged connectors may be corrected using repair procedures complying with the latest revision of AC 43.13-xx. All other physical damage or incorrect operation should be referred to the manufacturer for evaluation and repair.

**IF THESE UNITS ARE NOT BEING INSTALLED UNDER AN STC, THEY MUST BE
ACCOMPANIED BY A ONE-TIME FIELD APPROVAL FOR USE ON A TYPE
CERTIFICATED AIRCRAFT**