



# SERVICE INSTRUCTION SI0018 Rev D Page 1 of 6

**EFFECTIVE DATE:** This SERVICE INSTRUCTION is effective January 26, 2011

**SUBJECT:** *IGNITION BACKUP BATTERY INSTALLATION*

**MODELS AFFECTED:** *CC11-160 S/N 00093 THROUGH S/N 00153*

**CONTINUED INSPECTION:** *REPLACE BACKUP BATTERY ANNUALLY*

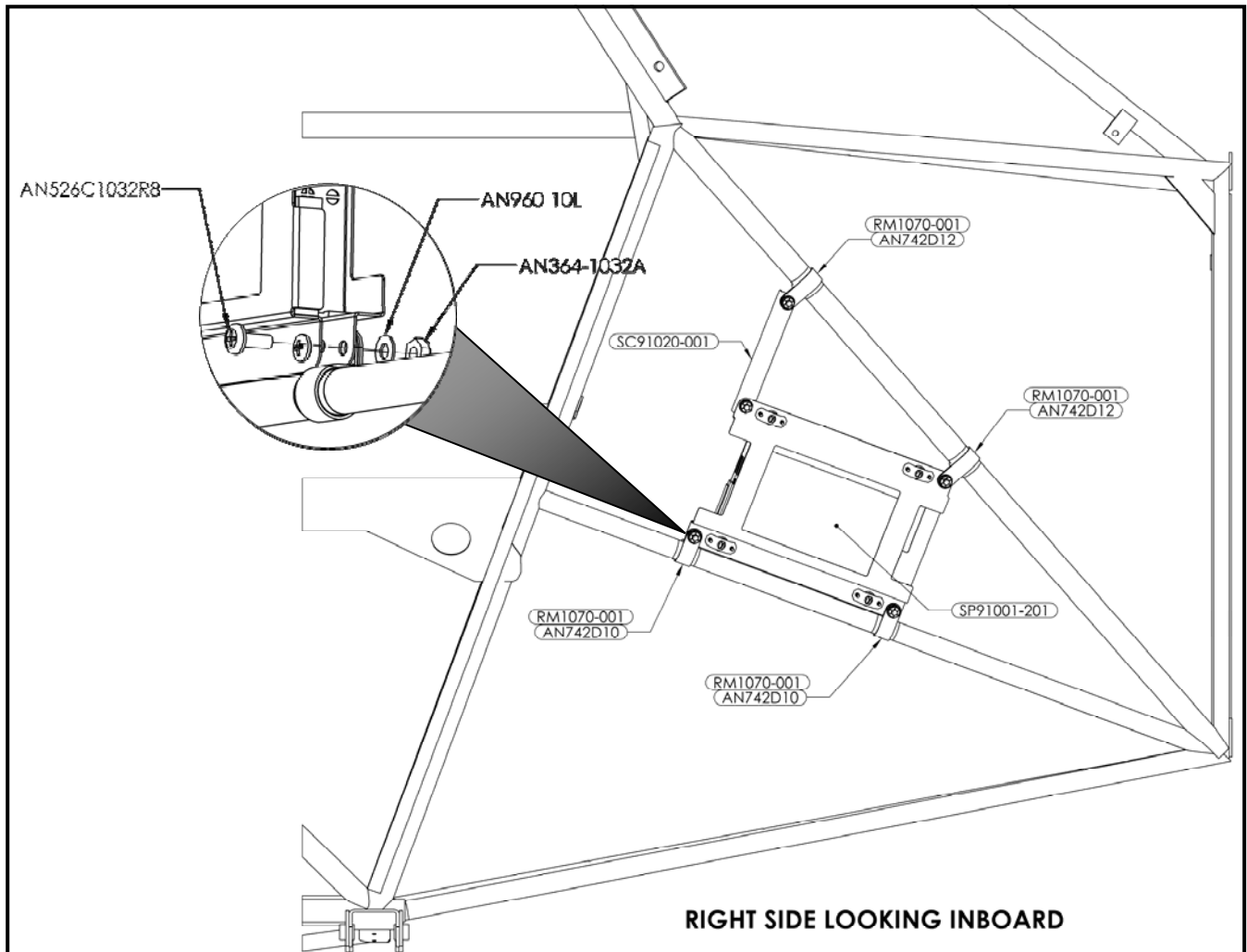
**PURPOSE:** After-Market installation of ignition backup battery system.

**PARTS LIST:**

<u>PART</u>	<u>DESCRIPTION</u>	<u>QTY</u>
SC71050-001	BACKUP BATTERY SWITCH ASSEMBLY	1
SC91020-001	BACKUP BATTERY BRACKET ASSEMBLY	1
SP91001-201	12VDC 2AH BATTERY, SLA	1
SC71204-029	CC11-160 IGNITION BACKUP BATTERY BORDER	1
VP6133-010	CIRCUIT BREAKER – PUSH-PULL (10 AMP)	1
AN742D10	TUBE CLAMP	2
AN742D12	TUBE CLAMP	2
AN526C1032R8	TRUSS HEAD SCREW, 10-32 X 1/2	4
AN960-10L	WASHER, FLAT, THIN	4
AN364-1032A	NUT, NYLON LOCK	4
VP6007-001	SOLDER SLEEVE (Ø.200)	1
RM1070-001	FRICTION TAPE, ELECTRICAL	1'
IG08B18W-1	EMER. BACKUP BATTERY TOGGLE – R. IGNITION MODULE	1
IG06B20W-1	RIGHT IGNITION C/B TO RIGHT IGNITION MODULE	1
IG08C200	20GA WIRE WITH LABEL	33"
VP6001-039	TERMINAL RING, 22-18G #8 STUD	2
VP6002-011	FEMALE DISCONNECT 22 TO 18G, .187 TAB INSULATED	1

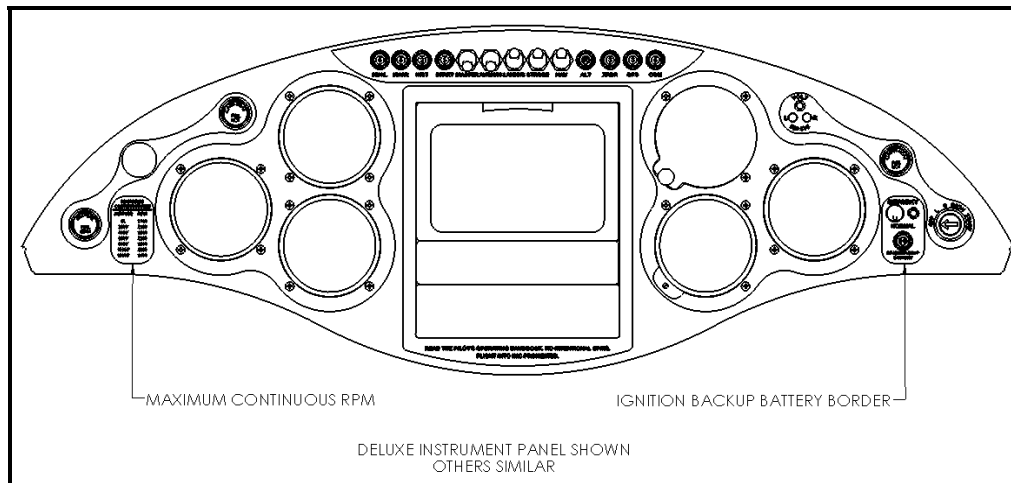
**INSTRUCTIONS:**

1. Unpin and slide pilot seat fully forward. Tip front seat up and forward to gain access to the battery compartment.
2. If backup battery is less than 12.0V, recharge at 2A or less.
3. Remove right forward interior access panel by removing the nylon snap rivets, retain for reinstallation.
4. Install SC91020-001, Backup Battery Bracket Assembly. Position as shown in Figure 1, use mounting hardware shown. If backup battery is recharging, leave battery uninstalled at this time.



**Figure 1 - Backup Battery Bracket Installation and Mounting Hardware**

5. See page 6 for the drill template. Verify the scale on drill template is equal to 6”.
6. Position Ignition Backup Battery Border Template opposite the "Maximum Continuous RPM" placard (see Figure 2).
  - a. Ensure 10A circuit breaker will clear fuselage tubes behind instrument panel. The template may need to be adjusted upwards.
  - b. Match drill instrument panel to template.



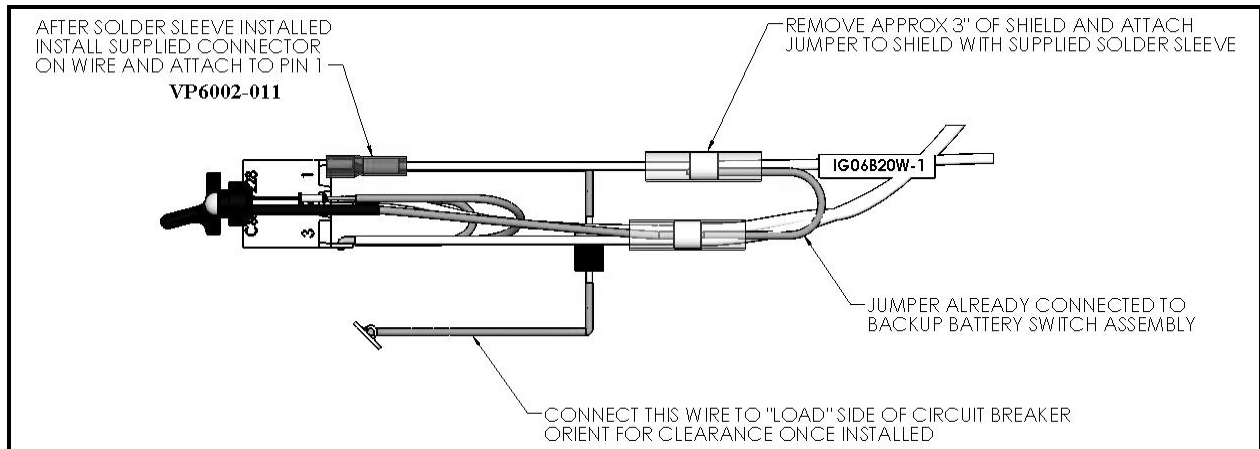
**Figure 2 - Ignition Backup Battery Border Location**

7. Remove template and install the Ignition Backup Battery Border over the drilled holes.
8. Loosely install Backup Battery Toggle Switch Assembly in the upper left hole of the Ignition Backup Battery Border.
9. Disconnect Right Ignition Module "INPUT" connector. Ensure disconnected Ignition Module is on aircraft right side as viewed from pilot seat
10. Remove wire IG06B20W-1 from pins 7, 8, 14, and 15 of connector.
11. Install wire IG08B18W-1, part of Backup Battery Switch Assembly, where IG06B20W-1 was removed.
  - a. IG08B18W-1 is routed around fuselage along final path.
  - b. Center conductor is soldered to pins 7 and 8.
  - c. Shield conductor is soldered to pins 14 and 15.
12. Route wire removed from Right Ignition Module "INPUT" connector, IG06B20W-1, to toggle switch temporarily mounted in panel. Mark appropriate length, trim as needed. Apply wire label IG06B20W-1 five to six inches from trimmed end.

**NOTE**

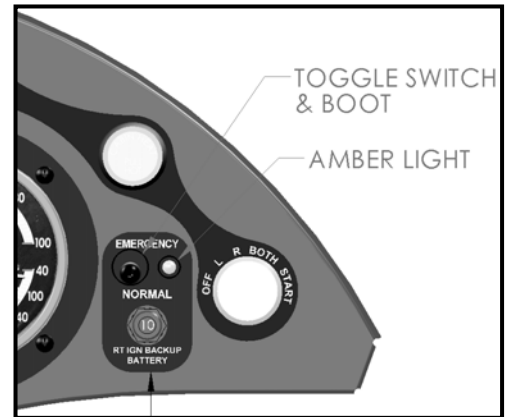
If smart monitor is not installed, cap and stow wires A10B200, A11A200, and A13A200

13. Remove toggle switch from panel.
14. Crimp connector, VP6002-011, to trimmed wire, IG06B20W-1, and connect to Backup Battery Switch Assembly, as shown in Figure 3.



**Figure 3 - Wire Connections and Assembly**

15. If IG08C200 terminal rings not installed, crimp VP6001-039 (22-18G #8 Stud) on both ends.
16. Connect IG08C200, wire supplied with Backup Battery Switch Assembly, to "LINE" side of supplied 10A circuit breaker. Orient for clearance.
17. Install Backup Battery Switch Assembly into instrument panel (See Figure 4).
  - a. Toggle switch goes in upper left hole with boot, keyway up (pins 3 and 6 up).
  - b. Amber light goes in upper right hole.
  - c. Circuit breaker goes in lower hole. If present, remove circuit breaker alignment pin before installation.



**Figure 4 - Switch, Amber Light and Breaker Installation**

18. Connect IG08C200 from supplied 10A circuit breaker to Main Bus or Lighting Bus. Do NOT connect to Avionics Bus.
19. Route IG08A18W-1, part of Backup Battery Switch Assembly, to Backup Battery Bracket Assembly where backup battery (SP91001-201) will be installed.
20. Install backup battery, SP91001-201 (12VDC 2Ah Battery SLA), in Backup Battery Bracket Assembly.
  - a. Ensure battery is fully charged.
  - b. 4 quick-turn fasteners hold the battery bracket cover in place.
  - c. Battery terminals may face forward or aft.
  - d. Connect IG08A18W-1 to the proper terminals on backup battery
    - i. The black heat shrink covered shield goes to **NEG (-)**.
    - ii. The white silicone sleeved wire goes to **POS (+)**.



# SERVICE INSTRUCTION SI0018 Rev D Page 5 of 6

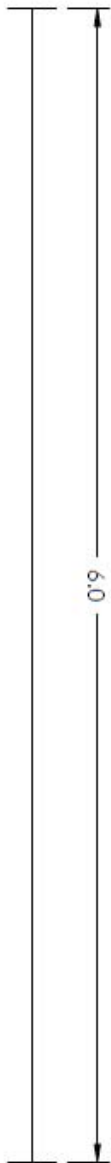
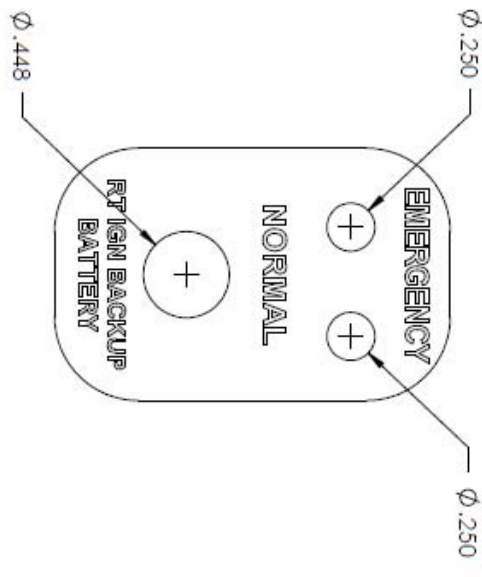
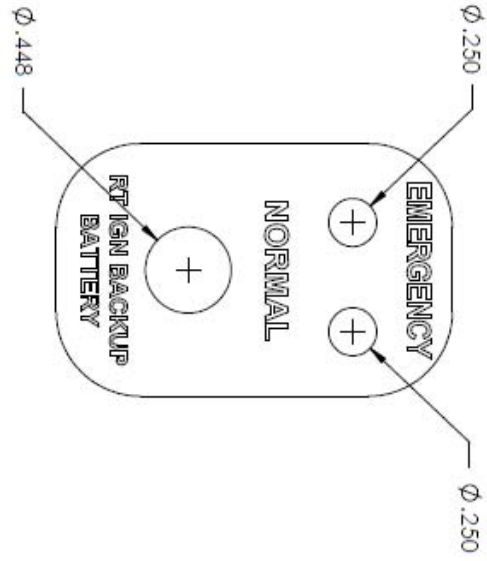
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21. Verify correct connections of system.
  - a. Turn Ignition Key Switch to "R", Red "IGN L" light illuminates
  - b. Switch toggle to "EMERGENCY" position, Amber Light illuminates
  - c. Switch toggle to NORMAL position and Ignition Key Switch to "OFF"
22. Reconnect Main Battery and reposition forward seat.
23. Install right forward interior panel, reinstalling the nylon snap rivets.
24. Operational check of system
  - a. Start engine normally
  - b. Switch Ignition Key Switch to "R", no appreciable change in engine RPM, Red "IGN L" light illuminates
  - c. Switch toggle to "EMERGENCY" position, amber light illuminates, no appreciable change in engine RPM
  - d. Red "IGN L" light stays illuminated, Red "IGN R" light stays extinguished
  - e. Switch toggle back to "NORMAL" position, Amber Light extinguishes
  - f. Switch Ignition Key Switch back to "BOTH" and the Red Ignition Lights are both extinguished
  - g. Operational check complete
25. Make logbook entry stating Ignition Backup Battery was installed per Service Instruction No. SI0018.
26. Add ignition backup battery system, 2.00 lbs. at 48.2" arm, to the Pilot's Operating Handbook Equipment List on page 6-13.
27. Refer to SSC10000AMM Revision A or later, CC11-160 Aircraft Maintenance Manual, for inspection and replacement requirements.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify Cub Crafters, Inc. of the address of the current owner to:

Cub Crafters, Inc.  
1918 S. 16<sup>th</sup> Avenue  
Yakima, WA 98903.  
1-877-484-7865 or 1-509-248-9491  
[support@cubcrafters.com](mailto:support@cubcrafters.com)

Please include the aircraft registration number, serial number, current name, and address of the owner and/or operator.



ACTUAL SIZE SHEET SCALE VERIFICATION  
ALL DIMENSIONS IN INCHES