Citation

SERVICE LETTER

CIL-33-01

TITLE
LIGHTS - TRANSMITTAL OF RADIANT POWER CORP. SB-RPC-001, PROCEDURE TO REPLACE OBSOLETE CONNECTOR ASSEMBLY FOR CBS28 EMERGENCY BATTERY

EFFECTIVITY

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SERIAL NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 (Citation)</td>
<td>-0001 thru -0349 that have incorporated SB500-33-13</td>
</tr>
<tr>
<td>500 (Citation I)</td>
<td>-0350 thru -0583 that have incorporated SB500-33-13</td>
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<tr>
<td>500 (Citation I)</td>
<td>-0584 thru -0689</td>
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<tr>
<td>525 (CitationJet)</td>
<td>-0001 thru -0269 that have incorporated SB525-33-06</td>
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<tr>
<td>525 (CitationJet)</td>
<td>-0270 thru -0359</td>
</tr>
<tr>
<td>525 (CJ1)</td>
<td>-0360 thru -0558</td>
</tr>
<tr>
<td>525 (CJ1+)</td>
<td>-0600 thru -0701</td>
</tr>
<tr>
<td>525A (CJ2)</td>
<td>-0001 thru -0244</td>
</tr>
<tr>
<td>525A (CJ2+)</td>
<td>-0300 and On</td>
</tr>
<tr>
<td>525B (CJ3)</td>
<td>-0001 and On</td>
</tr>
<tr>
<td>525C (CJ4)</td>
<td>-0001 and On</td>
</tr>
<tr>
<td>550 (Citation II)</td>
<td>-0002 thru -0505</td>
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<tr>
<td>550 (Citation II)</td>
<td>-0550 thru -0733 that have incorporated SB550-33-21 or SB550-33-30</td>
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<tr>
<td>550 (Bravo)</td>
<td>-0801 thru -1136</td>
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<tr>
<td>S550 (Citation SII)</td>
<td>-0001 thru -0160 that have incorporated SBS550-33-15</td>
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<tr>
<td>560 (Citation V)</td>
<td>-0001 thru -0259 that have incorporated SB560-33-16 or SB560-33-23</td>
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<tr>
<td>560 (Citation Ultra)</td>
<td>-0260 thru -0455 that have incorporated SB560-33-16 or SB560-33-23</td>
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<tr>
<td>560 (Citation Ultra)</td>
<td>-0456 thru -0538</td>
</tr>
<tr>
<td>560 (Citation Encore)</td>
<td>-0539 thru -0707</td>
</tr>
<tr>
<td>560 (Citation Encore+)</td>
<td>-0751 thru -0815</td>
</tr>
<tr>
<td>680 (Sovereign)</td>
<td>-0001 and On</td>
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</table>

REASON
When the old cell inside the battery pack is replaced a new connector will be required to install the new battery pack.
DESCRIPTION

This service letter transmits Radiant Power Corp. SB-RPC-001, Procedure To Replace Obsolete Connector Assembly For CBS28 Emergency Battery.

COMPLIANCE

INFORMATIONAL. This service letter is for informational purposes only.

REFERENCES

Radiant Power Corp. SB-RPC-001, Procedure To Replace Obsolete Connector Assembly For CBS28 Emergency Battery

PUBLICATIONS AFFECTED

None

ACCOMPLISHMENT INSTRUCTIONS

1. If a replacement battery is ordered for the CBS28 Battery Mod B or earlier, do the Radiant Power Corp. SB-RPC-001, Procedure To Replace Obsolete Connector Assembly For CBS28 Emergency Battery.

2. Record that this service letter has been completed.
   A. Complete a Maintenance Transaction Report.
   B. Put a copy of the completed Maintenance Transaction Report in the airplane logbook.
   C. Send a copy of the completed Maintenance Transaction Report to: CESCOM C/O Camp Systems International, 8200 East 34th Street North, Building 1600 Suite 1607 Wichita, KS 67226.
I. **PLANNING INFORMATION**

**A. EFFECTIVITY**

This service bulletin applies to the following Radiant Power part numbers:

<table>
<thead>
<tr>
<th>ASSEMBLY P/N:</th>
<th>SERIAL NUMBER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2501 (CBS28)</td>
<td>6500 and earlier</td>
</tr>
<tr>
<td>2503 (Battery Pack)</td>
<td>13000 and earlier</td>
</tr>
</tbody>
</table>

This service procedure is Optional and is only required if a replacement battery (Radiant P/N 2503 MOD A) is ordered for CBS28 MOD B or earlier. Alternatively, the service bulletin instruction may be performed by Radiant Power Corporation. Contact Radiant Power for more information: 941-739-3200

The CBS28 Emergency Battery is used on the following aircraft models 500, 525, 525A, 525B, 525C, and 680.

**B. REASON**

A 2-pin Connector/Header Assembly, located internally to the CBS28, has become obsolete. Replacement parts (plug and header) are available, but the retention features are not physically compatible with the equipment that is presently in service or spares. If any of the assemblies using this connector, or its mate, need to be replaced as part of a repair operation, the connector used on the new subassembly will not mate properly to the equipment that is being repaired.

As of October 1, 2012, all new purchases of CBS28 Emergency Battery Power Supply shall utilize the new connector/header solution. However, when replacement batteries are ordered for existing CBS28 product, the internal J2/P2 connectors will not mate properly. Since new battery subassemblies will incorporate the new connector, the internal PWA on existing product needs to be modified to accept the new battery subassembly.
C. DESCRIPTION

The service bulletin provides for the means to upgrade the CBS28 when Battery Pack 2503 is replaced.

D. COMPLIANCE

It is not necessary to perform this rework on equipment that is in service and not in need of any repair operations. Radiant Power Corp. recommends this modification be accomplished, in its entirety, only on CBS28 equipment when the 2503 Battery Pack is being replaced with a new part.

If the 2503 battery pack is replaced on CBS28 MOD B or earlier, the effected header shall be replaced in accordance with this service bulletin instruction. This service may be performed by Radiant Power Corporation upon request.

E. APPROVAL

The procedures and rework defined in this service bulletin do not affect fit, function, or interchangeability of the CBS28 equipment and therefore, does not required FAA approval. Cessna Aircraft Company performance approval is required.

F. MANPOWER

It is estimated that the service procedure will take 1 man-hour to complete. The validation test is estimated to take an additional 3 hours to complete.

G. MATERIAL – COST AND AVAILABILITY

The material required to perform this rework is Radiant Power P/N: 2503-KIT, Service Kit, CBS28.

H. TOOLING

The rework instruction requires items normally found in a Repair Station. These items include:
   a) Philips screwdriver
   b) Solder/Desolder station
   c) Soldering station vise
   d) Conformal coating, Humiseal 1A20

The verification procedure uses the same equipment for performing the final assembly test in accordance with CMM 24-31-03.

I. WEIGHT AND BALANCE – Not affected.
J. **ELECTRICAL LOAD** – Not affected

K. **SOFTWARE ACCOMPLISHMENT SUMMARY** – Not applicable.

L. **REFERENCES** - Component Maintenance Manual (CMM) 24-31-03

M. **PUBLICATIONS AFFECTED**
CMM 24-31-03 will be revised to incorporate the following:
- Assembly CBS28 to Modification Level C, “MOD C”;
- Battery Pack 2503 to Modification Level A, “MOD A”;
- New manufacturing part numbers for the header J2, plug P2, and terminal.

N. **INTERCHANGEABILITY OF PARTS**

All new and reworked CBS28 MOD C equipment that incorporate the new header and plug configuration are form, fit and function interchangeable on aircraft with CBS28 equipment that has not had the rework performed.

Owing to the fact that the new plugs on the 2503 Battery Pack do not effectively lock into the obsolete header, interchangeability of internal parts can only be maintained by changing the equipment part number of reworked equipment. All new and reworked CBS28 equipment shall be branded with Modification Level C, “MOD C”, suffix to the base equipment part number on the ID label, in two places.

To maintain compatibility with battery pack 2503 MOD A, earlier versions of CBS28 (MOD B or earlier) must be serviced to replace the existing header (Molex P/N 10-32-1023) with the new header (Molex P/N 53253-0270). Servicing the CBS28 to replace the J2 header will result in a “MOD C” designation on the LRU.

Table 1: Compatibility Between CBS28 (LRU) and Battery Pack 2503

<table>
<thead>
<tr>
<th></th>
<th>CBS28 MOD B (or earlier)</th>
<th>CBS28 MOD C (or later)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2503</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No MOD shown</td>
<td>No Action Necessary</td>
<td>Contact Radiant to Replace Battery</td>
</tr>
<tr>
<td><strong>2503 MOD A</strong></td>
<td>Replace J2 or Contact Radiant</td>
<td>No Action Necessary</td>
</tr>
<tr>
<td>(or later)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

O. **WARRANTEE CREDIT** – None.

II. **MATERIAL INFORMATION**

A. **MATERIAL – COST AND AVAILABILITY**
The materials required to accomplish the rework are provided as a kit when replacement parts (P/N 2503) are ordered from Radiant Power Corp. This kit is identified as Radiant P/N 2503-KIT.

<table>
<thead>
<tr>
<th>QTY</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>J2 Header: 53253-0270 (Molex)</td>
</tr>
<tr>
<td>2</td>
<td>Radiant ID Label Overlay: TBD (Radiant)</td>
</tr>
</tbody>
</table>

A. **INDUSTRY SUPPORT** – Not Applicable

B. **AIRPLANES** - Not applicable to in service equipment

C. **SPARES** - Not applicable to spare CBS28 equipment

D. **TOOLING – PRICE AND AVAILABILITY**

All tooling required to perform and validate the work is the same as standard equipment listed in the CBS28 Component Maintenance Manual 24-31-03.

III. **ACCOMPLISHMENT INSTRUCTIONS**

A. **AIRPLANES** - Not applicable to in service equipment

B. **SPARES** - Not applicable to spare CBS28 equipment

C. **REPAIRS**

1. Refer to CMM 24-31-03 for handling instructions, specific reference designations (from IPL Figure 1) and general instructions for disassembly, repair, and assembly.

2. The general instructions to replace J2 are:
   a) Disassemble to access A3 PWA in accordance with CMM 24-31-03, DISASSEMBLY.
   b) Remove J2 in accordance with CMM 24-31-03, REPAIR.
   c) Replace J2 with Molex P/N 53253-0270 (provided in the service kit).
   d) Re-assemble the CBS28 in accordance with CMM 24-31-03, ASSEMBLY.
   e) Add new “MOD C” labels (provided in the service kit) as shown.
   f) Perform Final Assembly Tests per CMM 24-31-03, TESTING AND FAULT ISOLATION, paragraph 4.

3. Instruction details are provided in Figures 1-8. The item numbers in parentheses, for example “screws (90)” are derived from CMM 24-31-03, IPL Figure 1.
Figure 2
1. Observe the labels on CBS28 to be “MOD B” or earlier (2 places).

Figure 3

2. Observe the label on the replacement battery 2503 to be “MOD A” or later.

Figure 4
3. Remove the fuse holder cap (130) and fuse F1 (5).
4. Remove the screws (25) and housing cover (20).
5. Pull tab on battery BT1 (35) to access J2 and J3. Separate the Velcro as needed.

Figure 5

6. Disconnect battery pack plug P3 from connector J3 (135).
7. Disconnect battery pack plug P2 from connector J2 on the A3 PWA (75).
8. Remove the old battery BT1 (35).

Figure 6
9. Remove 4 screws (90) from the two right mounting blocks (85).
10. Carefully extract A3 PWA (75) and secure it, so as not to stress the wires.
11. Use a solder station to replace J2 header (per IPC-610, Class 3).
12. Touch up the conformal coating.

Figure 7
13. Replace A3 PWA (75).
14. Secure the two right mounting blocks (85) with 4 screws (90).
15. Using the new “MOD-A” battery BT1 (35), connect plug P2 from battery pack BT1 (35) to connector J2 on the A3 PWA (75).
16. Connect plug P3 to connector to J3 (135).
17. Remove the protective tape from the new “MOD-A” battery BT1 (35).
18. Install the new “MOD-A” battery BT1 (35) into the housing (145). Carefully match the hook and loop Velcro to ensure the battery pack is secure.
19. Install the housing cover (30) with the screws (25).
20. Replace the large label (10) on the housing cover (20) to reflect the change to CBS28 (MOD C).
21. Replace the small label (15) on the housing (145) to reflect the change to CBS28 (MOD C).
22. Perform Final Assembly Tests per CMM 24-31-03, TESTING AND FAULT ISOLATION, paragraph 4.

Figure 9
D. **RECORD OF COMPLIANCE**

Not applicable.

By virtue of the fact that this service bulletin applies only to CBS28 equipment that is being repaired and the repair involves the replacement of affected components, the following tests, provided in CMM 24-31-03 TESTING AND FAULT ISOLATION, shall be successfully performed on the equipment prior to return to service:

a. Final Assembly Test, paragraph 4

This test procedure includes verification of the charging and discharging operations and proper installation of the header. Successful completion of this test as a part of the repair validation is sufficient to validate the rework specified in this service bulletin.