

SERVICE INFORMATION LETTER (SIL)

FOR THE

FIELD-REPLACEMENT PROCEDURE OF A CONDITIONED CBS28-1 BATTERY PACK

REVISION: C

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SCOPE: The purpose of this document is to provide instructions for field-replacements of the CBS28-1 battery pack to support a proactive maintenance process. New battery packs are Radiant P/N 2503, reconditioned battery packs are Radiant P/N 2503W.

PROCEDURE: Perform the following steps to replace the CBS28-1 battery pack. The facility performing the battery swap should capture this process as a router, work instruction, etc. and document the steps performed, the names/stamps of operators performing the work, the date, quantities, etc. as required by applicable regulations.

1) Remove the CBS28-1 Lid:

- a. Remove the seven (7) fasteners as shown in Figure 1. Retain the fasteners for installation later.
- b. Carefully remove the lid with a small flat head screwdriver or similar prying tool as shown in Figure 2 and set it aside for installation later.

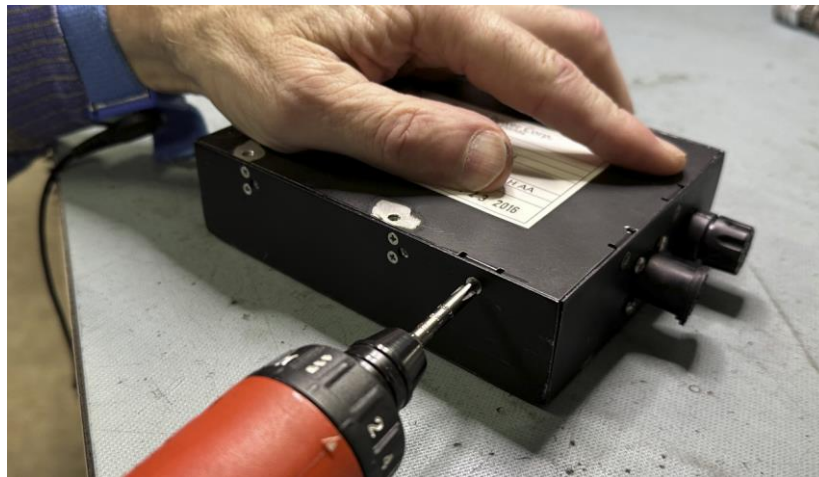


Figure 1: Removing the Lid's Screws



Figure 2: Removing the Lid – Prying it Off

2) Remove the CBS28-1 Battery Pack:

- a. Grab the pull tab on the battery and lift the battery pack straight up out of the CBS28-1 housing base. Note that the pack is secured to the housing with Velcro. See Figure 3.
- b. Carefully disconnect the battery's main connector (J3) and thermal sensor connector (J2) from the unit's circuit boards.
- c. Set the battery pack aside for it to be returned to Radiant Power for reconditioning at the factory. Radiant Power will return the battery pack to the customer after it is reconditioned¹.
- d. Before continuing, inspect the CBS28-1's connectors and electronics for any visible damage. If damage is observed then do not continue with this SIL and contact Radiant Repairs (rdsrepairs@rpcaero.com) to return the unit for repairs.



Figure 3: Removing the Battery Pack – Lift by the Tab

3) Install a New or Reconditioned Battery Pack:

- a. Insert the new (Radiant P/N 2503) or reconditioned (Radiant P/N 2503W) pack into the housing base at a slight angle (i.e., temporary position to accommodate the next step) as shown in Figure 4.
- b. Connect the new or reconditioned pack to the J2 connector on the A3 circuit board (temperature sensor) such that each wire is connected to the corresponding wire of the same color (i.e., black to black, etc.).
- c. Tuck the J3 connector under the wire harness next to the Printed Circuit Board (PWB A4) as shown in Figure 4.
- d. Install the battery pack in the orientation fully into the housing base aligning the Velcro on the battery with the mating Velcro within the housing base.

¹ Battery packs are typically ready to be returned-to-service after they are factory reconditioned. Failed packs may not be able to be reconditioned and will need to be replaced.

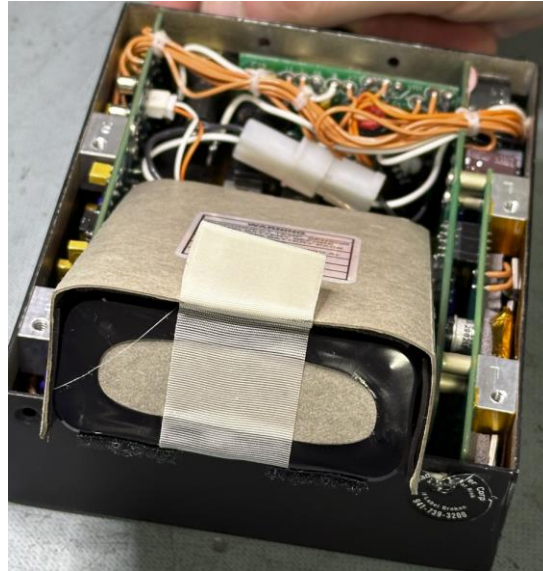


Figure 4: Installing the New Pack – Temporary Angled Position with Tucked Connector

4) Reinstall the CBS28-1 Lid:

- a. Verify that the unit's wire bundles are still routed properly through the dedicated slots in the printed circuit boards (PWBs A2 and A3) to prevent pinching of wires.
- b. Place the lid onto the housing in the proper orientation such that the lid's tabs and holes align with the fastener holes on the housing base.
- c. Install temporary mounting block screws (MS51957-24, QTY: 4) on the top-side of the lid (i.e., 4 holes on top) to ensure that the base's mounting blocks are properly aligned with the lid.
- d. Install the other screws around the outer perimeter (i.e., the screws removed earlier during the lid removal steps, QTY: 7).
- e. Remove the temporary screws and set them aside for future pack replacements.



Figure 5: Reinstalling the Lid – Note the 4 Mounting Block Holes and the 7 Perimeter Holes

5) Bench-Level Testing and Return to Service:

NOTE: This field battery replacement procedure is intended to be performed on recently conditioned battery packs. Battery packs that have not been stored without conditioning for periods of 120 days require further conditioning before returning to service. See the CMM for more information.

NOTE: The bench level testing prescribed below is used to confirm that the battery was installed properly within the CBS28-1. Additional on-aircraft testing should be performed in accordance with Cessna's procedures to confirm full operation.

- a. Apply 28 VDC power to the CBS28-1 for at least 10-seconds, then remove power. Referencing the CBS28-1's main connector, the positive input (+) is Pin A with the power return (-) on Pin B.
- b. After power is removed, use a calibrated voltmeter to measure the voltage between the following pins of the CBS28-1's main connector. For each measurement, verify the voltage is within the specified range.
 - i. Pin A to Pin B: Less than 1.0 VDC
 - ii. Pin C to Pin B: Between 22-to-28 VDC
 - iii. Pin D to Pin B: Between 22-to-28 VDC

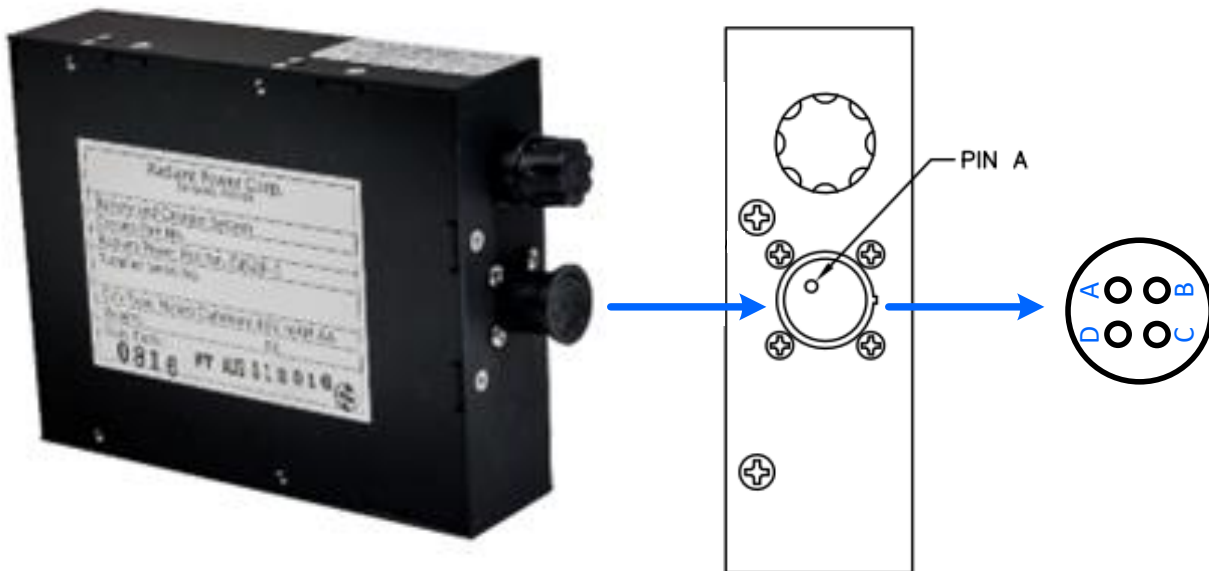


Figure 6: CBS28-1 Main Connector Location and Pin-Out