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Date: September 27, 2022 Service Bulletin No. 22-01

Subject: Mounting location of Integrated Back-up Battery Systems (IBBS units)

IBBS-12v-3ah-CRT
IBBS-12v-6ah-CRT
IBBS-24v-3ah-CRT

Models Affected:

Aircraft that have been modified in accordance with STC-AML SA04400NY as identified by either of the Master Data List (MDL):
p/n 760.0022 rev 1.1 dated 7/15/21
p/n 760.0011 rev 1.2 dated 9/19/19

Reason: Rechargeable lithium cells are capable of generating hazardous emissions when defective or subject to physical or operational abuse. Although, the IBBS system is protected from abusive failure conditions and includes a variety of fail-safe mechanisms, conditions may occur that could cause a Thermal Runaway (TR) event resulting in the venting of smoke or fumes and/or liquid. In the event of a TR, the IBBS system will vent smoke or fumes and/or leak a trace amount of liquid from the base plate mounting corners or from around the product fuse location.

To ensure that the aircraft occupants are not exposed to fumes emitted from a thermal runaway event, the IBBS system must be mounted in a non-occupant area of the aircraft as identified in the Required Action section of this document.

Timing: TCW Technologies recommends that this service bulletin be accomplished prior to the next 100 hr. or annual inspection of the aircraft, whichever comes first.

NOTE: All identified TCW Technologies p/n documents identified in this SB are available at no charge at www.tcwtech.com

Required Action:

If the IBBS unit is presently mounted in an *occupant area* of the aircraft, it must be relocated to a *non-occupant* area.

The non-occupant area must be partitioned off from the occupant area by a metal hatch/bulkhead/door/wall or equivalent structure. The separating structure must not have louvers or openings that allow airflow between the non-occupant area and the occupant area. The mounting area must provide at least 1" of clearance between the IBBS unit and other aircraft equipment or wiring.

Example non-occupant areas include locations such as a separated baggage compartment, avionics compartments, nacelles, empennage, tail cone, nose cone or wing storage compartments.

If the IBBS unit is already mounted in an area that meets the above requirements for a *non-occupant* area, no further action is required.

Relocating the IBBS unit:

1. If the IBBS unit is presently mounted in an occupant area of the aircraft, it must be relocated to a *non-occupant* area in accordance with STC-AML SA04400NY Installation Instructions identified as P/N 725.0047 rev 1.2 dated 8/23/2022 or later approved revision.
   All further references made in this document are to this revision level (1.2) or a later approved revision and are indicated below as STC-AML Installation Instructions. Additionally, the MDL p/n 760.0022 rev 1.2, dated 8/23/2022 or later approved revision provides a listing of relevant documents to this STC-AML including the pertinent AFMS and ICA documents.

2. Refer to **Section 3** of the STC-AML Installation Instructions p/n 725.0047 rev 1.2 for details regarding **Parts & Materials, Tools, and Standard Practices** utilized to accomplish this relocation procedure.

3. Select a non-occupant area for the new mounting location of the IBBS unit in accordance with the STC-AML Installation Instructions **Section 6.** Mount the IBBS unit per the instructions found in **Sections 6.1.1 & 6.1.2**

4. The wiring harness connections between IBBS unit and the aircraft wiring harness must be extended from the present location to the new mounting location. See **Section 6.3** of the STC-AML Installation Instructions for **Wire Routing and Installation Details**. See AC43.13-1B, Chapter 11, Section 13 for acceptable means of wire splicing.

   The IBBS harness utilizes standard MIL-W-22759/16-xx-x type wire with no requirements for shielding. The IBBS system utilizes the standard MS24308 style 15 pin D-Sub connector, populate all 15 conductors in an extension harness utilizing #20 awg wire as indicated in Table 3-3 found in the STC-AML Installation Instructions. The extension harness simply connects each respective pin in a one for one fashion, for example: pin1 on one end simply connects to pin 1 on the other end of the harness, this is done for all pin numbers.

Important Note: The STC-AML Installation Instructions includes Appendix B with four Interconnect Diagrams identified as Design A, Design B, Design C, Design D corresponding to different interconnect methods for various LRU types. Design C & Design D have a requirement for additional circuit protection, such as an in-line fuse mounted within 3" of the IBBS connector. If completing this modification on an installation utilizing Design C or Design D, the associated in-line fuses must be located with IBBS unit in the new mounting location. The existing fuses do not need to be removed from the current harness location; however, appropriate fuses must be mounted in accordance with the notes found in Appendix B of the STC-AML Installation Instructions for these installations.

As an alternative to wire splicing, a pre-made extension cable may be purchased from TCW Technologies, p/n IBBS-Harn-Ext. This harness allows the present aircraft wiring harness to be extended by up to 10 feet from the original mounting location.

5. After the IBBS has been mounted in the non-occupant area and the wire harness extended to the new mounting location follow all the procedures and steps in accordance with **Post-Installation, Section 7** of the STC-AML Installation Instructions.

6. **Return to Service** documents and instructions are found in **Section 7.6.** of the STC-AML Installation Instructions.