Acme Aerospace Inc.

SERVICE INFORMATION LETTER

Description

Battery Backup System, B737 Series Aircraft, Boeing 757 Series Aircraft, Boeing 767 Series Aircraft, and Boeing 747 Series Aircraft; Acme Aerospace (V31467 / 6HAR8)

1. Planning Information

A. Effectivity

This Service Information Letter provides clarification to all B737 Series aircraft, Boeing 757 Series Aircraft, B767 Series aircraft and Boeing 747 Series Aircraft Operators regarding the storage, handling and maintenance of Acme Aerospace's Battery Backup System components installed on B737 Series Aircraft, Boeing 757 Series Aircraft, Boeing 767 Series Aircraft, and Boeing 747 Series Aircraft.

Acme Aerospace is the original equipment manufacturer (OEM) of the following Battery Backup System Components:

Applicable Acme Aerospace Battery Backup P/N:
312BS101-1 (Boeing part number S282T005)

Serial Number:

All

B. Reason

Due to the recent grounding of B737 Series Aircraft, Boeing 757 Series Aircraft, Boeing 767 Series Aircraft, and Boeing 747 Series Aircraft, the Dedicated Battery/Charger (DBC) may experience performance issues when the aircraft is returned back to service. This SIL is intended to provide clarity regarding storage, handling, and maintenance of Acme Aerospace's Dedicated Battery/Charger (DBC).

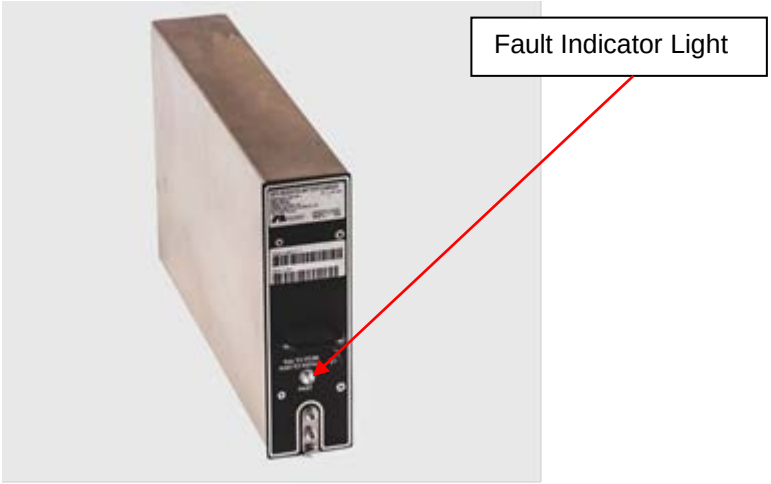
The Dedicated Battery/Charger (DBC) Acme Aerospace PN 312BS101-1, Boeing part number S282T005 is an LRU that function as both a Battery and a Battery Charger dedicated to providing long term emergency electrical power to a flight deck installed Integrated Standby Flight Display (ISFD).

The DBC is installed on Boeing 737, 747, 757 and 767 aircraft. The DBC provides a single source of electrical power to the ISFD. The DBC will normally route nominal 28 VDC power from the airplane bus to the ISFD. In the event of loss of airplane bus power, the DBC will supply nominal 24 VDC ISFD power from its internal battery. The DBC is designed to operate without scheduled maintenance between battery pack replacement intervals of three (3) years.

It contains a sealed lead acid battery pack and an electronic circuit boards dedicated to charge the internal battery pack and monitor and control the performance of the unit.

The front panel of the DBC contains a fault indicator light that illuminates in the event a fault has been detected. The DBC continuously monitors for the following faults.

- Safe Battery Temperature
- Battery Cell imbalance
- Power Good (battery in charged and ready condition)



The fault indicator light is not an indication of available battery capacity. Battery capacity can only be verified by test or replacement of the battery pack. The DBC was designed to meet the operational energy storage requirements when the following conditions are met IAW the DBC CMM 24-31-05, Rev 7

- **Storage Life:** Top charge the battery at one-year intervals at temperature of not exceeding 25 °C (77°F).
- **Storage and Handling:** The DBC breaker is to be open (pulled) during storage.

- **Rated Capacity:** The DBC shall be able to provide 1.2 amperes for 150 minutes ≥ 18 volts at an ambient temperature of 68°F (20°C).
- **Operational Service Life:** The battery pack shall be replaced every three (3) years (Reference: Boeing SCD S282T005 Rev A).

C. Description

The following conditions could affect the LRU's operation service life and lead to sulfation in the battery cells causing one or more-week cells:

- Aircraft parked or stored for an extended period; greater than 90 days
- Aircraft operated on ground or in short distance without allowing unit's internal battery pack to reach a fully charged
- 312BS101-1 LRUs or 312BS801-1 LRU in stores, storage for an extended period, disconnected from the aircraft greater than 90 days
- Storage in a less than fully charged state or storage with circuit breaker not pulled

Symptoms of weak cells in batteries

- Red fault light illuminated
- Battery will not Charge
- LRU fails ATP

Aircraft owners should strictly follow the product's CMM 24-31-05 Rev 7 which specifies storage, handling, and maintenance recommendations.

NOTE: CMM 24-31-05, Rev 7 Storage and Handling instructions included below for quick reference

The DBC and battery pack assembly shall not be stored at an ambient temperature above 25°C (77°F). Storage at lower temperatures is permitted.

A. DBC

(1) Top charge the DBC at one-year intervals from the date of battery pack installation, found on the "Battery Pack Maintenance Label" located on the exterior side of the DBC. Apply 28Vdc to the rear connector of the DBC, connect (+) to Pin 6 (+28V Input) and connect (-) to Pin 4 (Common), also connect (-) to Pin 3 (Enable), refer to IPL Figure 3, and charge for 24 hours. Update the "Battery Pack Maintenance Label" located on the exterior of the DBC by marking the applicable

year box.

(2) The DBC can be stored up to 3 years (with annual top charges) in a full-charge condition. After three years storage as indicated by the “Battery Pack Maintenance Label” located on the exterior of the DBC, install DBC on aircraft to begin the 3-year service life or replace the battery pack assembly (and return to storage.

(3) If the DBC is removed from aircraft operation and to be placed into long-term storage, battery pack assembly replacement is recommended prior to reinstallation onto aircraft.

(4) The DBC breaker (140) is to be open (pulled) during storage.

(5) The DBC is stored in a charged condition.

(6) The DBC can be removed from storage, close the DBC breaker (140) and then directly placed on the aircraft without re-charging.

B. Battery Pack Assembly

(1) The battery pack assembly can be stored up to 3 years (with annual top charges) in a fully charged condition from the date of manufacture located on the Battery Pack Label (part of Item 40, IPL Figure 1). After storage for one year, install battery pack assembly into a DBC and apply 28Vdc to the rear connector of the DBC, connect (+) to Pin 6 (+28V Input) and connect (-) to Pin 4 (Common), also connect (-) to Pin 3 (Enable), refer to IPL Figure 3, and charge for 24 hours. Remove the battery pack assembly from the DBC and update the “Charged Battery Pack Assembly Label” located on the outside of the battery pack assembly. Alternatively, the battery pack assembly can be returned to the manufacturer for re-charging.

(2) After 3 years of battery pack assembly storage, the battery pack assembly can be installed in a DBC for an additional DBC storage up to 3 years.

In the event the DBC was installed on the aircraft during a period of extended storage and the conditions above were not maintained or cannot be verified, it is recommended to perform a capacity check or replace the battery pack in the DBC

as defined in the CMM to verify the DBC meets the requirement for continued airworthiness.

It is recommended that fleet Operators perform a check on any stored LRU maintenance to ensure records support that each LRU is stored and maintained and operated in accordance with the CMM.

If the LRU is not properly stored, handled, and maintained in accordance with the CMM 24-31-05 Rev 7, warranty may be denied when unit is sent in for repair services.

E. Approval

All Battery System components referenced in Section A. of this Service Information Letter are qualified on all installed Boeing 737, 747, 757 and 767 series aircraft and remain approved and referenced in all installed on Boeing 737, 747, 757 and 767 series aircraft AMM's.

F. Manpower

All storage, handling, maintenance and repair and overhaul of Acme Aerospace Battery Backup System components remain consistent with CMM 24-31-05 Rev 7.

G. Material

All storage, handling, maintenance and repair and overhaul of Acme Aerospace Battery Backup System components remain consistent with CMM 24-31-05 Rev 7.

H. Support

Contact Support and Services for the Acme Aerospace B-737 Series aircraft, Boeing 757 Series Aircraft, B767 Series Aircraft Battery Backup

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