

MODEL AMPS-500; Part Number 171BS101-1/171BS101-M
COMPONENT MAINTENANCE MANUAL

SERVICE BULLETIN

ELECTRICAL POWER - General - Model AMPS-500, Battery Pack Assembly Modification

NOTE: Manufacturer recommends Battery Pack Assembly modification be accomplished by factory.

1. Planning Information

A. Effectivity:

(1) Aircraft Modular Power System (AMPS) affect:
Model AMPS-500, P/N 171BS101-1 and -M

(a) Serial numbers 001 thru 813 and 1001 thru 1025.

(b) New production serial numbers 814 thru 1000 and 1026 and up incorporate the battery pack assembly modification.

(2) Spares Affected:

ALL

B. Reason:

(1) Some installed AMPS-500 units which experience a cold soaking environment (approximately -20° C) have experienced an undesirable rapid cycling of the heater blanket circuit. This heater circuit rapid cycle occurs in a cold soak because the temperature sensors' are located in close proximity to the heater blanket assembly. When the heater circuit is in operation the AMPS-500 battery charger operates in the trickle charging mode. In this cold environment the battery is charged in the trickle mode only and may never reach 100% charge. This trickle charge mode can result in a battery pack assembly in an unknown charge condition.

(2) All units will be modified by the Factory to offset the undesirable rapid on and off cycling of the heater circuit. This modification will be accomplished at no cost to the customer if performed by the Factory at the time of repair of a failed unit. Operating units which have not failed do not need to be sent to the factory for modification.

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C. Description.

This Service Bulletin will accomplish the following:

- (1) Notify operators using AMPS-500 units in their aircraft system.
- (2) Identify AMPS-500 units requiring modification of the battery pack assembly.
- (3) Inform operators of identification marking for units which have received the battery pack assembly modification.
- (4) Provide materials list for battery pack assembly modification.

D. Compliance:

- (1) Compliance is required to offset the possibility of rapid heater circuit on/off cycling for units mounted in a cold soaking environment. All other units require eventual compliance so that they can be interchanged with units in a cold soak environment.
- (2) Proof of Compliance.
 - (a) All existing effected P/N 171BS101-M units - Reidentify as P/N 171BS101-1. Verify 171 Bulletin 24-02 Revision 1 has been incorporated and that an "R" is applied following the serial number on the ID plate.
 - (b) All existing effected P/N 171BNS101-1 units - Verify 171 Bulletin 24-02 Revision 1 has been incorporated, then apply an "R" following the serial number on the ID plate.
 - (c) All new production P/N 171BS101-1 units - Serial numbers 814 thru 1000 and 1026 and above will have this service bulletin incorporated and will not require markings following the serial number on the ID plate.

E. Approval:

This Service Bulletin contains information that revises the approved configuration dash (-) number on some of the AMPS-500 which is FAA approved in the factory and, therefore, will not require further FAA approval.

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F. Manpower:

Modification of the AMPS-500 Battery Pack Assembly may be accomplished in the following approximate man-hours:

NOTE: Man-hours are estimated based on work to be performed by skilled personnel on units which have been placed in a maintenance status. The man-hour/elapsed time estimates do not include:

- (1) Preparation for the inspection/replacement. Examples: Removing the unit from aircraft, transportation to maintenance locations, and obtaining tools.
- (2) Non productive elapsed time. Examples: Cleaning, lunch and/or rest periods, quality assurance inspections.
- (3) Administrative functions. Examples: Planning, parts requisitions, shift change coordination, and report writing.

WORK PHASES	MAN-HOURS
Gain access to battery pack	0.3
Heater blanket installation	1.0
Close up	0.5
Testing	0.5
TOTAL MAN-HOURS	2.3

G. Material - Cost and Availability:

(1) Amps-500

Parts required to accomplish this inspection/replacement are listed in paragraph 3.A. and can be obtained from Acme-URDC, operator stocks or established vendors. Kits are not available. Published prices in this service bulletin are not firm and are subject to change without notice.

(2) Spares:

Not Applicable

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H. Tooling - Price and availability:

NONE

I. Weight and Balance:

NONE

J. References:

Data used in preparation of this service bulletin:

Data Identification	Change	Type of Data
ATA 34-20-01	OCT 30/86	Component Maintenance Manual With Illustrated Parts List, AMPS-500, P/N 171BS101-M (superseded)
ATA 24-30-03	NOV 15/90	Component Maintenance Manual With Illustrated Parts List, AMPS-500 P/N 171BS101-1/171BS101-M (Replaces ATA 34-20-01)
171BS104, ECO 5945 R4		Engineering Change Order
171BS511, ECO 5946		Engineering Change Order
171BS512, ECO 5944 R1		Engineering Change Order
K. Publications affected:		
ATA 34-20-01		Component Maintenance Manual With Illustrated Parts List, dated OCT 30/86, AMPS-500, P/N 171BS101-M (Superseded)
ATA 24-30-03		Component Maintenance Manual With Illustrated Parts List, dated DEC 15/90, AMPS-500, P/N 171BS101-1/171BS101-M (Replaces ATA 34-20-01)

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2. Accomplishment Instructions:

Accomplishment instructions are not furnished with this service bulletin. Required modifications will be accomplished at no cost by the Factory on units which have failed and are returned to the factory for repair. Operators desiring incorporation of this modification, at the operators expense, on units that have not failed and do not require repair, should contact Acme-URDC Product Support (801) 255-2405, Fax (801) 562-9004 to schedule battery pack assembly modification.

3. Material Information.

A. The basis for the following material data is per AMPS unit:

New Part No.	Qty	Unit Price	Key Word	Old Part No.	Instructions
401422	1	\$67.00 ea	Htr Blanket	805-103	May be obtained from Acme-URDC.
01519081	1	(TBD)	Htr Blanket	805-103	May be obtained from Watlow Electronics
805-105	1	(TBD)	Htr Blanket	805-103	May be obtained from Electro-Flex
171BS512-2	1	\$1.00 ea	Insulator	171BS512	May be obtained from Acme-URDC
171BS511-2	1	\$8.00 ea	Cover	171BS511	May be obtained from Acme-URDC.
None	AR	\$19.88 RL	Solder	SN60	May be obtained from Acme-URDC, operator stocks or suppliers.
None	1	\$.25 ea	Connector	03-06-1092	May be obtained from Acme-URDC, or Molex.
None	9	\$.38 ea	Terminal	02-06-5103	May be obtained from Acme-URDC, or Molex.

Acme-Utah Research and Development Co.
ACME - URDC, Inc. 7915 South 1530 West
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New Part No.	Qty	Unit Price	Key Word	Old Part No.	Instructions
None	AR	N/A	Wire	M22759/16-22-9	May be obtained from Acme-URDC, operator stocks or suppliers.
None	AR	N/A	Wire	M22759/16-18-9	May be obtained from Acme-URDC, operator stocks or suppliers.

B. The basis for the following material data is per spares:

NONE

Any inquirers regarding accuracy, timeliness, completeness, and legibility of this Service Bulletin should be directed to the following:

Acme Electric
Utah Research and Development
7915 South 1530 West
P.O. Box 10
West Jordan, Utah 84088

ATTN: Product Support
Telephone (801) 255-2405
FAX (801) 562-9004