



MBB-BK 117 C-2 (EC145)

SERVICE BULLETIN

Air-Conditioning – Aft Evaporator Motor Replacement

1. Planning Information

A) Effectivity

i) **Helicopters affected:** Eurocopter MBB-BK 117 C-2 (EC145) helicopters equipped with a Metro Aviation vapor-cycle air-conditioning kit P/N 117MM-100-2, with Aft Evaporator Assy. P/N 560055-2.

ii) **Components affected:** Air-Conditioning System

iii) **Spare Parts affected:** Not Applicable.

B) **Concurrent Requirements:** Not Applicable.

C) **Reason:** Improved reliability and maintainability.

D) **Description:** This service bulletin details the procedure to remove the existing aft evaporator fan motor, and install a new fan motor.

E) **Compliance:** It is recommended that this service bulletin be incorporated upon next failure of Motor P/N PN00308.

F) **Approval:** Technical aspects are approved as an alternate part.

G) **Manpower:** 4.0 man-hours are required to replace the motor.

H) **Weight and Balance:** Not Applicable.

I) **Electrical Load Data:** Not Applicable.

J) **Software Accomplishment Summary:** Not Applicable.

K) **References:** Metro Aviation, MBB-BK 117 C-2 (EC145) Vapor Cycle Air-Conditioner Equipment Maintenance Manual.

L) **Other Publications affected:** Not Applicable.

M) **Interchangeability of Parts:** The new part supersedes the old part.



2. Material Information

- A) Material – Price and Availability:** One aft evaporator motor, and two “O” Rings will be provided per aircraft at no cost until Dec. 31, 2011. Fax a purchase order referencing the aircraft serial number and Service Bulletin number to Metro Aviation at (318) 698-5205.
- B) Support Information:** Not Applicable.
- C) Material Necessary for Helicopter:**

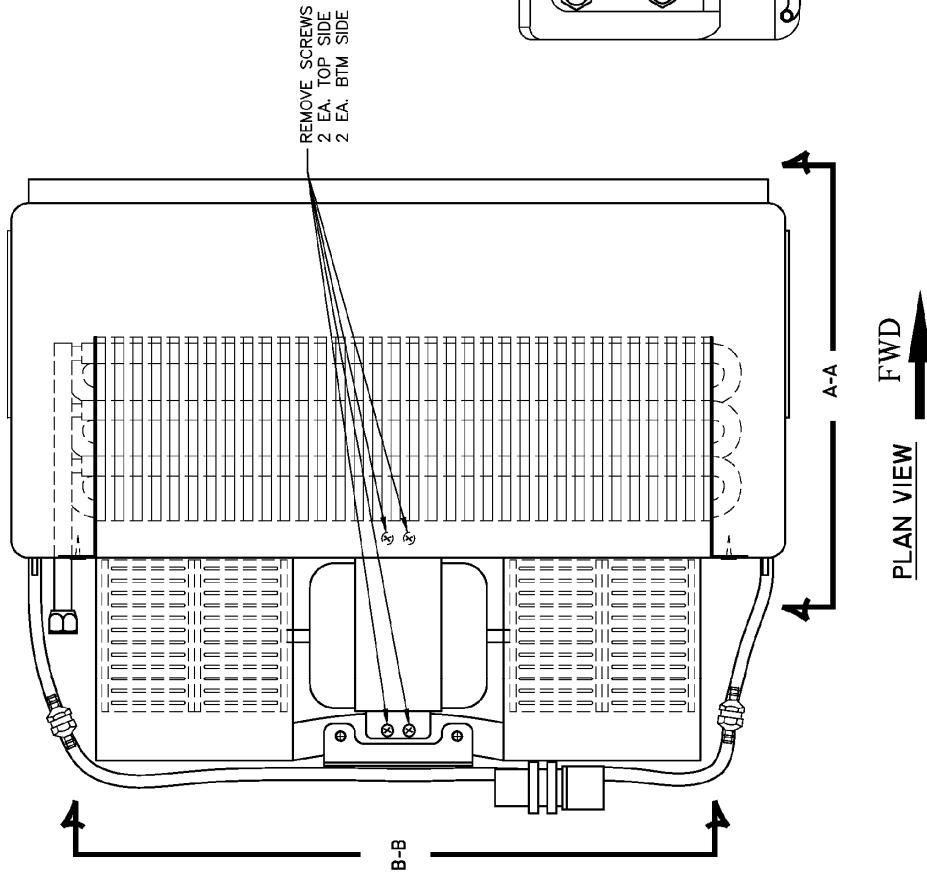
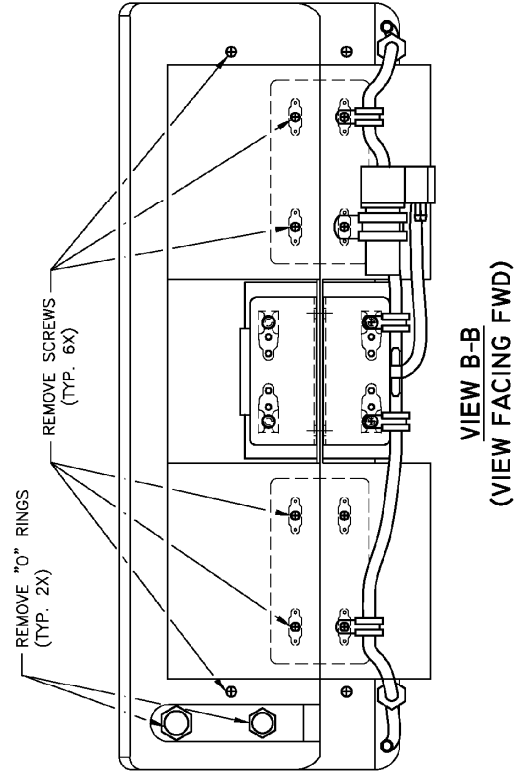
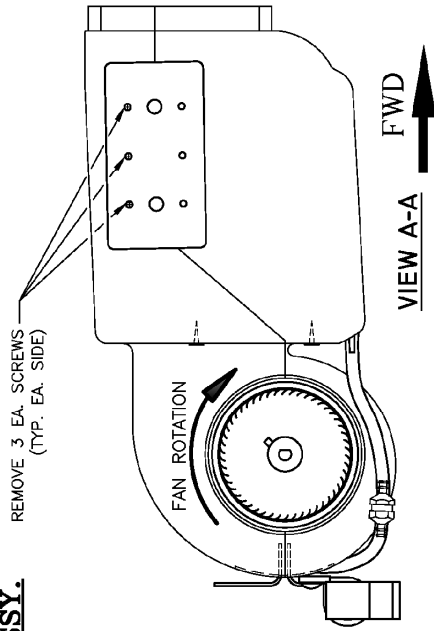
Item No.	New P/N	Description	Old P/N	Qty.	Disposition/Instructions
1	60-9001	Aft Evaporator Motor	PN00308	1	Discard
2	YF-2958	“O” Ring	YF-2958	1	Discard
3	YF-2960	“O” Ring	YF-2960	1	Discard

3. Accomplishment Instructions

- A)** Reclaim R134A Freon charge from the A/C System in accordance with MBB-BK 117 C-2 (EC145) Vapor Cycle Air-Conditioner Equipment Maintenance Manual, Chapter 21, Part II, paragraph 3-1.
- B)** Remove Aft Evaporator Assy. P/N 560055-2.
- C)** Remove cork tape from coil tubes to expose coil mount screws.
- D)** Remove: 6 ea. screws from mounting brackets (3 per side), 2 ea. top coil mount screws, 4 ea. motor mount screws (2 ea. from the top with nuts, and 2 ea. from the bottom), and 4 ea. screws from the fan case (aft end). (Ref. Page 3)
- E)** Open the aft evaporator case, remove old motor, and remove fans (note fan blade orientation). Install fans onto new motor P/N 60-9001 (Vendor: Airpro).
- F)** Reassemble in reverse order.
- G)** Remove and discard existing “O” Rings. Install new “O” Ring P/N YF-2960, and “O” Ring P/N YF-2958 (Vendor: Motorcraft).
- H)** Wire in accordance with 117M-200-2-EO-2.
- I)** Reinstall Aft Evaporator Assy. using previously removed hardware.
- J)** Charge the A/C System using R134A Freon in accordance with MBB-BK 117 C-2 (EC145) Vapor Cycle Air-Conditioner Equipment Maintenance Manual, Chapter 21, Part II, paragraph 3-2.



AFT EVAPORATOR ASSY.
(P/N 560055-2)



ENGINEERING ORDER

METRO AVIATION, INC.

E.O. NO.:
117M-200-2-EO-2

E.O. SHEET NO.:
1 OF 2

DWG NO.: 117M-200-2
REV: C
DWG SHT. NO.: 11

MODEL:
MBB-BK117-C-2

DWG. TITLE:
ELECTRICAL

MAJOR:
MINOR:

STC NUMBER:
SH3880SW

REASON:
-2 AFT EVAPORATOR ASSY WIRING
WITH AIRPRO MOTOR

PROPRIETARY RIGHTS STATEMENT:

THE DATA CONTAINED WITHIN THIS DOCUMENT IS PROPRIETARY TO METRO AVIATION, INC. DISCLOSURE OR USE OF THIS DATA FOR ANY PURPOSE IS FORBIDDEN WITHOUT WRITTEN AUTHORIZATION FROM METRO AVIATION, INC.

- ① WIRE AFT EVAPORATOR ASSY. P/N 560055-2 IAW SHT. 2 OF THIS E.O. WHEN MOTOR P/N 60-9001 (VENDOR: AIRPRO) IS USED.

DRAWN BY:
KDM *KDM*

DATE
22 JUN 11

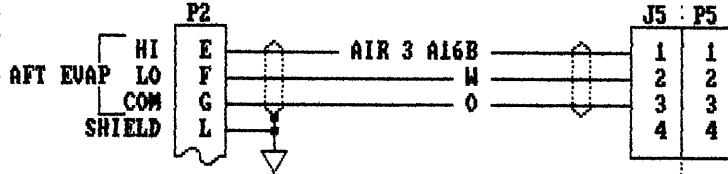
CHECKED BY:
WPJ *[Signature]*

DATE
22 JUN 11

APPROVED BY:
MKG *[Signature]*

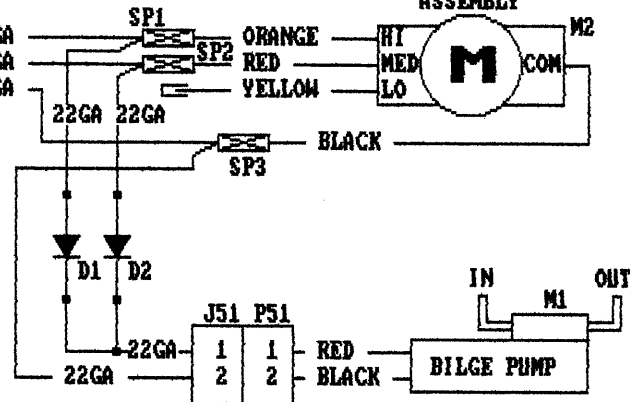
DATE
22 JUN 11

ELECT PANEL ASSY
P/N 540092-1



AFT INTERIOR CEILING AREA

AFT EVAPORATOR ASSEMBLY



WIRING FOR
P/N 560055-2 AFT EVAPORATOR ASSEMBLY.

ITEM	QTY	DESIGNATION	PART NUMBER	DESCRIPTION
1	2	D1, D2	1N4007	DIODE
2	1	M1	5014	PUMP ASSEMBLY
3	1	P51	1-480319	PLUG
4	1	J51	1-480318	RECEPTICAL
5	3	SP1, 2, 3	320562	SPLICE
6	AR		M22759/16-16-9	WIRE 16GA
7	AR		M22795/16-22-9	WIRE 22GA
8	1	M2	60-9001	MOTOR

REF: DWG NO. 117M-450-3 FOR EMS
DWG NO. 117M-450-4 FOR VIP

Proprietary Rights Statement:
The data contained within this document is
Proprietary to Metro Aviation, Inc. Disclosure or
use of this data for any purpose is forbidden
without written authorization from Metro Aviation, Inc.

Drawn by:	MPJ	METRO AVIATION, INC.		
Checked by:	BJH	1214 Hann Ave. Shreveport, LA 71107		
Approved by:	MPJ	PH: 318-222-5529 FAX: 318-222-0503		
Date:	JUN 22, 2011	Title: ELECTRICAL INSTALLATION		
		AFT EVAPORATOR WIRING		
		DWG No: 117M-200-2-EO-2 File No: BKME02		
		S/N:	Sheet	Rev:
		ALL	2 of 2	IR