

Air Comm Corporation  
Boulder CO 80303

Document No. BK117H-200M

SERVICE MANUAL SUPPLEMENT  
COCKPIT HEATER/WINDSHIELD DEFROSTER SYSTEM  
FOR  
MESSERSCHMITT-BALKOW-BLOHM BK-117

October 1, 1992

Revision

<u>Rev</u>	<u>Date</u>	<u>Description</u>	<u>Appl</u>
A	12-10-04	Revised document to include Model To include model BK-117 C-1	<i>MS</i>

Action Taken by:  
FAA, Denver Aircraft Certification  
Office, ANM-160D

- Approves Data
- Accepts ~~Approval~~ *Revision*
- Approves Recommendation
- For Comments See FAA Letter  
Dated \_\_\_\_\_

This Data Has Been Added To Our Files

Ref: *STC SR00007DE*

*[Signature]* *12/15/04*  
Engineer Date

## System Description

The Cockpit Heater/Windshield Defroster System is a “bleed air” type which is installed in combination with an existing Environmental Control System.

The system installation is shown by figure 1. The function of the system components is described in the following paragraphs.

Two Cockpit Heater Ejectors provide recirculated, heated cabin air to the flight deck area.

A single Jeffan Airmover installed within the existing three inch diameter defroster air duct. The purpose of the Jeffan is to enhance warm airflow onto the windshield, by augmenting the ECU output to the existing windshield diffuser.

Insulated bleed air plumbing. The plumbing taps into the existing ECU bleed air source and serves to supply bleed flow to the Cockpit Heater Ejectors and the Windshield Defogger Jeffan. A bleed air plumbing Drain Valve is included as part of the Heater Control Valve. The valve is intended to drain water from the plumbing and opens at pressures below 10 psig. The valve consists of a spring loaded ball which seal against a viton O-Ring seat.

## References

1. STC No. SR00007DE
2. Installation Drawings
  - 117H-202 General Arrangement – BK117 Cabin Heater/Windshield Defroster
  - 117H-502 Instl – Bleed Air Plumbing
  - 117H-552 Instl – Control Valve
  - 117H-902 Instl – Cockpit Heater Ejector
  - 117H-962 Instl – Defroster Jetfan
  - 117H-982 Instl – Aft Heater Ejector (Optional)

## Model Applicability

Messerschmitt-Bolkow-Bluhm  
Models BK117, A-1, A-3, A-4, B-1 & C-1

### Spares List

<u>Item No</u>	<u>Description</u>	<u>P/N</u>
1	Cockpit Heater Ejector	222H-9006-2
2	Placard-Cockpit Heater/Defroster	222H-9000-14
3	Valve Assy	117H-9000-1
4	Jetfan Defroster	S-6406EC-1
5	Drain Valve	S-9230EC-1
6	O-Ring	2-009

### Maintenance Schedule

The following should be accomplished annually:

1. Remove Jetfan and Cockpit Heater Ejector and inspect for evidence of corrosion.
2. Apply shop air at bleed air plumbing connection at ECU, and check for system leaks.
3. The drain valve should “close” when the system is pressurized. If the valve does not “close” it should be removed and cleaned. Replace the o-ring if necessary.

Note: Some leakage of the main control valve is normal.

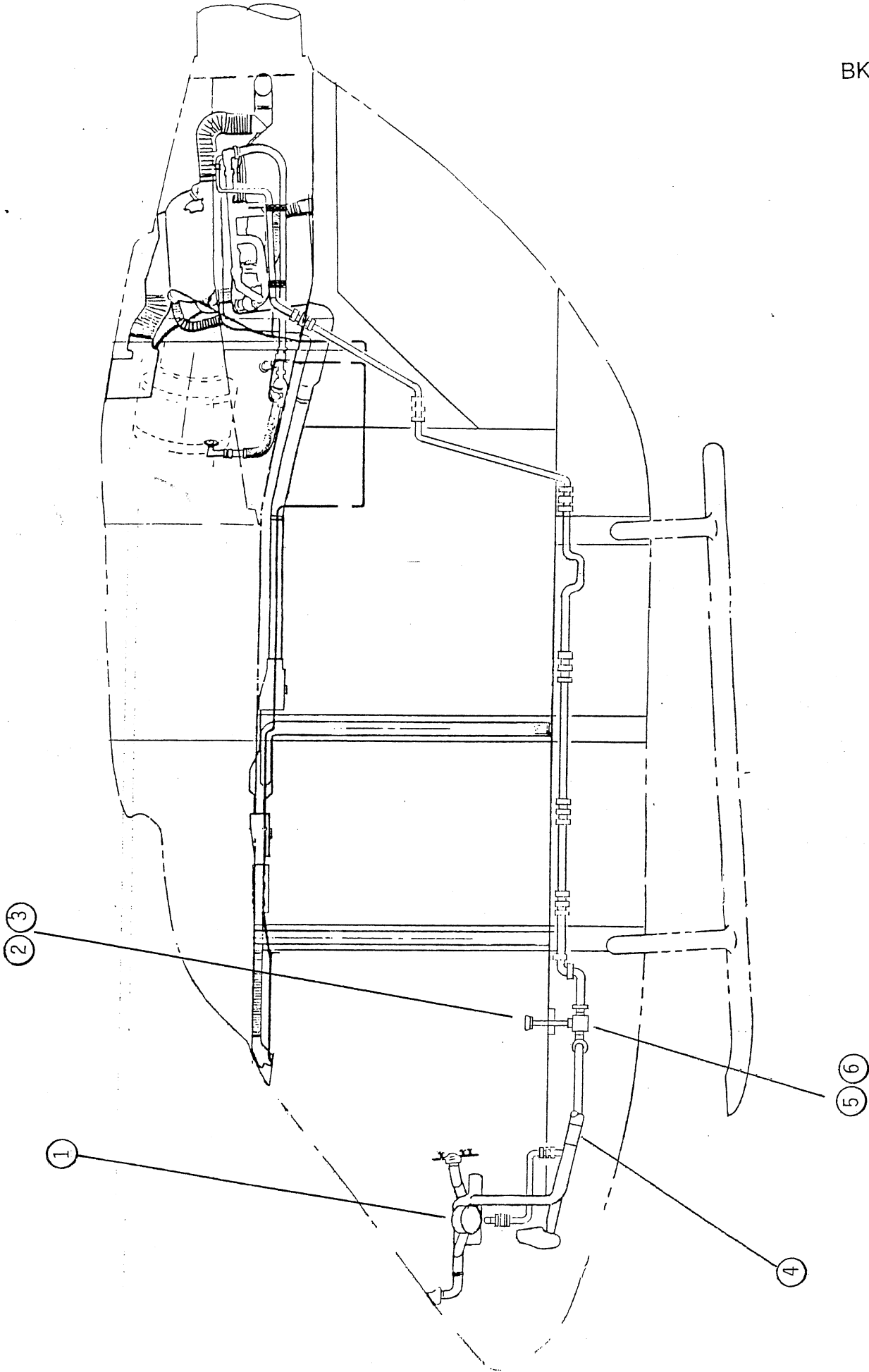


Figure 1 BK117 Cockpit Heater/Windshield Defroster System  
(Models BK117, A1, A3 & A4)

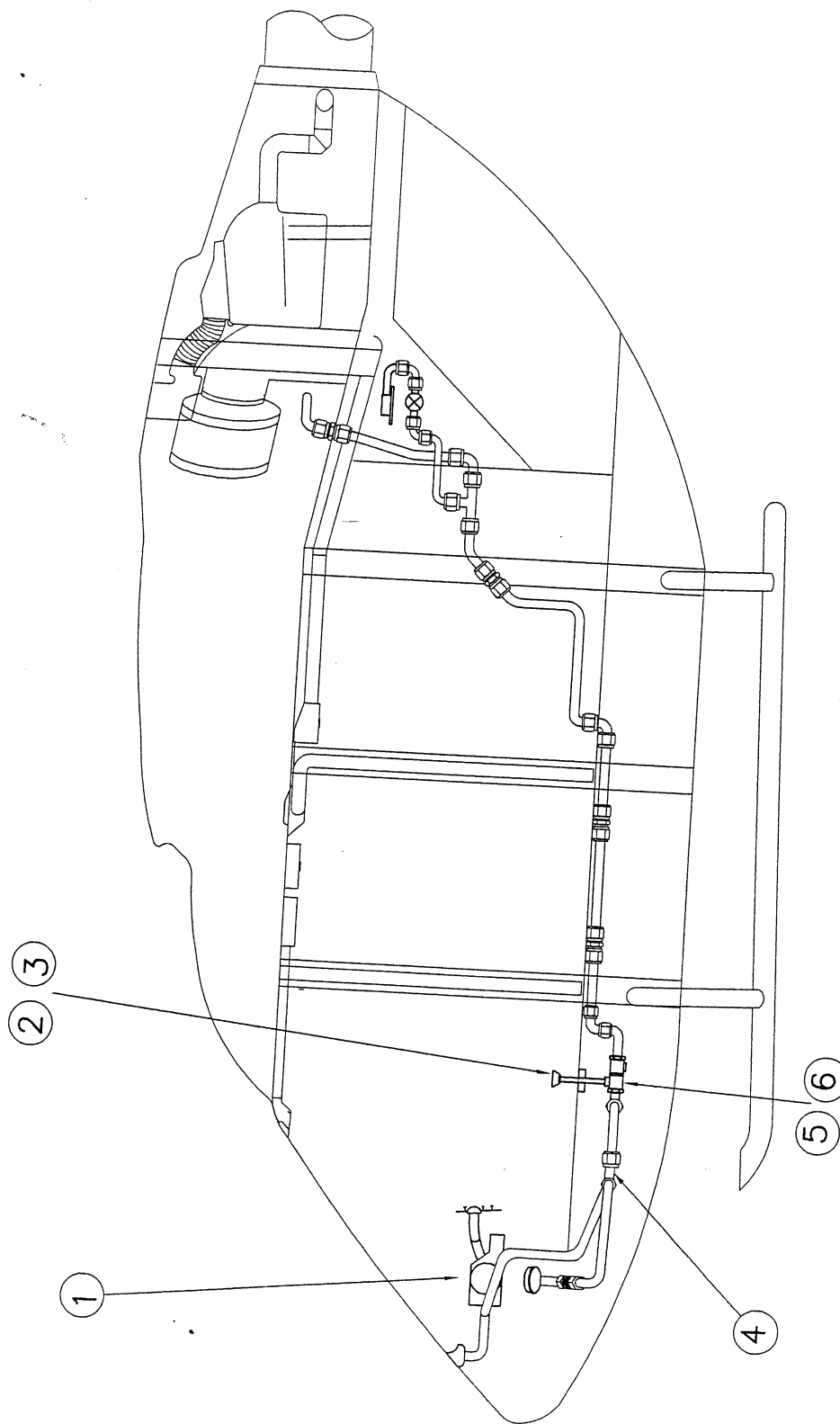


Figure 2 BK117 Cockpit Heater/Windshield Defroster System  
(Model C-1)