

SUPPLEMENT TO
EC120B RFM
AIR COMM CORPORATION
3300 AIRPORT ROAD
BOULDER, COLORADO 80301

SUPPLEMENT TO
EC120B RFM
Air Comm Corporation
Document No. EC120BH-1
CABIN BLEED AIR HEATER/DEFROSTER SYSTEM

FAA-APPROVED

ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

FOR

EUROCOPTER EC120B

REG. NO. _____

SER. NO. _____

CABIN BLEED AIR HEATER/DEFROSTER SYSTEM

Document No. EC120BH-1

This supplement must be attached to the DGAC approved EC120B Rotorcraft Flight Manual dated June 19, 1997, Revision 2 or later approved revision, when the Cabin Bleed Air Heater/Defroster System is installed in accordance with Air Comm Corporation STC No. SR00549DE

The information in this document supplements or supersedes the basic manual only in the items contained herein. For Limitations, Procedures, and Performance Data not contained in this supplement consult the basic Flight Manual.

FAA Approved *David Lawrence*

For Ronald F. May, Manager
Denver Aircraft Certification Office
Northwest Mountain Region
Denver, Colorado

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Log of Revisions			
Rev. No.	Pages	Date	FAA Approval
Original	1-10	5/13/04	<i>David Lawrence</i> Ronald F. May, Manager Denver Aircraft Cert. Office Northwest Mountain Region Denver, Colorado

CABIN BLEED AIR HEATER/DEFROSTER SYSTEM

SECTION 1

INTRODUCTION

The Cabin Heater/Defroster System is an engine bleed air type that replaces or if desired supplements the existing factory heater/defroster system. The Cabin Bleed Air Heater/Defroster System components and general arrangement are shown in Figure 1.

The Cabin Bleed Air Heater/Defroster System connects to the spare port of the engine's bleed air line "T" fitting that feeds the existing factory heater/defroster system. The bleed air is then mixed with cabin air and exhausted to the cabin floor and windshield via two cockpit heater ejectors, one cabin heater ejector and a windshield defroster vane, all of which are installed at floor level.

The Cabin Bleed Air Heater/Defroster System can be operated either independently or simultaneously with the factory heater/defroster system.

The Cabin Heater/Defroster System offers two manually operated control valves installed in a small pedestal that is mounted to the floor between the pilot's and copilot's seats as shown in Figure 3. One of these control valves is used to control the flow of bleed air to the windshield defroster vane and the other is used to control the flow of bleed air to both the cockpit and cabin heater ejectors. Both the heater and defroster control valves can be operated independently from full-open to full-closed to provide the flight crew the means of maintaining a desired cabin temperature. A back-lit panel with dimming control is also incorporated into the control valve pedestal.

There are two cockpit heater ejectors, one mounted to the floor on either side of the center console and forward of the anti-torque pedals. There is one cabin heater ejector located at floor level behind the cabin's aft bulkhead on the right-hand side of the aircraft. The cockpit and cabin heater ejectors mix engine bleed air with existing cabin air to create a warm air flow that is subsequently exhausted across the cabin floor. The air circulation through the ejectors is achieved through the pumping action generated by the bleed air pressure.

A vane type windshield defroster is mounted to the floor adjacent to the windshield. This defroster vane extends from the left-hand to right-hand door posts and provides a flow of warm air that moves upward over the entire windshield.

SECTION 2

OPERATING LIMITATIONS

- 2.1 Heater and defroster valves shall be in the OFF position during engine start and shut down.
- 2.2 Do not operate heater and/or defroster when OAT is above 70° F (21° C) to preclude excessive heater output air temperature.

PLACARDS AND MARKINGS

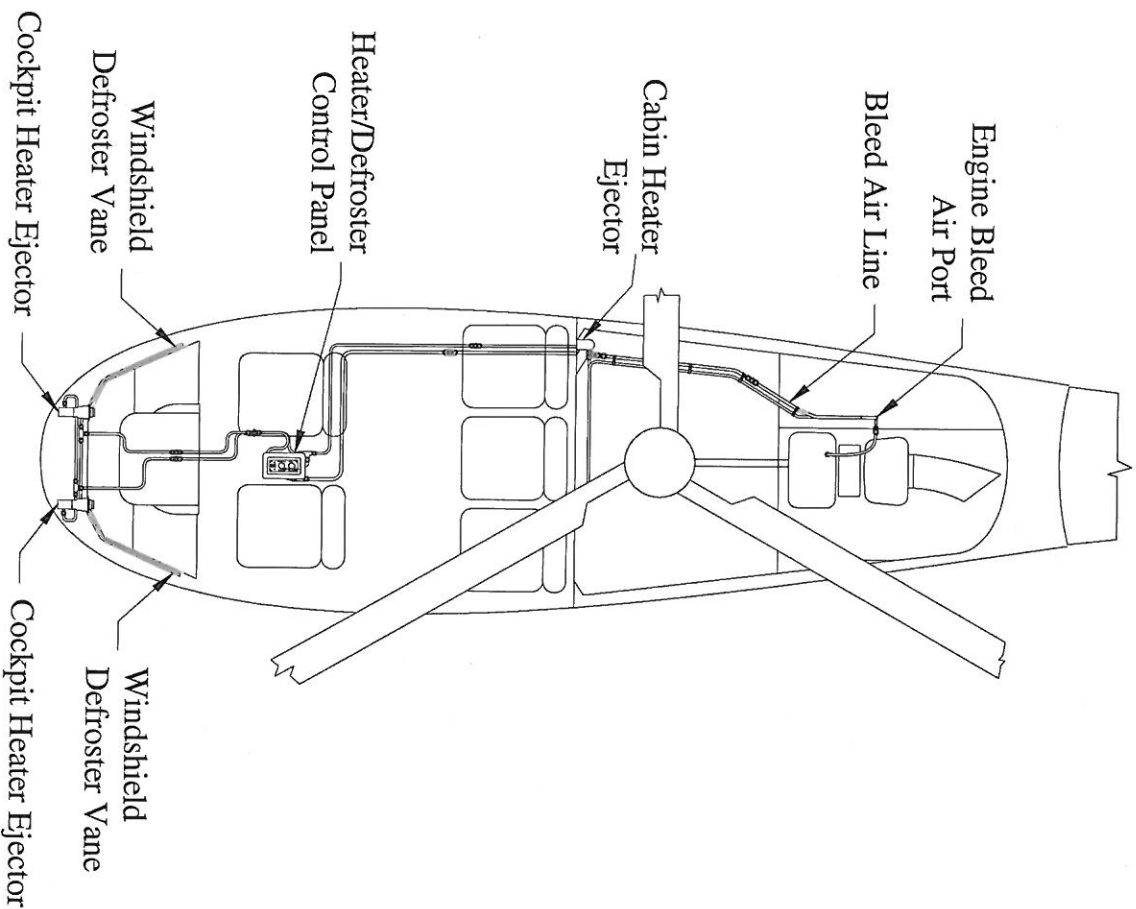


Figure 1

General Arrangement
Cabin Bleed Air Heater/Defroster System

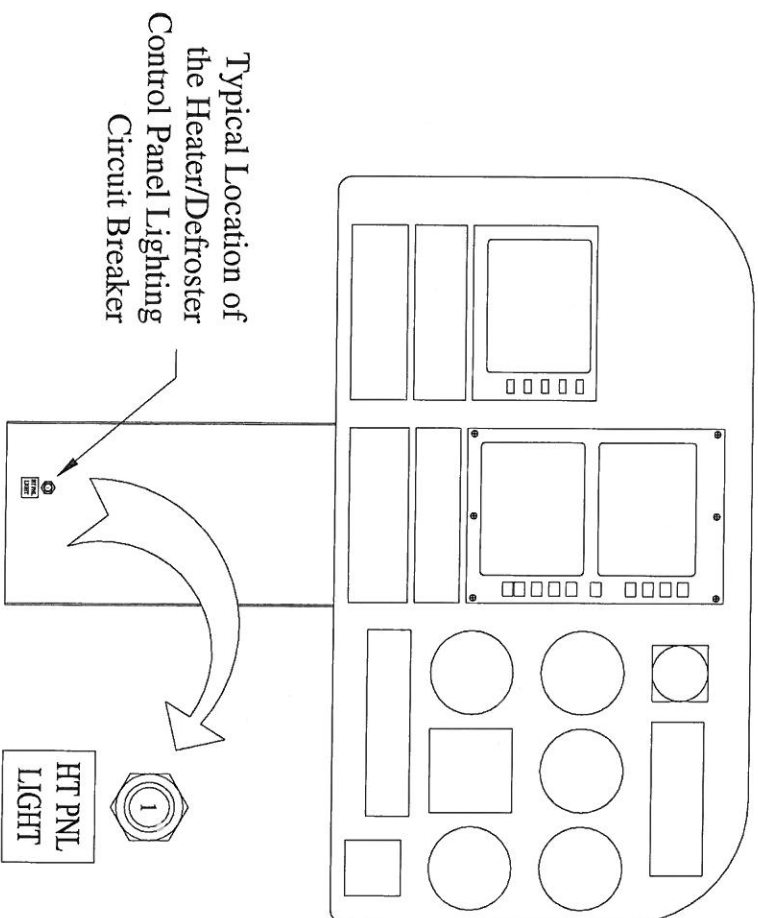


Figure 2

Heater/Defroster Control Panel Light Circuit Breaker

SECTION 2

OPERATING LIMITATIONS

PLACARDS AND MARKINGS (cont'd)

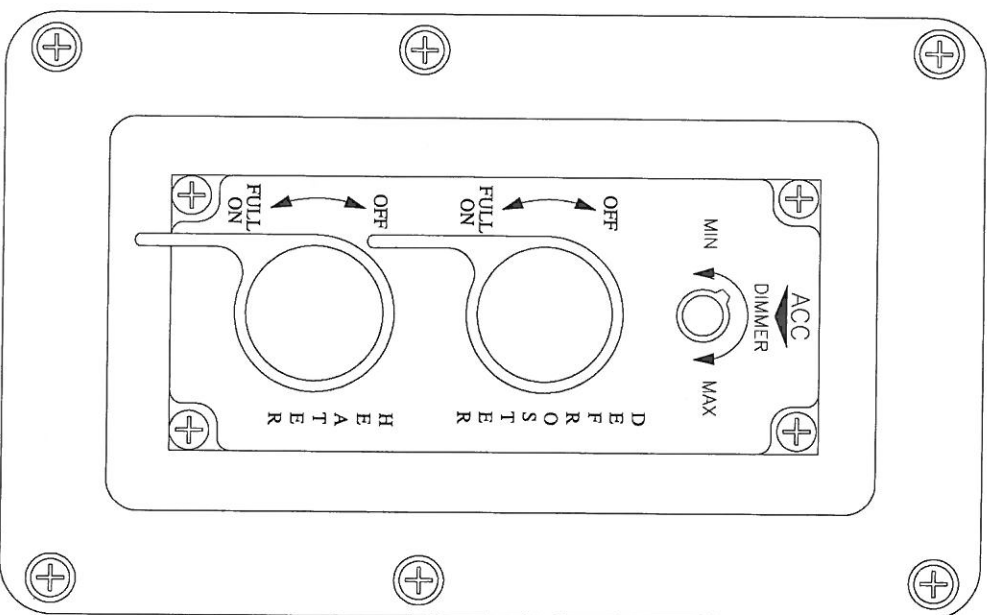


Figure 3

Heater/Defroster Control Panel

(Mounted to floor between the pilot's and copilot's seats)

SECTION 3

EMERGENCY PROCEDURES

Heater Control Valve – OFF
Defroster Control Valve – OFF

Place both Heater and Defroster Control Valves in the OFF position for any of the following emergencies:

Smoke in the cabin
Engine failure
Engine over-temperature
Water landing

NOTE

Heater and/or Defroster operation can be restored once the emergency condition has been alleviated.

SECTION 4

NORMAL PROCEDURES

ENGINE PRESTART CHECK

Heater Control Valve – OFF
Defroster Control Valve – OFF
Control Panel Lighting – Dim or brighten as desired

BEFORE TAKEOFF

Heater Control Valve – As Desired
Defroster Control Valve – As Desired
Control Panel Lighting – Dim or brighten as desired

SECTION 4

NORMAL PROCEDURES

IN FLIGHT OPERATIONS

Heater Control Valve – As Desired
Defroster Control Valve – As Desired
Control Panel Lighting – Dim or brighten as desired

DECENT AND LANDING

Heater Control Valve – As Desired
Defroster Control Valve – As Desired
Control Panel Lighting – Dim or brighten as desired

NOTE

Operation of the heater and/or defroster will result in an engine temperature increase, but will not result in a loss of aircraft performance. The flight crew must monitor the engine temperature during heater and/or defroster operations to ensure engine does not over-temp.

NOTE

Do not operate heater and/or defroster when OAT is above 70° F (21° C) to preclude excessive heater output air temperature.

SECTION 6

WEIGHT AND BALANCE

No change in performance during heater and/or defroster operations.

Installed Equipment	Weight	Longitudinal		Lateral	
		Arm	Moment	Arm	Moment
EC120H-200-1 Cabin Bleed Air Heater/Defroster System	lbs	in	in – lbs	in	in – lbs
	12.50	112.0	1,400	7.8	97
	Kg	mm	mm – Kg	mm	mm - Kg
	5.67	2,845	16,131	198	1,123

NOTE

Lateral calculations are minus (-) equal left-hand side of aircraft and positive (+) equals right-hand side of aircraft.

SECTION 5

PERFORMANCE DATA