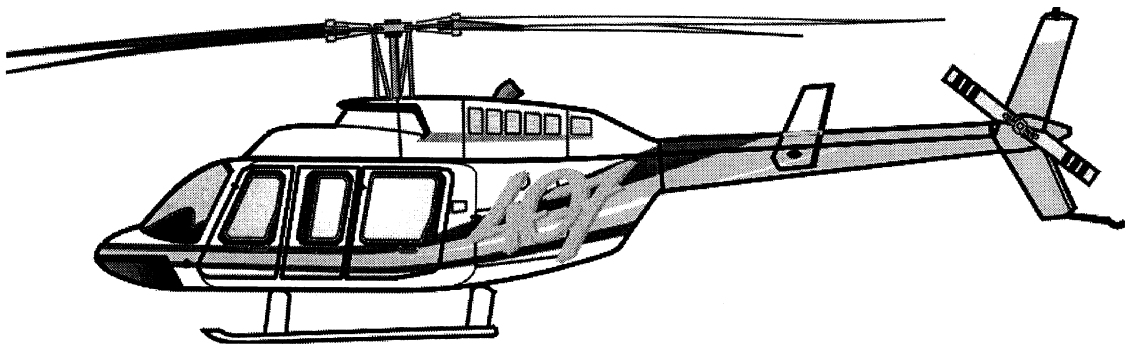


**AIR COMM CORPORATION
3300 AIRPORT ROAD
BOULDER, CO. 80301**

**DOCUMENTS FOR THE INSTALLATION OF THE
BELL MODEL 407 CABIN VENTILATION SYSTEM**



LIST OF EFFECTIVE PAGES

LIST OF REVISIONS

Revision 0 (Original Issue) 30 March, 1996

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**CHAPTER 0
INTRODUCTION**

This document contains information, which is required for the installation and operation of the Air Comm Corporation's cabin ventilation system installed in the bell 407 series helicopter. After completion of the installation of the cabin air ventilation system the Weight & Balance Information, Flight Manual Supplement, and the Supplemental Type Certificate must be removed from this document and placed with the appropriate existing aircraft documents.

1. SCOPE

The scope of this document encompasses the general procedures and reference documentation necessary to install the Air Comm Corporation cabin ventilation system in the Bell 407 series helicopter.

2. PURPOSE

The purpose of this document is to provide the aircraft mechanic in the field the necessary information and documentation to install the cabin ventilation system.

3. ARRANGEMENT

This document is arranged by chapters, which are broken down into paragraphs and sub-paragraphs. All of the chapters and paragraphs are listed in the front of this document in the Table of Contents, and are further identified by their individual page number.

4. APPLICABILITY

This document is applicable to Bell Helicopter models 407 that are equipped with the Air Comm Corporation kit number 407V-102 Cabin Ventilation system.

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CHAPTER 1
GENERAL INSTALLATION PROCEEDURE & REFERANCE DOCUMENT

1. GENERAL INSTALLATION PROCEEDURE

This section is intended to supplement the information contained on the installation drawings. All details and notes contained on the drawings should be reviewed carefully. As instructions for installation are provided on the installation drawing where appropriate, and are not repeated in this document.

It will be necessary to remove the main cabin headliner, Chin bubbles, to facilitate the installation of this kit.

The system components and associated hardware are packaged separately. Prior to beginning the installation it is recommended that the hardware be inventoried and placed in separate (labeled) boxes to prevent mixing.

2. REFERANCE DOCUMENT

The approval basis of the system covered by this document is Supplemental Type Certificate SR00230DE.

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**CHAPTER 2
WEIGHT & BALANCE INFORMATION**

This page must be removed and placed with the appropriate existing aircraft documents.

Weight breakdown – Bell 407 cabin ventilation system:
Dwg. 407V-102-1 / -2

Weight & Balance

<u>Item</u>	<u>Wt (lbs)</u>	<u>Arm (in)</u>	<u>M (in-lb.)</u>
Total (407V-102-1 installation)	12.00	21.5	258
Total (407V-102-2 installation)	28.40 lbs	115.1	3269

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**CHAPTER 3
FLIGHT MANUAL SUPPLEMENT**

1. FLIGHT MANUAL SUPPLEMENT

The following document must be removed and placed with the appropriate existing aircraft documents.

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AIR COMM CORPORATION
 3300 AIRPORT ROAD
 BOULDER, COLORADO 80301

BELL HELICOPTER
 MODEL 407

FLIGHT MANUAL SUPPLEMENT
 407V-1

Cabin Fresh Air Ventilation System

FAA APPROVED

The information contained in this document is FAA approved material, which must be carried in the basic Flight Manual, after the rotorcraft has been modified by installation of the Cabin Fresh Air Ventilation System in accordance with Air Comm Corporation STC No SR00230DE.

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: May 16, 1996
 REVISED JUL 3 1 1997

Log of Pages

FAA APPROVED
 SUPPLEMENT

**MODEL 407
 FLIGHT MANUAL**

Cabin Air Conditioning System

Log of Revisions				
Original	Log of Pgs	Pgs Rev	Date	Appl
Rev No.				
0	1-9			
1	1-9	2,3,5,7 & 8	7/31/97	
2	1-9	6	5/19/00	dy
FAA APPROVED: <u>May 16 1996</u> Approved: <u></u> Ron May, Manager Denver Aircraft Certification Office, Northwest Mountain Region, Denver, Colorado				

FAA APPROVED May 16, 1996
 REVISED JUL 3 1 1997

MODEL 407
FLIGHT MANUAL

CABIN FRESH AIR VENTILATION SYSTEM

INTRODUCTION

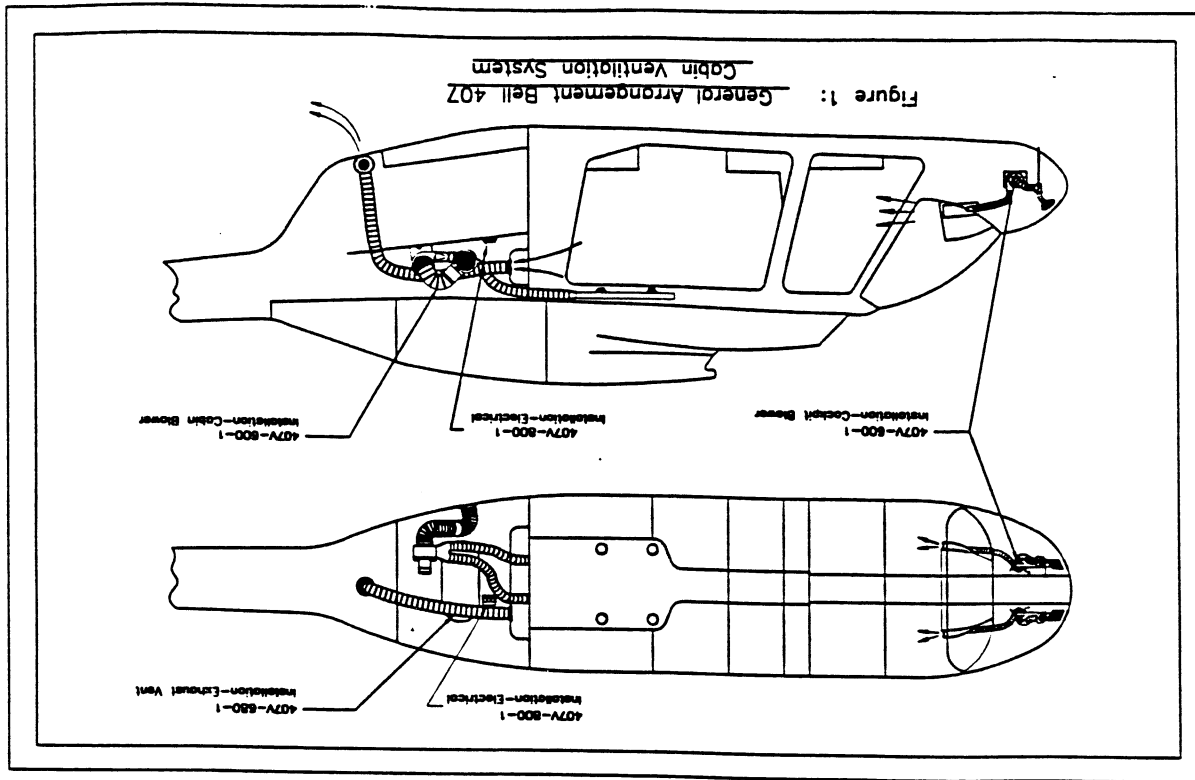
The system consists of a high output 28 VDC cabin ventilation blower (300 cfm), two cockpit ventilation blowers (150cfm) and instrument panel mounted air ducts. The aft ventilation blower utilizes existing headliner ducting to distribute the fresh air to the cabin occupants. The inlets to the cockpit ventilation blowers are mounted to an adapter which utilizes the existing fresh air vent openings. The two forward blowers are considered to be standard and the aft blowers optional.

The system is operated by opening the nose mounted fresh air vents and activating the ventilation blowers. The switches for the ventilation system are located in the overhead center panel. Turning BLO switch (ON) activates both the Forward and Aft blowers. Speed of the blowers can be operated independently. In the cockpit, fresh air is pulled through the vent openings to the individual blowers and then flows directly onto the pilot and copilot. This results in both a supply of fresh air and windchill cooling in the "greenhouse" part of the cabin.

In the cabin, fresh air is pulled through a 4.5" fuselage cutout to the high output blower and then flows to the occupants through the headliner mounted air outlets. This also results in both a supply of fresh air and windchill cooling similar to the forward vent blowers. The aft ventilation blower is mounted above the baggage compartment and the fresh air opening is located on the left side of the aircraft.

An exhaust vent is utilized to increase the air exchange rate throughout the cockpit and cabin. The 3" cabin exhaust air duct is provided to allow a continuous exchange of air throughout the helicopter. The vent opening is located on the bottom of the aircraft.

Model 407 FLIGHT MANUAL
CABIN FRESH AIR VENTILATION SYSTEM



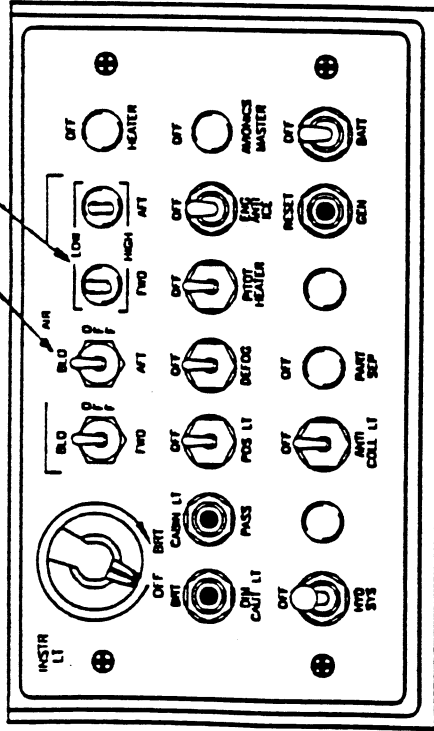
CABIN FRESH AIR VENTILATION SYSTEM

SECTION 1 OPERATING LIMITATIONS

PLACARDS AND MARKINGS

Blower Speed Switch

Fresh Air Ventilation / Blower Switch

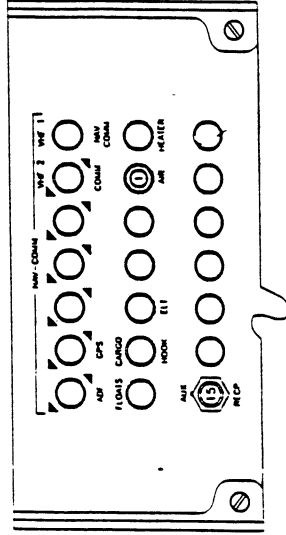


Located in overhead console

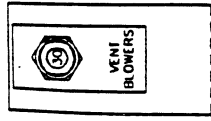
CABIN FRESH AIR VENTILATION SYSTEM

SECTION 1 (cont) OPERATING LIMITATIONS

PLACARDS AND MARKINGS



Cabin Ventilation System control circuit breaker
Located in overhead console



Circuit Breaker Label located on circuit breaker panel
above baggage compartment.

EXHAUST VENT
 Push Open - Close
 Open when Vent Blower is
 ON For Maximum Ventilation
 Close when Desired To Achieve
 Max Cabin Htr or AC Effectiveness

Locate in hat rack below exhaust air vent

CABIN FRESH AIR VENTILATION SYSTEM

SECTION 2 NORMAL PROCEDURES

PREFLIGHT CHECK (EXTERIOR)

ENGINE PRESTART CHECK
BLO Switch (Fwd) - OFF
BLO Switch (Aft) - OFF

BEFORE TAKEOFF

Fwd & Aft **BLO** switches - On, as desired.
Select **HIGH / LOW** blower as desired.

Note

With the fwd fresh air vents closed,
the fwd blowers will recirculate cabin
air. With the fwd fresh air vents open,
the fwd blowers will circulate fresh air.

IN FLIGHT OPERATIONS

Fwd & Aft **BLO** Switches - On, as desired.
Select **HIGH / LOW** blower as desired.
Open fwd fresh air vents as desired.

CABIN FRESH AIR VENTILATION SYSTEM

SECTION 3 EMERGENCY PROCEDURES

Operate Fwd & Aft **BLO** switches to - OFF,
for any of the following emergencies:

Engine Failure
Generator Failure

SECTION 4 MALFUNCTION PROCEDURES

NONE

FAA APPROVED
SUPPLEMENT

MODEL 407
FLIGHT MANUAL

CABIN FRESH AIR VENTILATION SYSTEM

SECTION 5 PERFORMANCE DATA

No change to basic manual.

SUPPLEMENTAL INFORMATION

Although there is a check valve installed in the inlet ducting of the ventilation system, it is possible under certain conditions to have outside air leakage into the cabin when the ventilation system is not in use. To prevent the leakage, the exhaust duct louver located in the hat shelf must be completely closed.

It may be desirable under certain conditions to operate the ventilation system in conjunction with the Cabin heater to enhance window defogging capability.

CHAPTER 4
SUPPLEMENTAL TYPE CERTIFICATE

1. SUPPLEMENTAL TYPE CERTIFICATE

The following document must be removed and placed with the appropriate existing aircraft documents.

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United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SR00230DE

This certificate, issued to Air Comm Corporation

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 27 of the Federal Aviation Regulations.

Original Product—Type Certificate Number: H2SW
Make: Bell Helicopter Textron, Inc.
Model: 407

Description of the Type Design Change:

Installation of an cabin fresh air ventilation system in accordance with Air Comm Corp. Master Drawing List Report DL-407V, Rev. A, dated April 9, 1996, or later FAA approved revision.

Limitations and Conditions:

1. Approval of this change in type design applies to the above model rotorcraft only. This approval should not be extended to aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the interrelationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that rotorcraft.
2. FAA approved Flight Manual Supplement 407V-1, Rev. N/C dated May 16, 1996 or later FAA approved revision is required.
3. A copy of this certificate and Flight Manual Supplement must be maintained as part of the permanent records for the modified rotorcraft.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: February 16, 1996

Date reissued:

Date of issuance: May 16, 1996

Date amended:



By direction of the Administrator

Roger A. Caldwell
ROGER A. CALDWELL (Signature) Acting Manager
Denver Aircraft Certification Office
Northwest Mountain Region, Denver, Colorado

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.



Supplemental Type Approval

This approval is issued to:

Air Comm Corporation

Number: SH96-74

Issue No.: 1

Approval Date: June 26, 1996

Issue Date: June 26, 1996

Responsible Region:

Headquarters

Aircraft/Engine Type or Model:

Bell 407

Canadian Type Approval or Equivalent:

H-92

Description of Type Design Change:

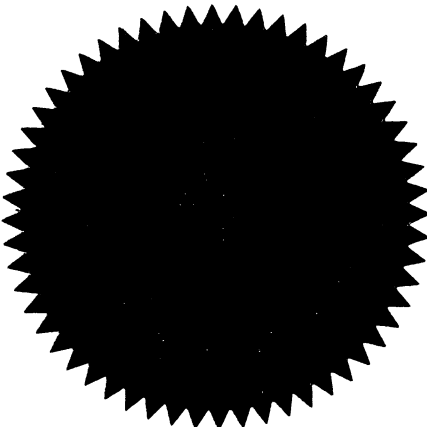
Installation of a cabin fresh air ventilation system in accordance with FAA STC SR00230DE

**Installation/Operating Data,
Required Equipment and Limitations:**

Installation of a cabin fresh air ventilation system is to be done in accordance with Air Comm Corp. Master Drawing List Report DL-407V, Rev. A, dated April 9, 1996, or later approved revision.

Required Equipment

FAA Approved Air Comm Corporation Bell Helicopter Model 407 Flight Manual Supplement 407V-1, Rev. N/C dated May 16, 1996 or later approved revision.



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.

F. R. Davies

For Minister of Transport