

AIR COMM CORPORATION
3300 AIRPORT ROAD
BOULDER, COLORADO 80301

BELL HELICOPTERS
MODEL 206L, 206L-1, 206L-3, 250-C20B,
250-C20R/2, 250-C28B, 250-C30P: ENGINES

FLIGHT MANUAL SUPPLEMENT
FOR
AIR CONDITIONING SYSTEM

206AC-202

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 Air Conditioning System in accordance with Air Comm Corporation STC No. SH2750NM.

The information in this document supplements or supercedes the basic manual only in the items contained herein. For limitations, Procedures, and Performance Data not contained in the supplement, consult the basic flight manual.

FAA APPROVED July 5, 1988
REVISED August 18, 1988
August 23, 1992
Nov 19, 1993

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CABIN AIR CONDITIONING SYSTEM

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1, 3,4,5,6	2		
1 & 3	3		

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APPROVED: *Michael H. Barfig*
Denver A/C Certification Office
Northwest Mountain Region
Aurora, Colorado

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CABIN AIR CONDITIONING SYSTEM

CABIN AIR CONDITIONING SYSTEM

INTRODUCTION

Log of Revisions			
No.	Rev. Date	Pgs. Revised	FAA Appl
0		Original Issue	
1	8/18/88	All pgs to add 206L	<i>[Signature]</i>
2	APR 23 1992	Revised pgs 1, 3, 4, 5 & 6.	<i>[Signature]</i>
3	NOV 19 1993	1	<i>[Signature]</i>
Note: Revisions are indicated by a black vertical line. Insert latest revision pages; dispose of superseded pages.			

The cabin air conditioning system is a vapor cycle type which consist of engine driven compressor, a condenser, and multiple evaporators.

The function of the compressor is to pump refrigerant throughout the system circuit.

The function of the condenser it to remove heat energy from the refrigerant by forcing outside air across the condenser heat exchanger.

The function of the evaporators is to remove heat and moisture from the cabin, by forcing cabin air across the evaporator heat exchangers.

The system controls consist of a switch which can be positioned to AC, BLOWER, or OFF. In the AC mode, the complete cooling system is activated. In the BLOWER mode, only the evaporator blowers are operating as a means of cabin air circulation.

A HI/LO blower speed switch is located adjacent to the AC, BLOWER, OFF switch for airflow adjustment.

Window defogging can be accomplished by simultaneous operation of the air conditioner and the cabin heater. For this case the performance degradation of both the heater and the air conditioner is additive.

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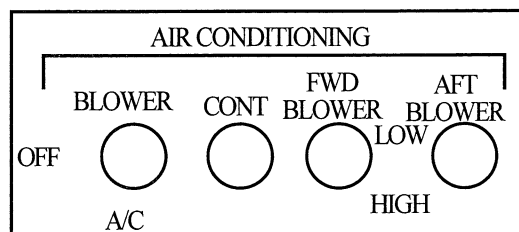
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CABIN AIR CONDITIONING SYSTEM

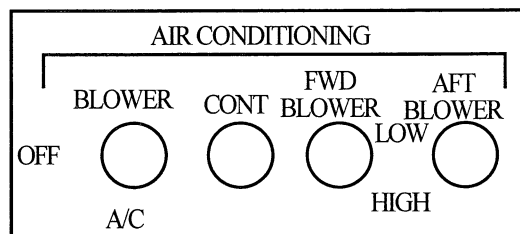
SECTION 1

OPERATING LIMITATIONS

PLACARDS AND MARKINGS



Located in overhead console - applicable to configuration with forward and aft-mounted evaporators.



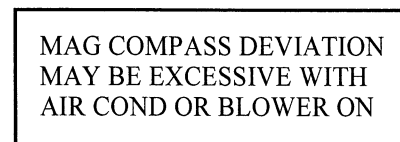
Located in overhead console - applicable to configuration with aft-mounted evaporators.

CABIN AIR CONDITIONING SYSTEM

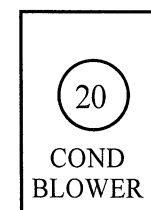
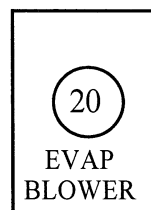
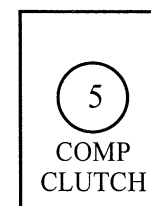
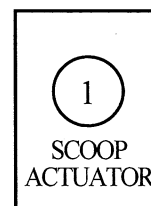
SECTION 1 (Cont'd)

OPERATING LIMITATIONS

PLACARDS AND MARKINGS



Located on top of compass support bracket.



Circuit breaker labels located on lower surface of top panel of baggage compartment, adjacent to circuit breakers.

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SECTION 2

NORMAL PROCEDURES

PREFLIGHT CHECK (EXTERIOR)

Compressor - check security.
Compressor drive belt - check tension and general condition.
Condenser - check security.

ENGINE PRESTART CHECK

A/C Switch - OFF

BEFORE TAKEOFF

A/C ON as desired.
Select HI/LO blower as desired.

IN FLIGHT OPERATIONS

A/C ON as desired.
Select HI/LO blower as desired.

DESCENT AND LANDINGS

A/C ON as desired.
Select HI/LO blower as desired.

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CABIN AIR CONDITIONING SYSTEM

SECTION 3

EMERGENCY PROCEDURES

Operate air conditioner switch to - OFF, for any
of the following emergencies:

Engine Failure
Engine Overtemperature
Fuel Control and/or Governor Failure
Insufficient Power
Generator Failure

SECTION 4

MALFUNCTION PROCEDURES

Lack of cooling may be an indication of loss of
refrigerant. If outlet air is not cool, turn A/C to OFF,
or to BLOWER to preclude damage to the compressor.

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SECTION 5

PERFORMANCE DATA

When the A/C is operating, the performance data in the basic flight manual should be reduced as shown below:

Rate of Climb - 206L-1, L-3: Reduce the rate of climb in the basic Flight Manual by the amount shown below when the point located by the intersection of the pressure altitude and the OAT is above the R/C application curves in the following chart.

R/C.....68 ft/min.

Rate of Climb - 206L: Reduce the rate of climb in the basic Flight Manual by the amount shown below. Apply this correction at all altitudes.

R/C.....86 ft/min.

Hover Ceiling Gross With Degradation
(all models).....48 lbs.

EXAMPLE:

What reduction in R/C could be expected under the following conditions:

Model: 206L3
Pressure Altitude: 6,000 feet
OAT: 20°C

Enter at an OAT of 20°C, move vertically to the 6,000 ft. Pressure Altitude line. This intersection is below the curves, therefore no rate of climb change applies.

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SECTION 5

PERFORMANCE DATA

R/C Application Curve -
Max. Cont. Power ----- Without Particle Sep.
Take-off Power ----- Anti-ice - Off

