

Service Letter

FAA-DER APPROVED

Service Letter: No. 324

Subject: Replacement of AFT Evaporator Blower Wheel & Motor Assy.

Date: 29 August 1996

Applicability: Bell Helicopter Model 412 Series.

Reference:

1. F.A.A./S.T.C. #SR00066DE, Bell 412 series Air Conditioning System.
2. Evaporator Assy. AFT Drawing Numbers
412AC-602 Installation AFT Evaporator.
412AC-6002 Assembly AFT Evaporator.

Compliance: Optional, at the discretion of the Operator.

Background: Air Comm Corporation a program to refine, upgrade and assist in the upkeep of it's product line. It has come to our attention that from time to time, the replacement of the AFT Evaporator blower wheel or motor has become necessary. This document provides the necessary instructions for the replacement of the AFT evaporator blower wheel and motor.

Purpose: To enable operators of Bell 412 series helicopters to change the AFT evaporator blower wheel & motor in the field.

Bill of Materials:

Qty.	Part Number	Description
1	ES61060-2	Motor, 24 VDC
1	ES73100-8	Blower Wheel R/H
1	ES73100-7	Blower Wheel L/H

NOTE

Some of the items listed above may not be required to resolve a problem, and should be ordered on a case by case basis.

CAUTION

Disconnect Battery and External Power from aircraft before starting work!

Replacement of AFT Evaporator blower wheel and motor.

Removal:

1. Remove screws holding the AFT evaporator top in place, and remove top.
2. Cut electrical wires half way between motor housing and evaporator enclosure assy. (See page 4 of 4)
3. Remove the four (4) blower motor mounting screws from the outer ring of the motor housing.
4. Using a 1/8 inch Allen wrench, remove set screw holding the blower wheel to the motor shaft, and the blower wheel shaft adapter.
5. Remove blower motor & wheel assy. from evaporator blower housing assembly.

Installation:

1. Install new blower motor & wheel in the reverse order of its removal.

NOTE

Trim the ES61060-2 Blower motor shaft as necessary to accommodate the installation of the blower wheel adapter.

CAUTION

Handling of the blower wheel may cause damage, resulting in blower vibration.

2. Using the blower outlet for access, carefully rotate the blower wheel by hand. Checking for any interference or rubbing of the blower wheel. Areas (A) the "venturi ring", and (B) the "blower housing" (See page 4 of 4) are the most likely areas of interference.

NOTE

If blower wheel rubbing exist, the following procedure is required.

- A. Loosen the four (4) blower mounting screws, adjust the blower motor & wheel assy. radial to achieve a location which eliminates the interference.
- B. If rubbing occurs at area (A) the "venturi ring", loosen the set screw and reposition the blower wheel on the motor shaft. Be sure to re-tighten the set screw after you have adjusted the blower wheel.
- C. If rubbing occurs at area (B) the "blower housing", and this condition can not be resolved by adjusting the location of the blower motor or wheel assy.. then the edges of the blower housing may require filing to achieve clearance.

CAUTION

Interference of the blower wheel will result in failure of the motor!

3. Splice the blower wires together, using butt connectors (Not supplied)
Note: R/H evaporator motor: black wire is +, and L/H is -.
4. Apply electrical power to the blower motor, and recheck for wheel interference. Observe rotation of the wheel thru the duct outlet. Proper rotation will have the vanes of the blower wheel "scooping" the air towards the blower outlet.

WARNING

Be sure to wear safety glasses when observing the blower wheel!

CAUTION

Improper blower wheel rotation will cause blower vibration.

5. Recheck the system operation.

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