

Service Kit

Service Kit: SK-ES61074-2

Title: Spares replacement of M427 RH Forward and Aft Evaporator Blower Motor

Date: June 4, 2013

Applicability: Bell Helicopter Model 427 equipped with the Air Comm Corporation Air Conditioner System, Part Number 412EC-200

Reference: STC SR00418DE, M427 Air Conditioning System

Compliance: Optional at the discretion of the operator

Discussion: This Service Kit provides for the replacement of the existing RH forward and aft evaporator blower motor (ES61062-1) with an alternate motor (ES61074-2). This change is required because the original motor is no longer available.

Approval: The technical aspects of this document are based on FAA approved data.

Installation Instructions:

Remove and replace those components listed in the Bill of Materials section of this document.

NOTE

This kit is applicable to **RH** evaporator installations only.
Refer to SK-ES61074-1 for **LH** evaporator installations.

Bill of Materials (Parts to be removed)

| Item | Description | Part Number to be Removed | Qty |
|------|-------------|---------------------------|-----|
| 1 | Motor | ES61062-1 | 1 |

Bill of Materials (Parts to be installed)

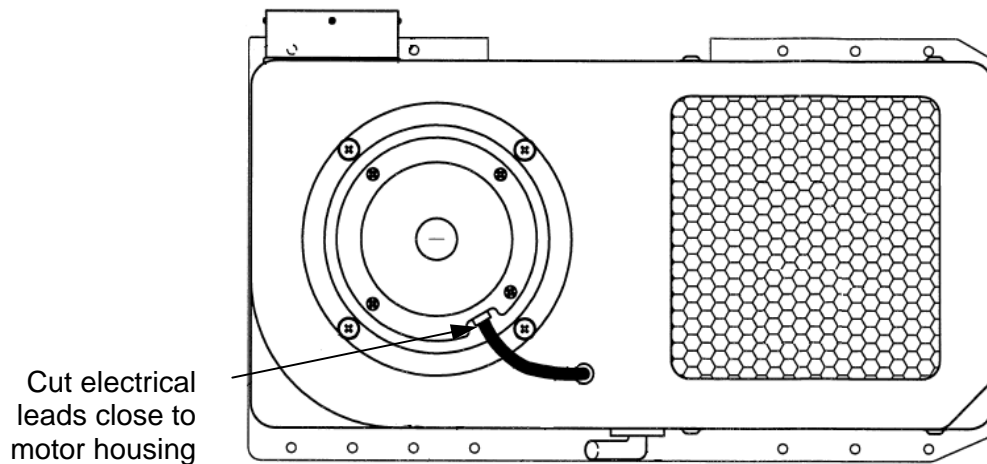
| Item | Description | Part Number to be Installed | Qty. |
|------|-------------------|-----------------------------|------|
| 1 | Motor, CCWSE (RH) | ES61074-2 | 1 |
| 2 | Splice | M81714/65-12-1 | 2 |
| 3 | Clamp, Cushioned | MS21919WDG3 | 2 |
| 4 | Molex pin, male | 02-09-2103 | 2 |

| Rev | Issued | Inserted | Approved | Description of Change |
|-----|-----------|----------|---|-----------------------|
| NC | 5/20/2013 | RL |  | Initial Release |

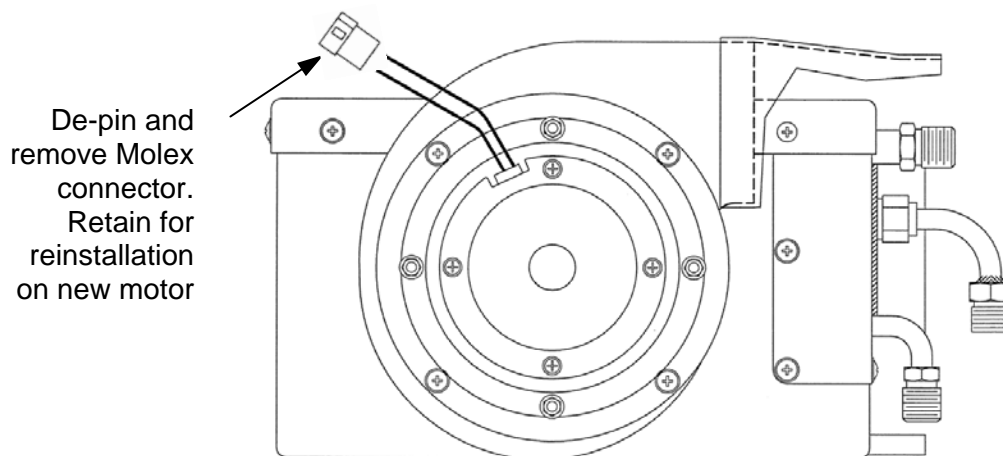
Removal:

NOTE

It will not be necessary to remove the evaporator assembly from the aircraft.



**RH Forward Evaporator Assembly – Old Motor
Figure 1-1**



**RH Aft Evaporator Assembly – Old Motor
Figure 1-2**

1. **Forward evaporator:** Cut electrical leads going into the motor as close as possible to the motor housing. This will aid in splicing old motor leads onto new motor. (Figure 1-1)
2. **Aft evaporator:** Disconnect blower motor Molex connector from aircraft wiring. Remove and retain connector from motor wiring. (Figure 1-2)

3. Remove and retain attaching hardware securing motor to evaporator assembly enclosure.
4. Remove motor and blower wheel assembly from evaporator assembly enclosure.

NOTE

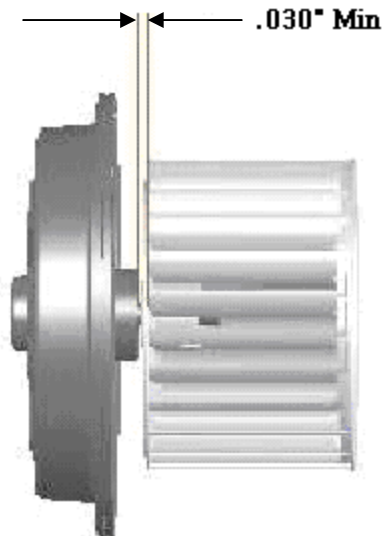
It may be necessary to apply heat to the set screw of the blower wheel to separate the two parts.

5. Loosen retaining set screw and remove blower wheel from motor shaft. Retain blower wheel.

Installation:

Forward Evaporator

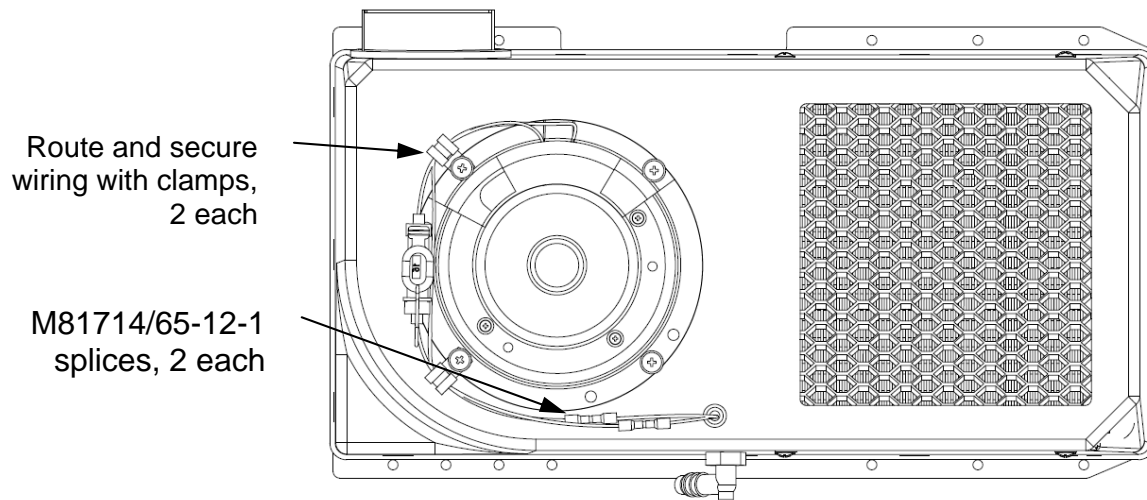
1. Install retained blower wheel on new motor. Press the blower wheel onto the motor shaft until it stops against motor. Back blower wheel away to achieve a .030"-.040" clearance between blower wheel and new motor. Apply one drop of low strength Loctite to set screw and tighten against flat portion of motor shaft to lock wheel in place. (Figure 1-3)



**Motor and Blower Wheel Assembly
Figure 1-3**

2. Install new motor and blower wheel assembly into evaporator enclosure using retained attaching hardware.

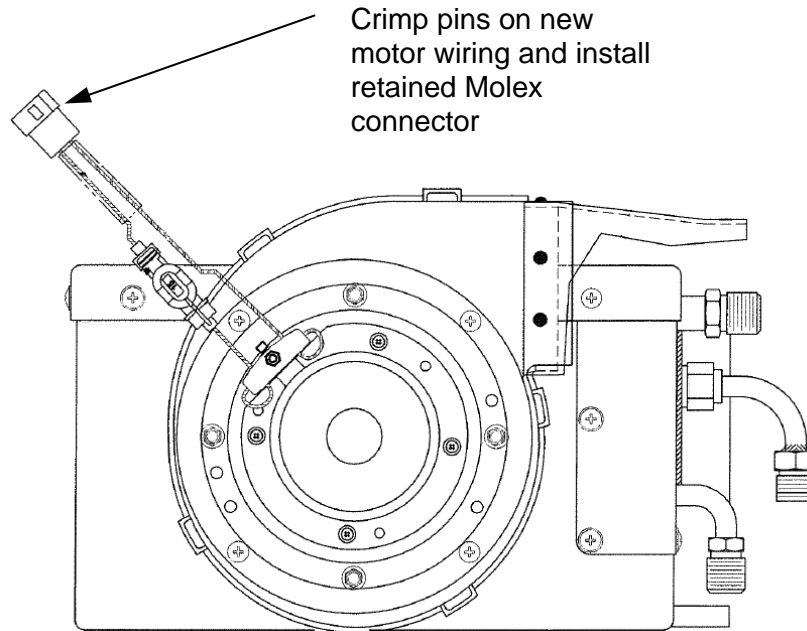
3. Splice new motor wires into existing wiring on forward evaporator using M81714/65-12-1 splices. Observe wiring polarity. (Figure 1-6)
4. Route and secure motor wiring for forward evaporator using 2 each MS21919WDG3 clamps. (Figure 1-4)



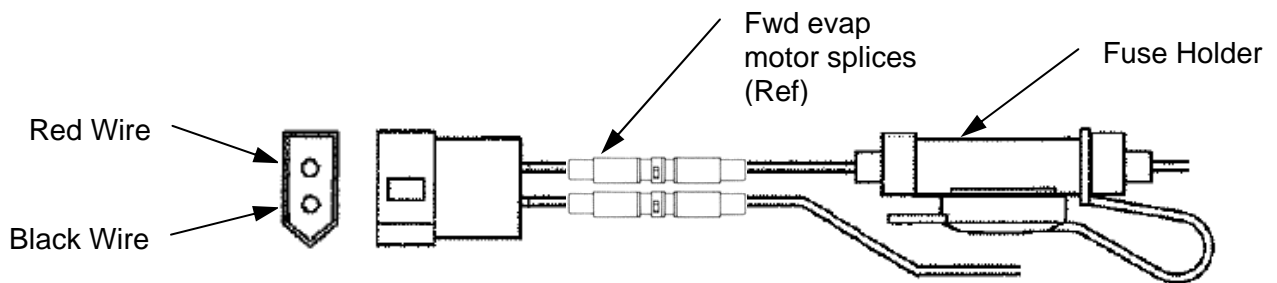
RH Forward Evaporator Assembly – New Motor
Figure 1-4

Aft Evaporator

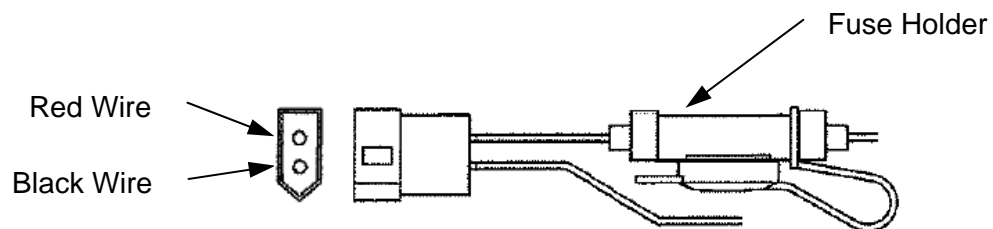
1. Install existing blower wheel on new motor. Press the blower wheel onto the motor shaft until it stops against motor. Back blower wheel away to achieve a .030”-.040” clearance between blower wheel and new motor. Apply one drop of low strength Loctite to set screw and tighten against flat portion of motor shaft to lock wheel in place. (Figure 1-3)
2. Install new motor and blower wheel assembly into evaporator enclosure using retained attaching hardware. (Figure 1-5)
3. Crimp 02-09-2103 pins to new motor wiring using appropriate crimping tool and install retained Molex connector. Observe wiring polarity. (Figure 1-6)
4. Connect motor connector to aircraft wiring and secure as required to prevent chafing.



**RH Aft Evaporator Assembly – New Motor
Figure 1-5**



**Molex Connector Wiring Polarity – Fwd Evaporator Motor
Figure 1-6**



**Molex Connector Wiring Polarity – Aft Evaporator Motor
Figure 1-7**