

Service Letter

Subject: Bell 427 Air Conditioner Blower Motor Connector Upgrade.

Date: Feb 9, 2016

Applicability: Bell Helicopter Model 427 equipped with the Air Comm Corporation 427EC-200-1 thru -4 air conditioning systems

Reference: ACC Service Bulletin SB 427-110414

Discussion:

This Service Letter describes the actions necessary to change the connectors on the air conditioning aft evaporator blower and condenser blower motors regarding the potential issue described in the referenced service bulletin. Note that per SB 427-110414 it is only necessary to change connectors showing indications of an overheated condition although the instructions in this letter provide the information to change all potentially affected connectors.

Approval:

The resultant alterations described in this document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

Weight & Balance:

There is no change in weight and/or balance due to this alteration.

Revision History:

Revision	Issue Date	Inserted By	Approved	Description of Changes
N/C	Nov 11, 2014	JMB	MJK	Initial Release
A	Feb 9, 2016	JMB		Installation instruct pg 3: corrected crimp tool p/n & description

Bill of Materials:
Aft Evaporator parts to be replaced

Item	Part Number	Description	Quantity
1	03-09-1022	Receptacle (2 pin on main harness)	1
2	02-09-1103	Socket (in item 1 receptacle)	2
3	03-09-2022	Plug (mates w/ item 1 receptacle)	1
4	02-09-2103	Pin (in item 3 plug)	2

Condenser parts to be replaced

Item	Part Number	Description	Quantity
1	03-09-1042	Receptacle (4 pin on main harness)	1
2	02-09-1103	Socket (in item 1 receptacle)	4
3	03-09-2042	Plug (mates w/ item 1 receptacle)	1
4	02-09-2103	Pin (in item 3 plug)	4

1.0 Rework Instructions
1.1 Aft evaporator:
Removal:
CAUTION

Disconnect the aircraft battery and external power prior to starting work.

1. Access the aft evaporator assembly, located on the left side above the aft baggage compartment.
2. Locate the 2 pin connector (see Figure 1) and mark the white wires "Red" and "Black" as appropriate. It may be necessary to remove a portion of the heat shrink covering on the harness.
3. Cut the wires on the back side of the connector shown in Figure 1 and its mate. Remove minimal wire length. Remove and discard the connectors w/pins & sockets.

Installation:

Install pins, sockets, plugs, and receptacles onto free ends of wires.

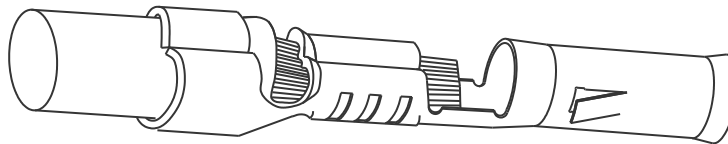
Crimp Molex pins using Molex Corporation Tool #0638111000 (Available thru Molex USA 1-800-786-6539) or equivalent wire terminal crimping tool for Molex 1189, 1190 series terminals (2.36mm / .093" dia).

The Conductor Crimp should not have excessive extrusions (flashing)

The insulation crimp (strain relief) should grip the insulation without cutting through it.

Wearing leather work gloves, perform non-destructive pull test.
Wire should not dislodge from conductor crimp under normal hand pressure. (Approx 10lbs.)

Finished crimp should resemble drawing below.



Post-rework Inspection

After completing 10 flight hours re-inspect the connectors to verify the integrity of the crimps.

1.2 Condenser:

Removal:

CAUTION

Disconnect the aircraft battery and external power prior to starting work.

1. Access the condenser assembly, located below the aft cargo compartment. See Figure 2.
2. Locate the 4 pin connector on the blower harness.
3. Identify the wires and remove both the plug and receptacle.

Installation:

Install the supplied pins, sockets, plugs, and receptacles onto free ends of wires.
Crimp Molex pins per instructions on sheet 3.

Post-rework Inspection

After completing 10 flight hours re-inspect the connectors to verify the integrity of the crimps.

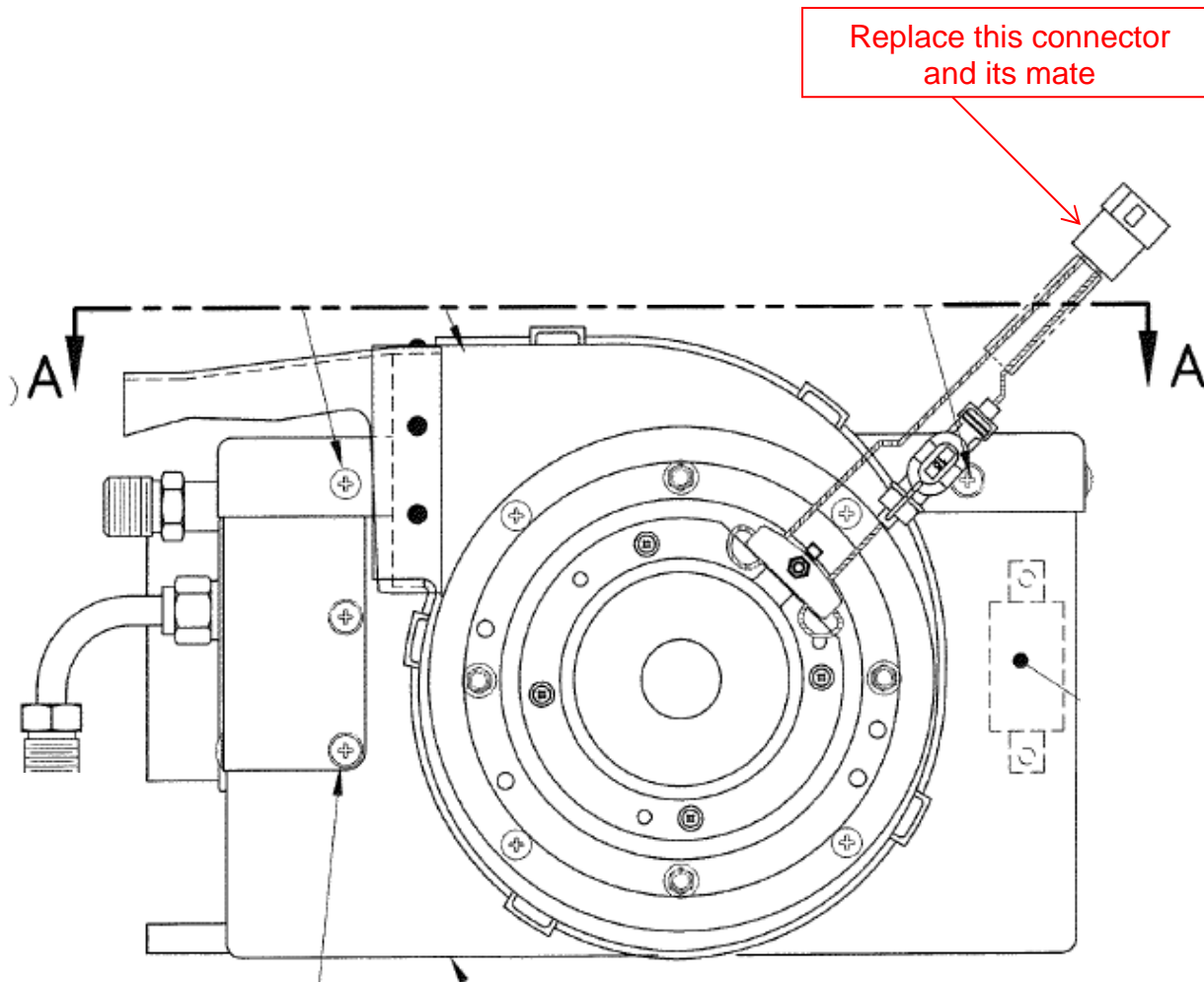


Figure 1 Aft Evaporator Blower Assembly (blower configuration may differ slightly. Connector is used on all 427 aft evaporators)

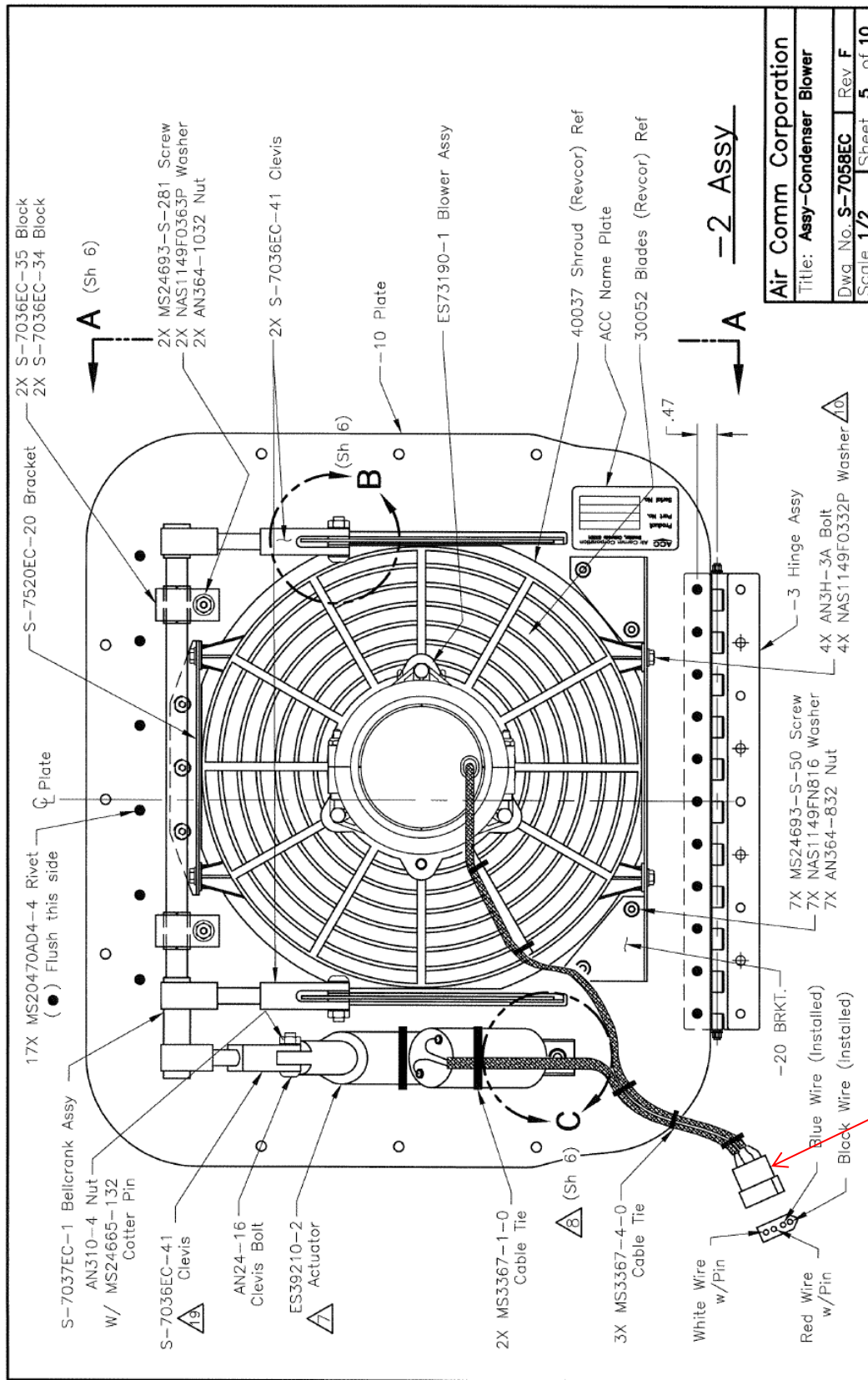


Figure 2. Condenser Blower 427 AC systems

Replace this connector and its mate