

### Service Bulletin

**Title:** SB 427-110414; Bell 427 Air Conditioner Blower Motor Connector

**Date:** July 6, 2016

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

**Reference:** FAA / STC # SR00543DE, Bell Helicopter 427 Air Conditioning System.

**Compliance:** Inspection within 20 flight hours unless already replaced with new ES59112 connector

**A. Discussion:**

Field reports have indicated that in some rare occurrences the aft evaporator blower motor connectors may have overheated due to an improper contact crimp or loose fitting terminations. This Bulletin requires a visual inspection and basic pull test of the connectors on the evaporator and condenser blowers to determine if there is evidence of overheating or a loose wire-to-contact interface. If any signs of overheating or loose contacts are found, the A/C system must be made inoperable until the connector is replaced with new replacement connectors.

**B. Warranty:**

If any of the connectors inspected show indication of overheating or loose wire-to-terminal interface, instructions and new replacement connectors (ES59112) can be obtained free of charge from the Air Comm Corporation Service Department. Please contact us at: Phone 303-440-4075, Fax 303-440-6355, or E-mail [service@aircommcorp.com](mailto:service@aircommcorp.com)

**C. Approval:**

The technical aspects of this Service Bulletin are based on FAA approved data.

**D. Weight & Balance:**

The weight change due to the installation of these parts would be negligible and no adjustment to the weight and balance of the aircraft is necessary.

Revision	Issue Date	Inserted By	Approved by	Description of Changes
NC	11/04/14	JMB	MJK	Initial Release
A	6/3/2016	EIM	<i>JMB</i>	Revision to instruct use of new connectors. Added pages 3-5

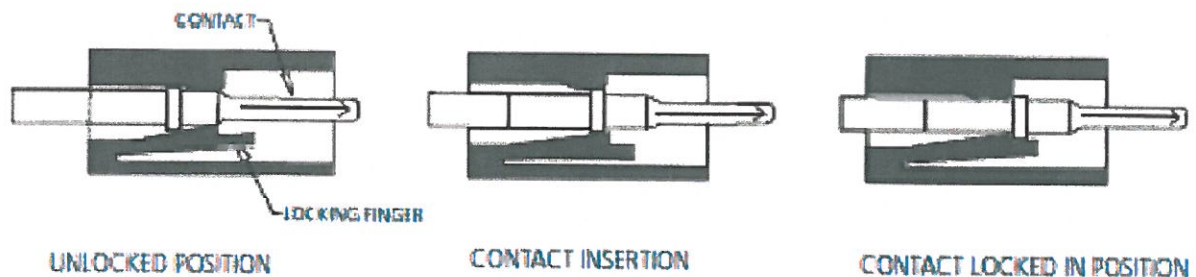
**E. Procedure:**

Locate each connector as shown in Figures 1 and 2. De-mate each connector and inspect both mates for signs of overheating, discoloration or plastic deformation. Gently pull (estimated 5-7 lb force) on each wire to verify the integrity of the contact's crimp. The contacts should be fully seated and locked in the housing so pulling gently on the wires will not dislodge the contacts from the housings.

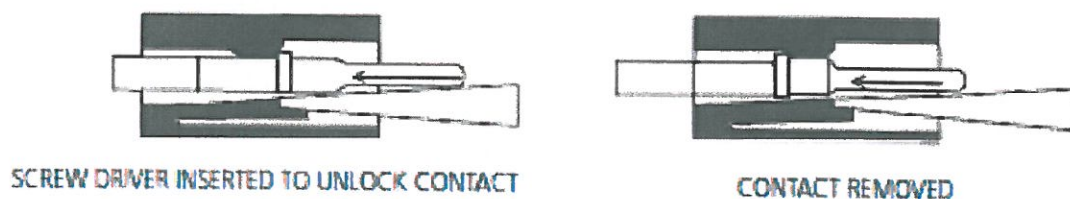
If any signs of overheating of the housing are present or if the pull test fails, the system must be rendered inoperative and the connector housings and contacts replaced with new replacement connectors using Deutsch HDT-48-00 Crimping tool or equivalent MIL-DTL22520 Type 1 crimping tool before further operation. See Section B for information on how to contact Air Comm Corporation..

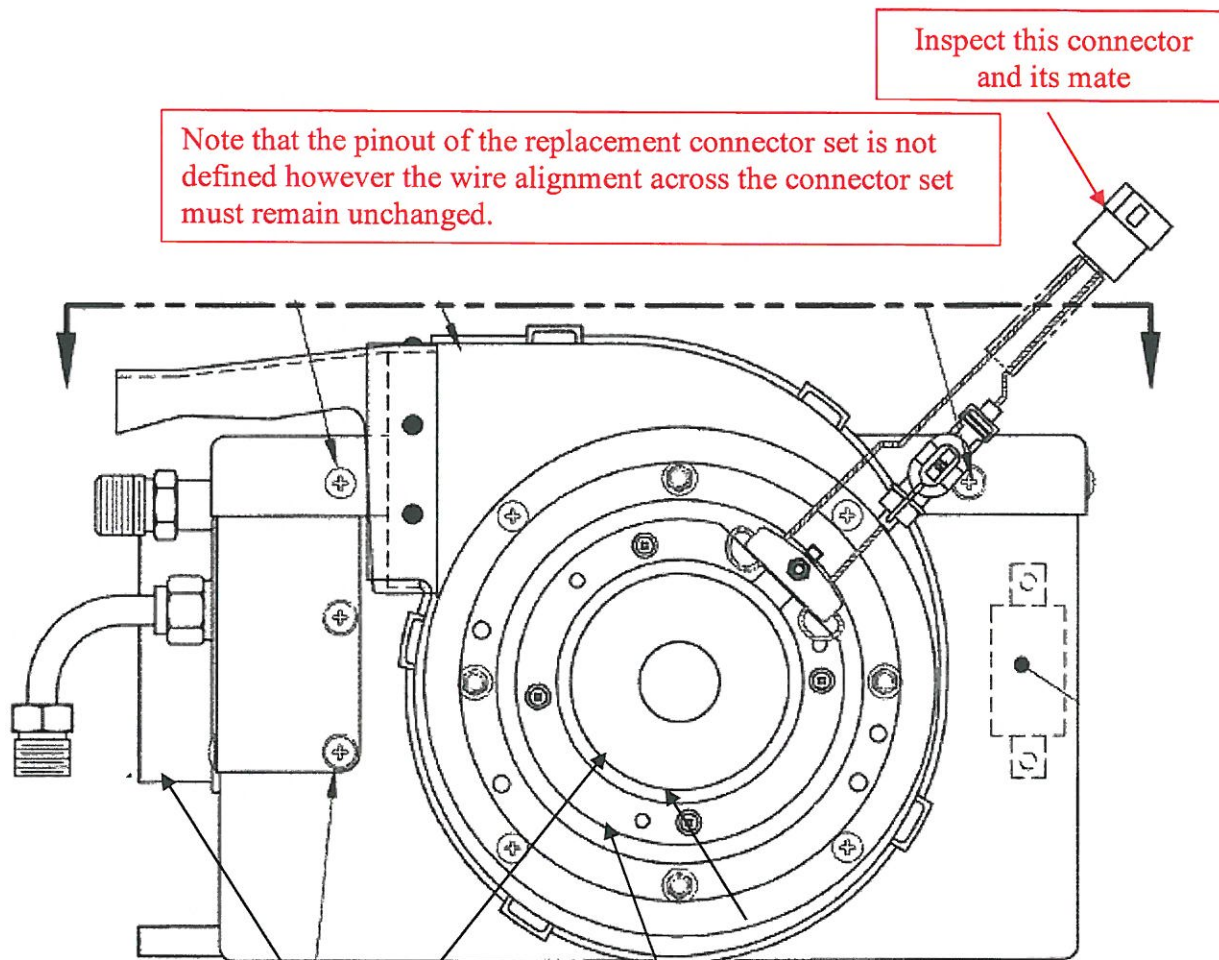
Installation instructions for new replacement connectors are per the view below and as shown on pages 3 thru 5.

**Contact Insertion System (DTM/DT/DTP)**

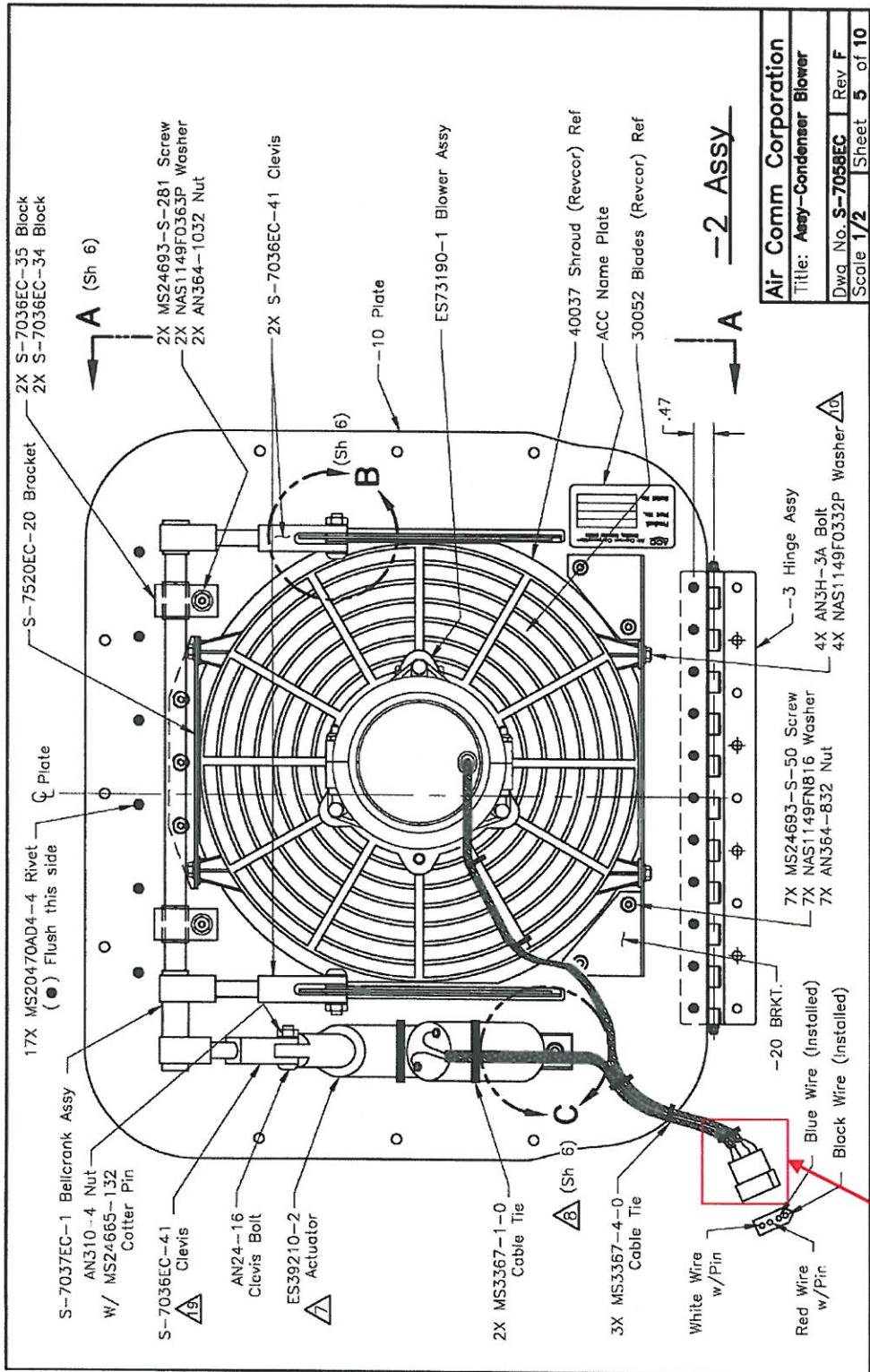


**Contact Removal Procedure (DTM/DT/DTP)**





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



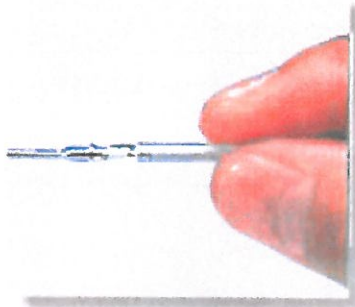
Air Comm Corporation	
Title: Assy-Condenser Blower	
Dwg. No. S-7059EC	Rev F
Scale 1/2	Sheet 5 of 10

**Figure 2. Condenser Blower 427 AC systems**

**Inspect this connector**

**Note that the pinout of the replacement connector set is not defined however the wire alignment across the connector set must remain unchanged.**

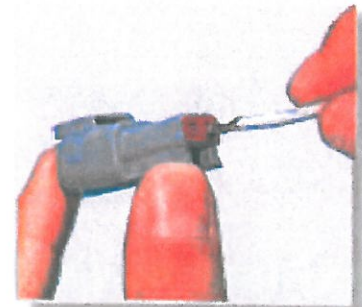
### Assembly Contact Insertion (DTM, DT, DTP)



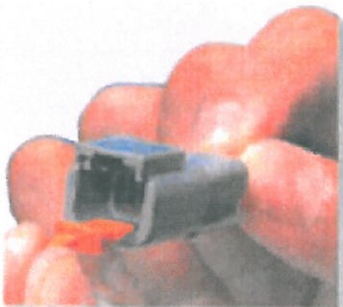
1. Grasp crimped contact approximately 1.0" (25.4mm) behind the contact barrel.



2. Hold connector with rear grommet facing you.



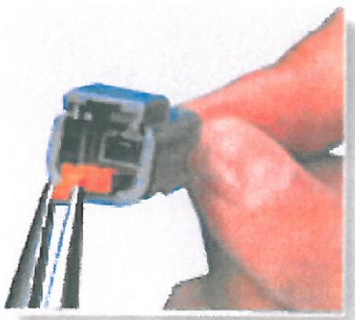
3. Push contact straight into connector grommet until a click is felt. A slight tug will confirm that it is properly locked in place.



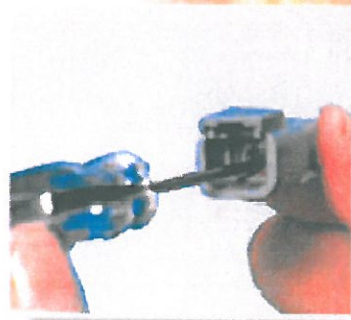
4. Once all contacts are in place, insert orange wedge: receptacles - with half holes aligning with contacts. Plugs - with contacts aligning behind full holes. The orange wedge will snap into place.

NOTE: The receptacle is shown - use the same procedure for plug.

### Contact Removal



1. Remove orange wedge using needle-nose pliers to pull wedge straight out.



2. To remove the contacts, gently pull wire backwards, while at the same time releasing the locking finger by moving it away from the contact with a screwdriver.



3. Hold the rear seal in place, as removing the contact will displace the seal.