

Service Bulletin

Title: SB 407-110414; Bell 407 Air Conditioner Blower Motor Connector

Date: January 13, 2017

Applicability: Bell Helicopter model 407 Equipped with the Air Comm Corporation 407EC-201, -202, or -203 air conditioner systems with Molex-style connectors on the Aft Evaporator blowers

Reference: FAA / STC # SR00222DE, Bell Helicopter 407 Air Conditioning System.

Compliance: One time 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 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

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	11/4/14	JMB	MJK	Initial Release
A	2/4/2016	JMB	MJK	Added Molex reference to "Applicability", Compliance was within 20 flight hours, Added "Alternately a different style..." to Warranty
B	7/6/2016	EIM	JMB	Revision to instruct use of new connectors. Added page 6
C	1/10/2017	CRP	LCB	Added additional instructions for ES59112 connectors. Added page 7.
D	1/13/2017	CRP	LCB	Corrected figure number for Figure 3 and added verbiage for Figure 3 in Section E

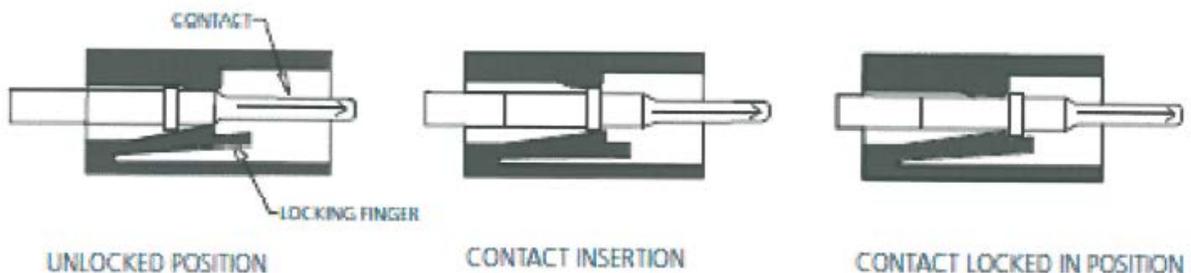
E. Procedure

Locate each connector as shown in Figures 1, 2 and 3. 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.

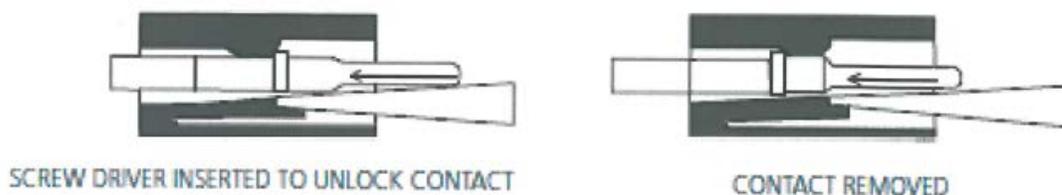
If any signs of overheating of the housing are present or if the pull test fails, the system must be rendered inoperative and the connector housings and contacts replaced with new replacement connectors using Deutsch HDT-48-00 Crimping tool or equivalent MIL-DTL22520 Type 1 crimping tool before further 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 6 and 7.

Contact Insertion System (DTM/DT/DTP)



Contact Removal Procedure (DTM/DT/DTP)



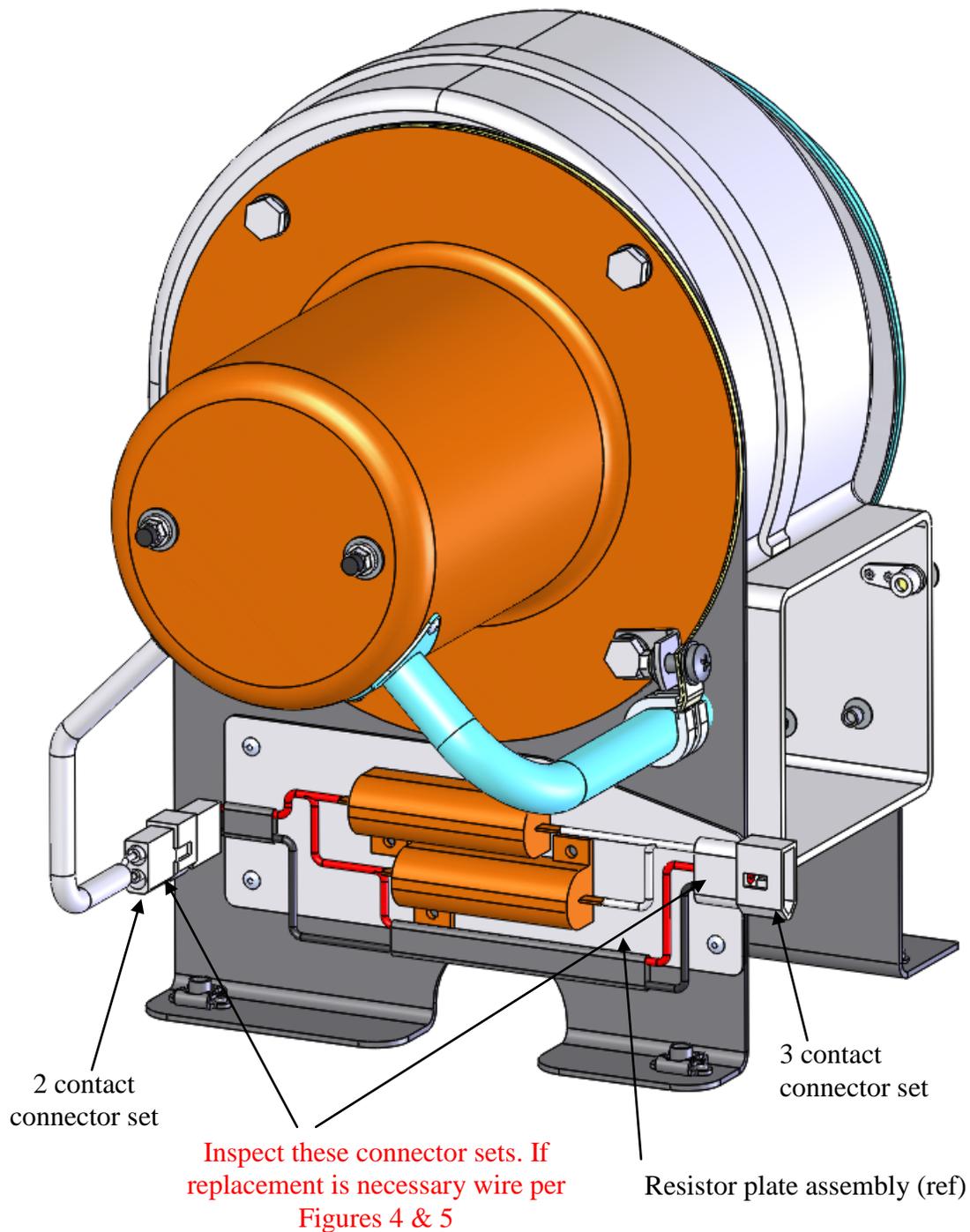
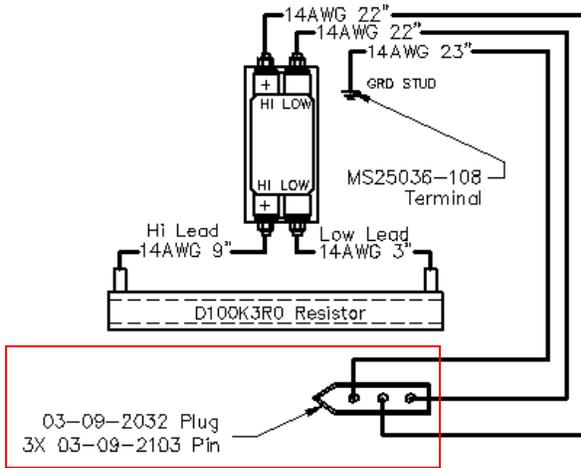


Figure 1 Aft Evaporator Blower Assembly S-6102EC-4 used in the 407EC-202-1,-2,-3 and 407EC-203-2 AC kits



Wiring Schematic

Inspect this connector.
If replacement is necessary
wire per Figure 6

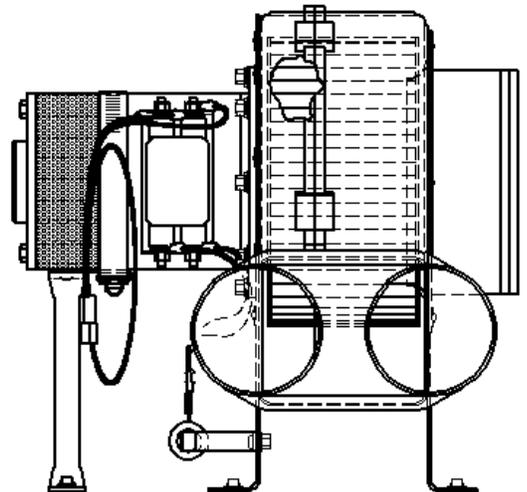
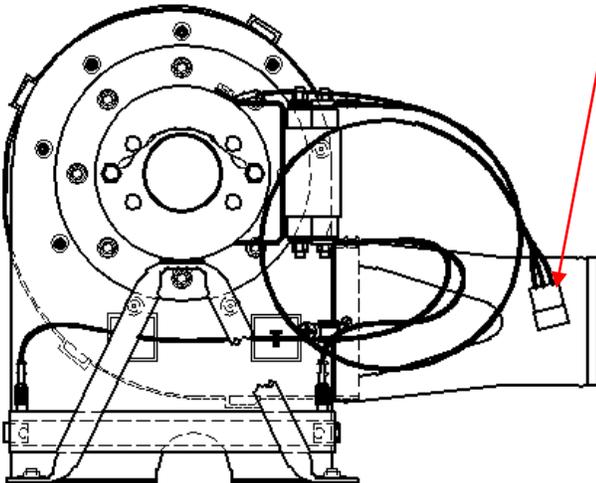
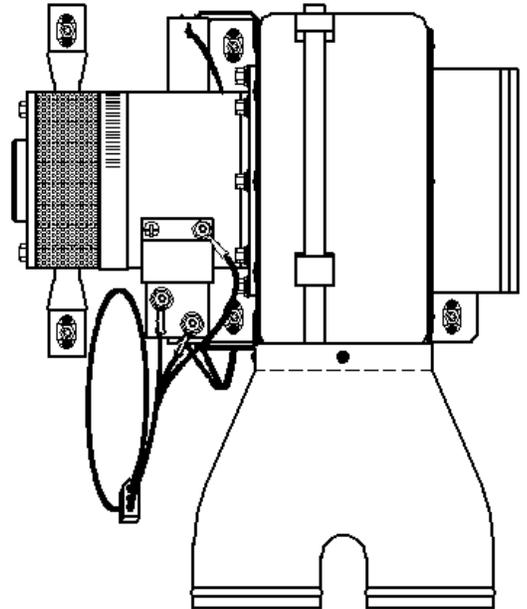
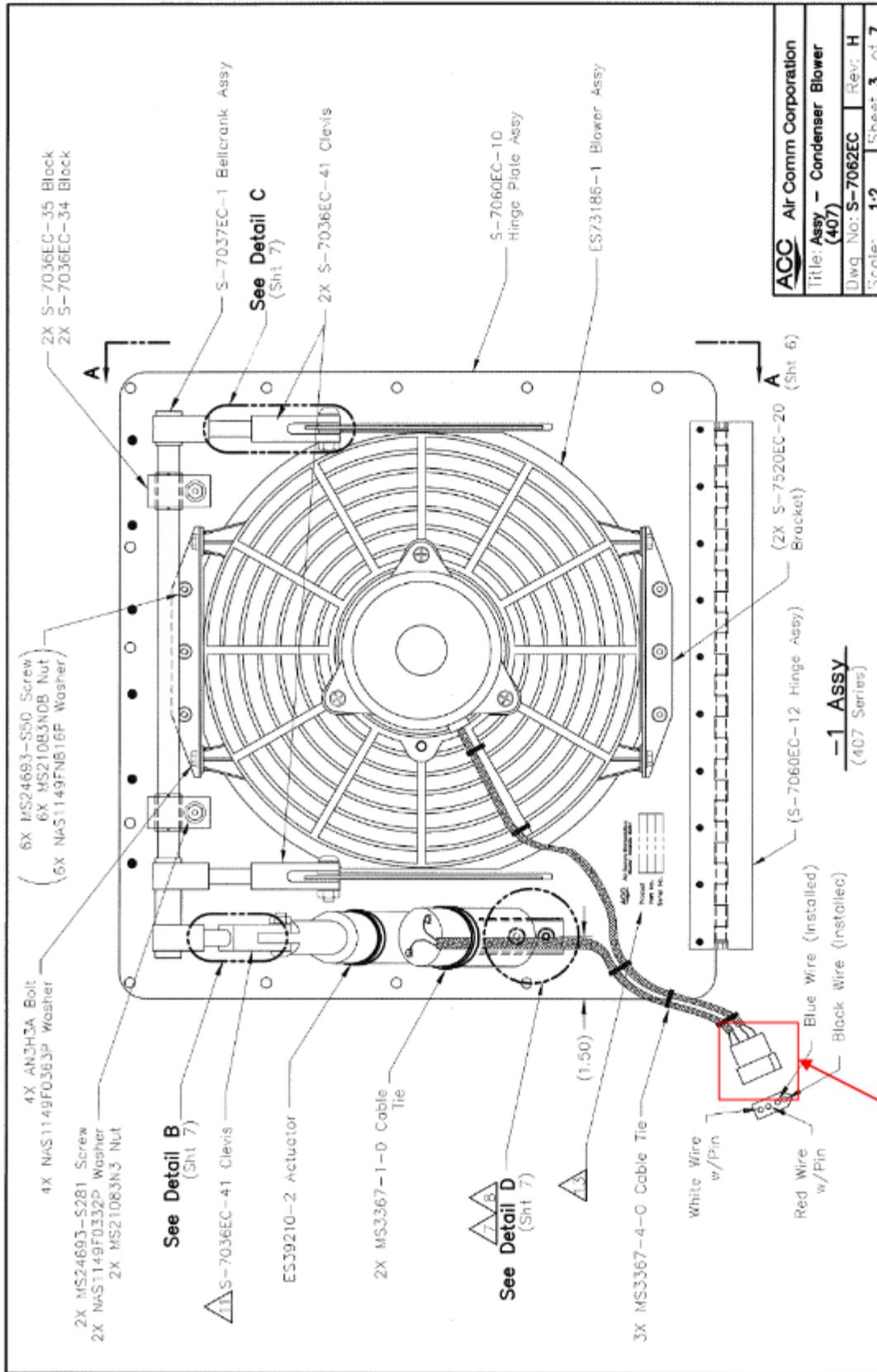


Figure 2 Aft Evaporator Blower Assembly S-6078EC-15
used in 407EC-620-2 AC kits



ACC Air Comm Corporation	
Title: Assy - Condenser Blower (407)	
Dwg. No: S-7062EC	Rev: H
Scale: 1:2	Sheet: 3 of 7

Figure 3 S-7062EC-1, -2 Condenser Blower
 Used on 407EC-702, -704 Condenser Assembly

Inspect this connector and its mate

Note that the pinout of the replacement connector set is defined by the installer, however the wire alignment across the connector set must remain unchanged.

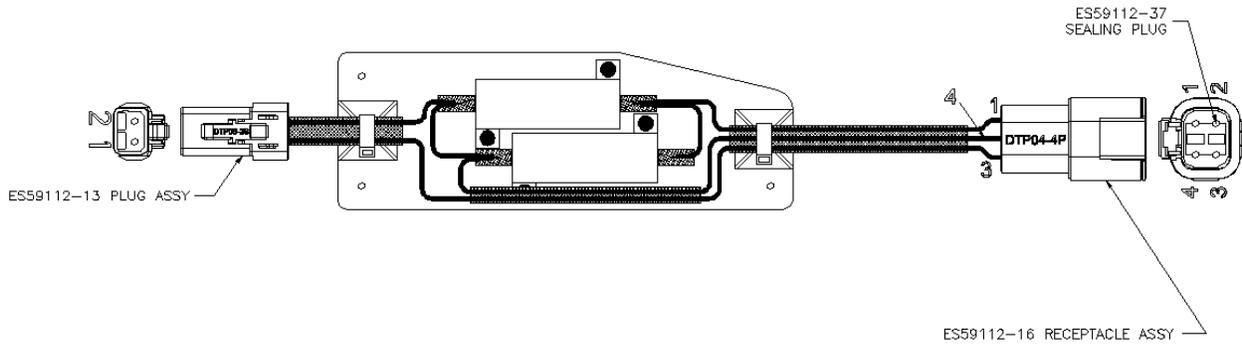


Figure 4 Resistor Plate Assy w/ Deutsch connectors

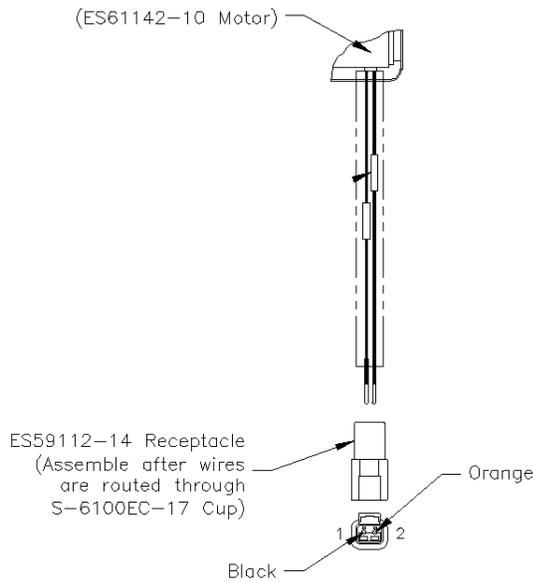


Figure 5 Blower Motor Connector w/ Deutsch connector

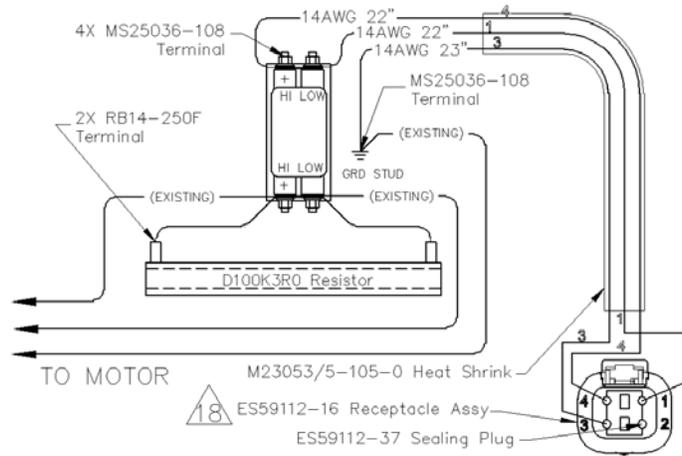
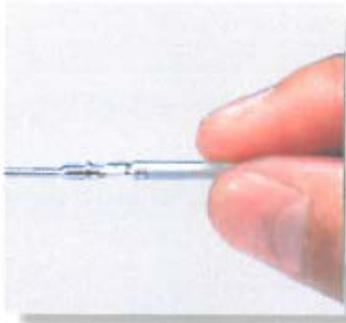


Figure 6 Resistor Plate Assy w/ Deutsch connector

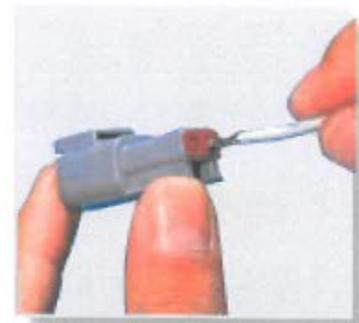
Assembly Contact Insertion (DTM, DT, DTP)



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



2. Hold connector with rear grommet facing you.

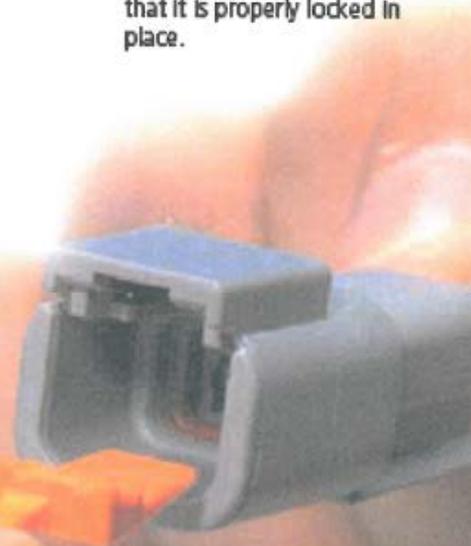


3. Push contact straight into connector grommet until a click is felt. A slight tug will confirm that it is properly locked in place.



4. Once all contacts are in place, Insert orange wedge: receptades - 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.