

Service Bulletin

Title: SBEC135-25-01; EC135 Air Conditioner Aft Evaporator Wiring Harness Blower Motor Connector

Revision	Issue Date	Checked by	Approved by
NC	03-MAR-2025	T. Wiklund	D. Sirbaugh
A	02-MAY-2025		

Summary: The purpose of this Service Bulletin is to provide instructions for replacing the Molex Connectors on the Aft Evaporator Blower assembly with Deutsch connectors. This Service Bulletin is optional and may be performed at the operator's discretion.

Compliance: Optional

Effectivity: Airbus Helicopters Deutschland models EC135P2, EC135P2+, EC135T2, and EC135T2+ Equipped with the Air Comm Corporation EC135-200-2 thru -5 and EC135-202-1 thru -4 air conditioner system.

Reference: FAA / STC # SR00565DE, Airbus Helicopter Deutschland EC135 Air Conditioning System.

Electrical: No change

Weight & Balance: No change

Labor: Labor hours are an estimate given for information only. It is estimated to take one airframe technician 1 hour.

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

Discussion:

The Molex motor connectors used in the Air Comm Corporation Aft Evaporator Blower Assembly EC135-6844-1 are now obsolete and have been replaced with Deutsch connectors ES59112 as built per EC135-6844-2 and EC135-8010-5.

When replacing the top-level assembly P/N EC135-6844-1 with the replacement P/N EC135-6844-2 or the motor P/N ES61142-3 with new P/N ES61142-1, the aircraft side connectors must be replaced with new P/N ES59112-13. Additionally, the Wire Harness Assembly P/N EC135-8010-4 must be replaced with P/N EC135-8010-5, as it connects the blower motor to the aircraft.

If only performing a connector replacement due to connector failure, replace the obsolete Molex connectors with the Deutsch connectors to convert the Aft Evaporator assembly from P/N EC135-6844-1 to S/N EC135-6844-2. The assembly must be part-marked accordingly.

This service bulletin provides instructions for replacing Molex connectors with Deutsch connectors, both when replacing only the connectors and when replacing the motor.

Revision History:

Revision NC is the initial release, no changes.

Revision A adds instructions for performing connector replacement only.

Require Material for Ordering:

ES59112-15 Deutsch Plug Assembly – Socket Contacts included (QTY 1)

ES59112-37 Sealing Plug (QTY 1)

EC135-8010-5 Wire Harness Assembly (QTY 1)

ES59112-14 Deutsch Receptacle Assembly – Pin Contacts included (QTY 1)

Optional Materials for Ordering:

ES59112-34 Socket Contacts (Spares for ES59112-15)

ES59112-35 Pin Contacts (Spares for ES59112-14)

Procedure:

Warning: Comply with all general instructions and safety instructions per the applicable aircraft AMM.

1. If the motor P/N ES61142-3 was replaced with P/N ES61142-1, skip to step 6. Otherwise, follow steps 1-5 to install ES59112-35 Deutsch pins on the blower motor to convert the Aft Evap Blower Assembly to P/N EC135-6844-2.
2. Remove the Molex connector of the blower motor by trimming the wires as close as possible to the connector to maintain the wire length.
3. Strip the wire insulation back between 0.222 and 0.284 inch [Reference DEUTSCH Field Maintenance Crimp Tool HDT-48-00].
4. Crimp a pin contact ES59112-35 to each of the striped wires using Deutsch tool HDT- 48-00 crimping tool.
5. Locate the blower motor assy P/N marking and add with indelible ink "SBEC135-25-01".
6. Insert the red wire into Pin 1, and the black wire into Pin 2 of the Deutsch connector ES59112-14. Ensure contacts are locked in per Figure 4.
7. After installing or converting to P/N EC135-6844-2 (Figure 1), remove the existing harness and install the new Wire Harness Assembly EC135-8010-5 (Figure 2). This harness connects to the blower, as shown in Figure 3.
8. Locate the existing Molex connector on the aircraft-side leading to the relay panel. The new aircraft-side Deutsch connector ES59112-15 will plug into the mating connector of the Wire Harness Assembly shown in Figure 2.
9. Trim wires ACCA23A14 (Low), ACCA24A14 (High), and ACCA31A14N (Ground) at existing connector to maintain wire length.
10. Strip the wire insulation back between 0.222 and 0.284 inch [Reference DEUTSCH Field Maintenance Crimp Tool HDT-48-00].

11. Crimp a socket contact ES59112-34 to each of the striped wires using Deutsch tool HDT-48-00 crimping tool.
12. Insert crimped wire ACCA23A14 (Low) into Pin 1, crimped wire ACCA24A14 (High) into Pin 4, and crimped wire ACCA31A14N (Ground) into Pin 3 of the Deutsch Connector ES59112-15 as shown in Figure 3. (Contact insertion instructions are shown in Figure 4).
13. Insert sealing plug ES59112-37 into Pin 2 and ensure contacts are locked in per Figure 4.
14. Reconnect the Wire Harness Assembly as shown in Figure 3.

Note: It is not necessary to part mark the assembly with the service bulletin number if installing a new EC135-6844-2 or ES61142-1.

Note: If necessary, contact removal instructions are shown in Figure 5.

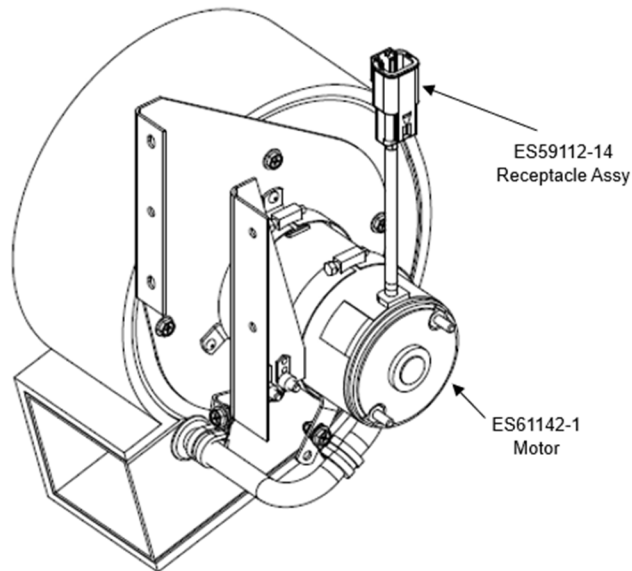


Figure 1: Aft Evaporator Blower Assembly EC135-6844-2

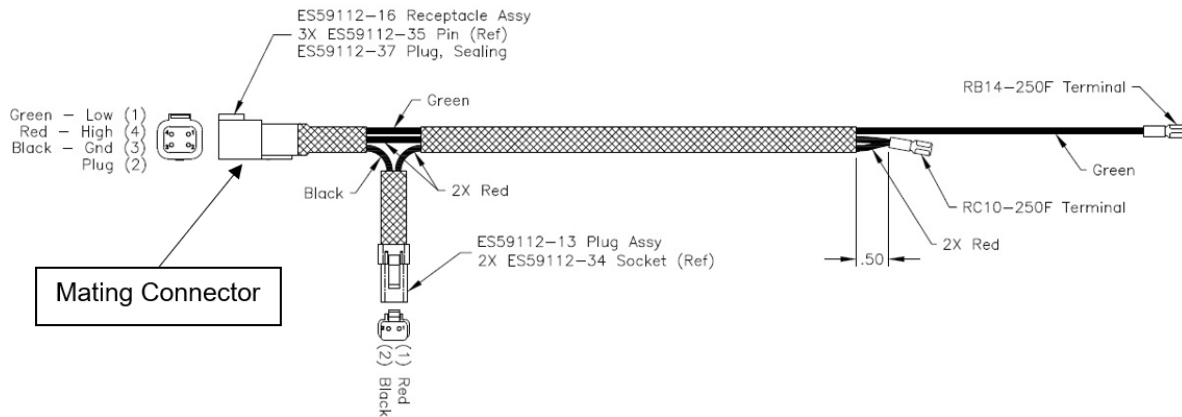


Figure 2: Wire Harness Assembly EC135-8010-5

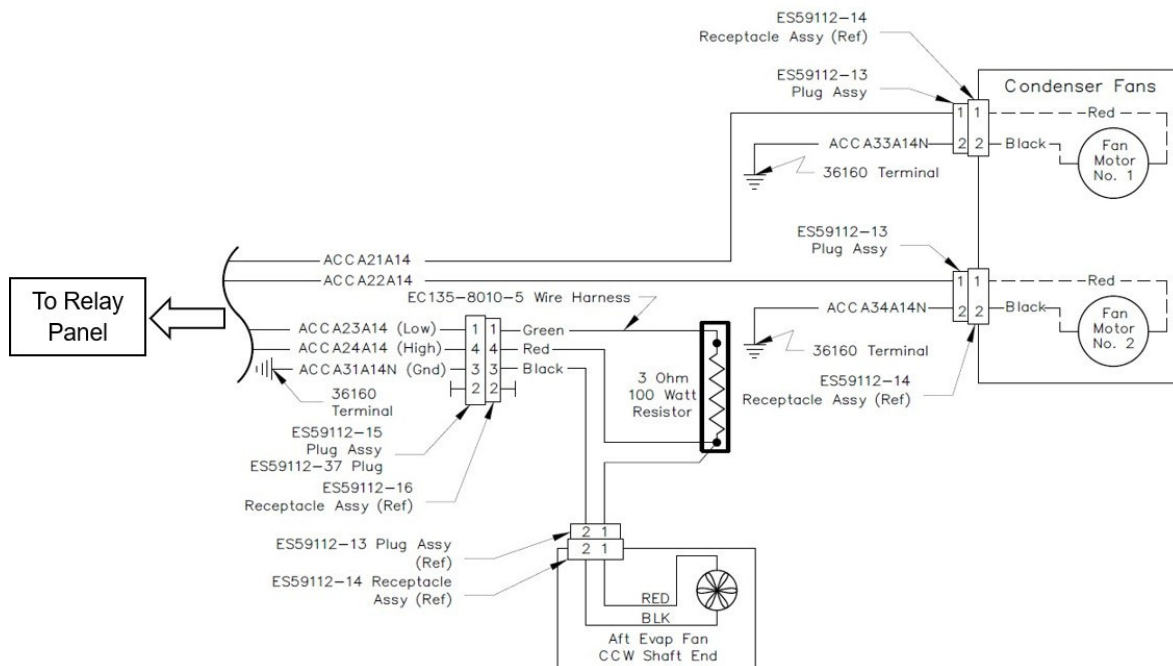
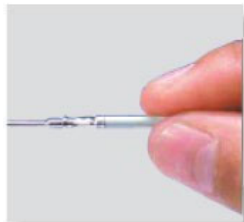


Figure 3: Electrical Schematic

Assembly Contact Insertion (DTM, DT, DTP)



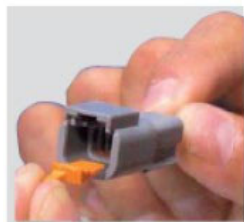
1. Grasp crimped contact approximately 1.0" (25.4mm) behind the contact barrel.



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.

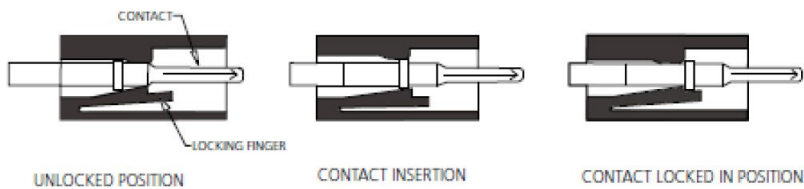
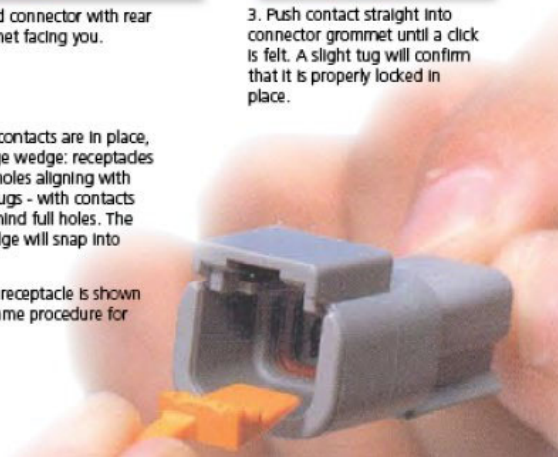
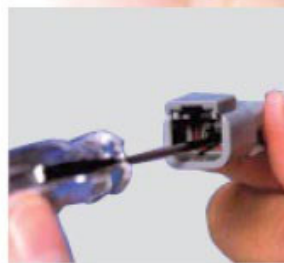


Figure 4: Contact Insertion

Contact Removal



1. Remove orange wedge using needlenose 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.

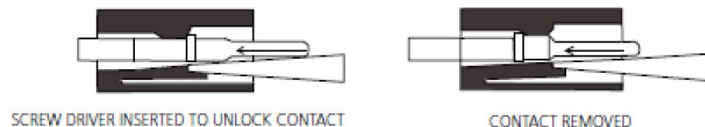


Figure 5: Contact Removal