

Service Bulletin

Title: SB 412AC-2502; Bell 412 Air Conditioner Relay Panel Wiring

Date: 29 July 2015

Applicability: Bell Helicopter 412 Aircraft equipped with the Air Comm Air Conditioning System, all serial numbers. The system serial number is marked on the compressor mount.

Reference: FAA STC # SR00066DE

Compliance: Initial inspection within 50 flight hours, then re-inspect during routine 300 hour aircraft inspection cycle thereafter

A. Discussion:

During a routine periodic inspection, an operator discovered evidence of overheated components inside a 412AC-2502-1 Relay Panel Assembly. Subsequent inspection of other 412 aircraft in the operator's fleet revealed a total of four overheated panels.

This bulletin is intended to provide the necessary instructions for operators to inspect their 412AC-2502 Relay Panel Assemblies for overheating and if damage is found, provides instructions to obtain and install a replacement panel.

Note: Re-inspections must continue even if Relay Panel has been replaced. Air Comm will re-evaluate the need to continue inspections of replacement panels once sufficient service history has been obtained to determine further inspections are not necessary.

B. Warranty:


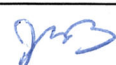
The new parts referenced in this bulletin can be obtained free of charge from the Air Comm Corporation Service Department. Please contact us at: Phone 303-440-4075, Fax 303-440-6355, or E-mail service@aircommcorp.com

C. Approval:

This bulletin is based on previously FAA-approved data.

D. Weight & Balance:

No change to aircraft weight & balance.

Revision	Issue Date	Inserted By	Approved by	Description of Changes
NC	10/13/14	KDP	MJK	Initial Release
A	4/2/15	JMB		Modified range of applicability to include all kit serial numbers.
B	7/29/15	KDP		Revised to add repetitive inspection

E. Removal and Inspection:

Removal:

1. Ensure electrical power is removed from the non-essential bus that powers the AC system.
2. Disconnect the MS27467T25B19P and MS27467T13B98P Amphenol connectors from the bracketed receptacles aft of the relay panel.
3. Carefully remove the relay panel by removing the six (6) AN525-10R6 screws securing the relay panel to the cabin top.

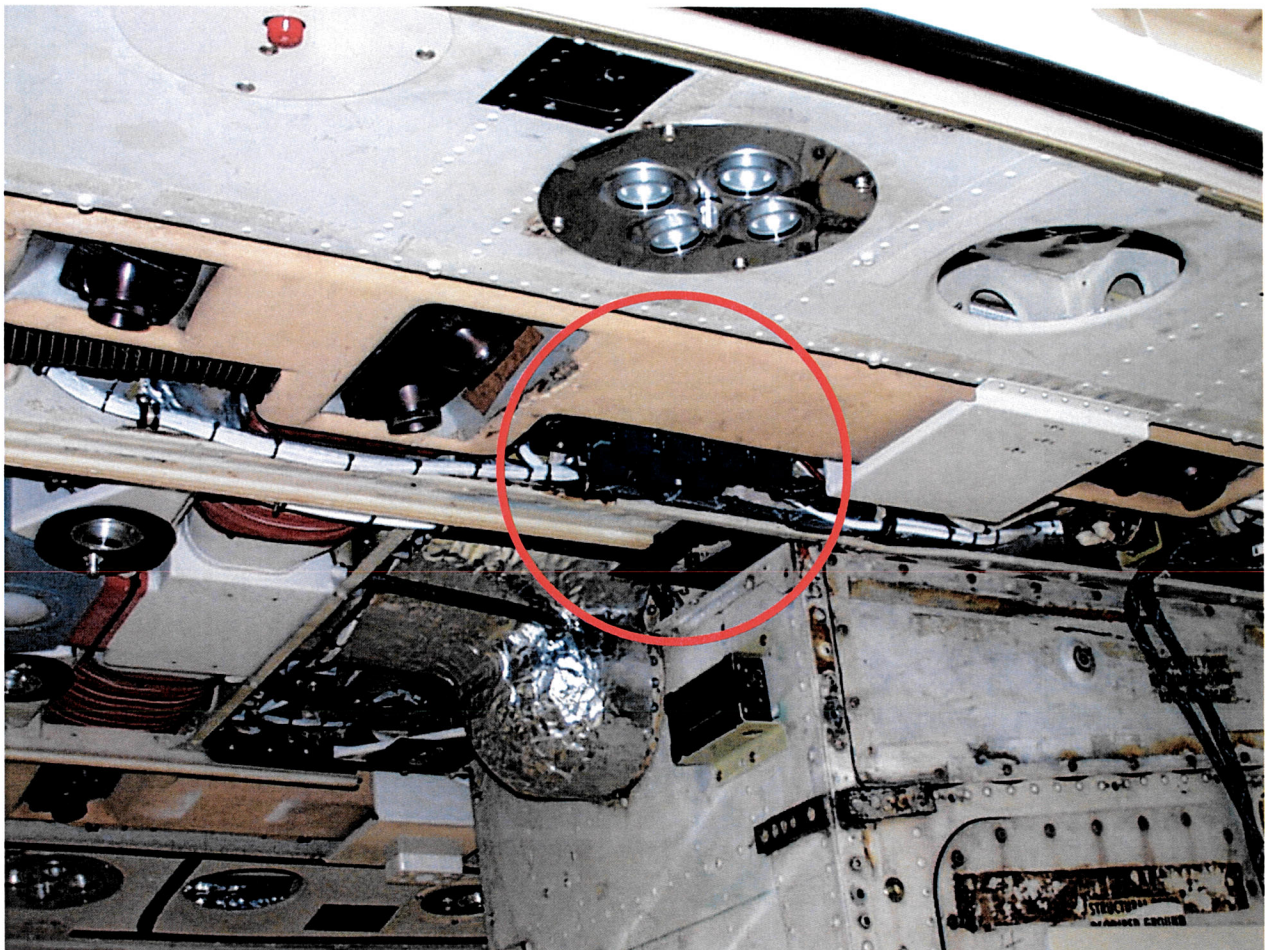


Figure 1: Relay Panel location in cabin overhead

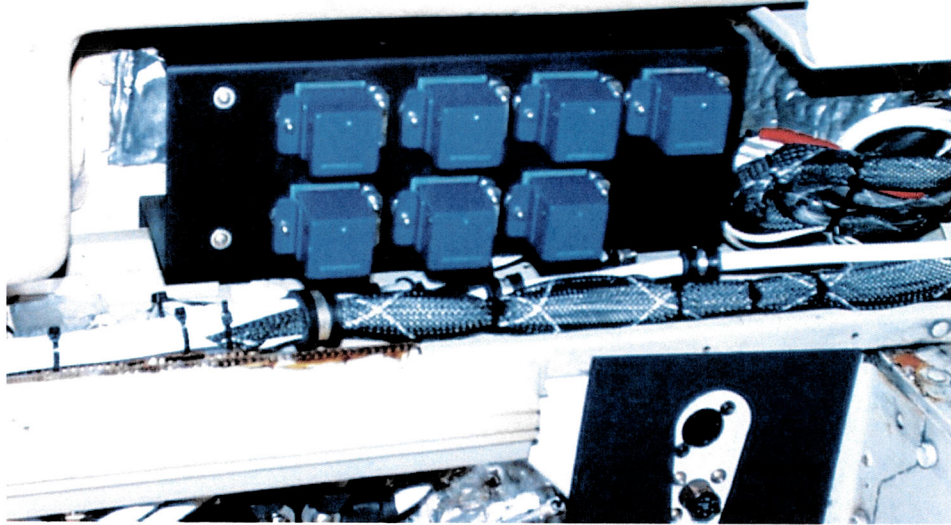


Figure 2: Close-up of Relay Panel

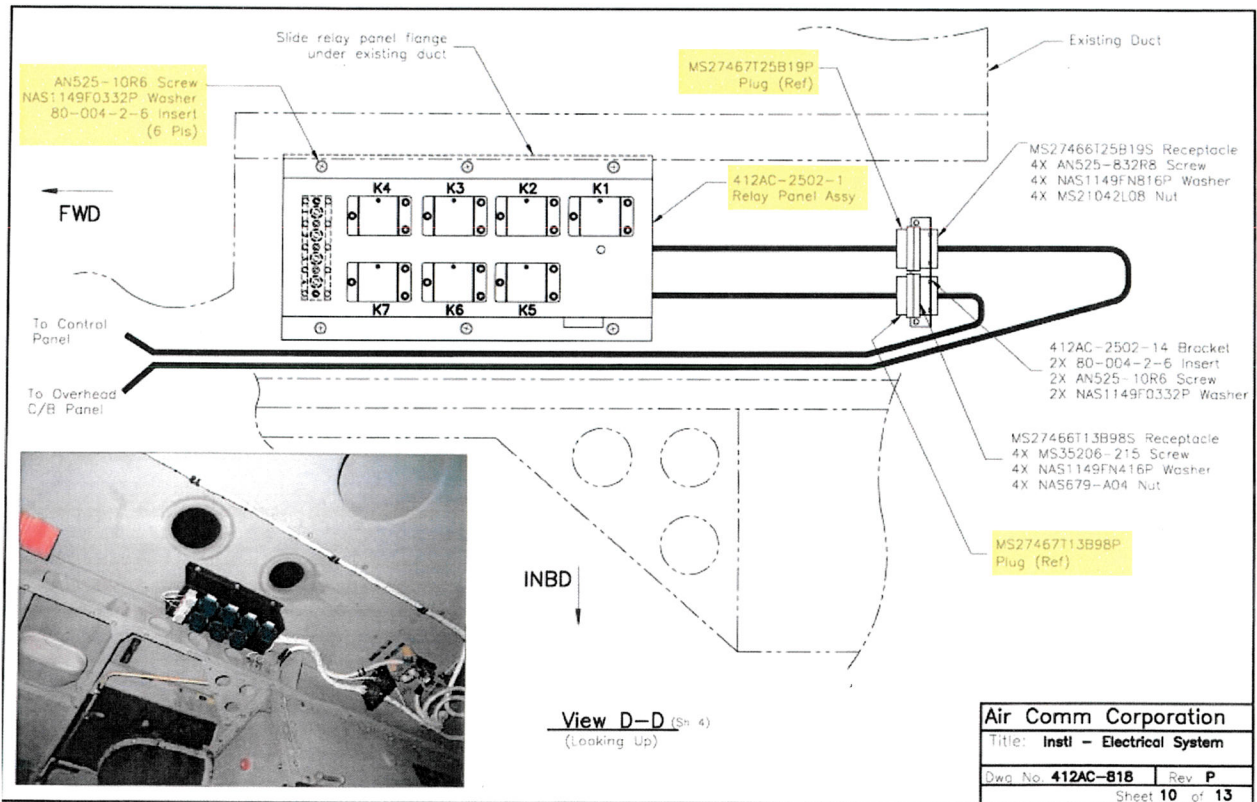


Figure 3: Drawing showing components to be removed

Inspection:

1. Turn the relay panel over to observe the wiring and components.
2. It is necessary to carefully cut away any cable ties and/or lacing tape that may be holding the wire bundle together, in order to gain access to all splices.
3. It will be necessary to remove the cover of the terminal block in order to enable the ring terminals to be fully visible.
4. Carefully inspect each butt splice and ring terminal attached to the terminal block for signs of heat-related discoloration, melted plastic or charred material.
5. Carefully inspect the wiring to ensure all insulation is intact and no brown or black heat-related discoloration is present. Check wires for signs of nicks and cuts due to chafing against other components or sheet metal.
6. If any overheated components are found, the air conditioning system must be placed in a non-operational state and remain deactivated until the panel is replaced. Flight is permitted as long as the air conditioner remains deactivated. Contact Air Comm for instructions on how to obtain a replacement unit.
7. It is an FAA requirement that the results of this inspection be reported to Air Comm to demonstrate full compliance.

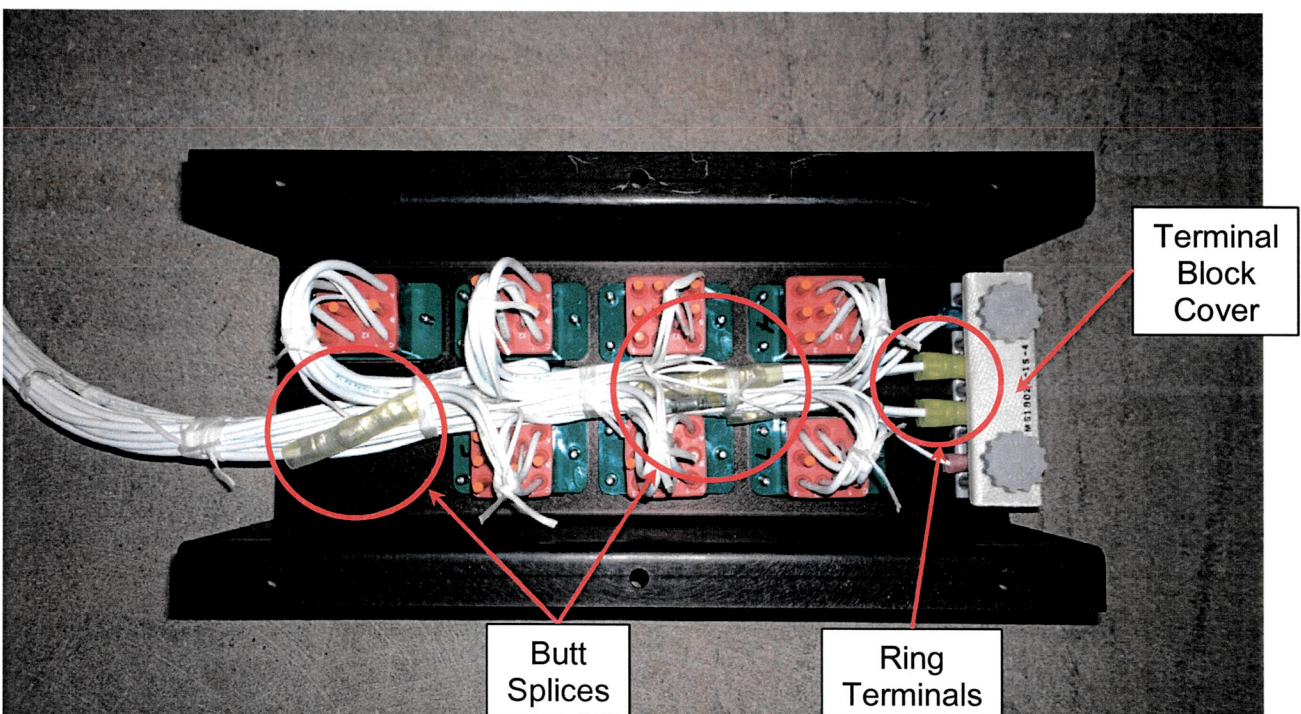


Figure 3: Underside of relay panel showing components and wiring

Installation:

1. Replace any cable ties or lacing tape removed. Ensure the wire bundles are well-secured and immobilized from chafing.
2. Replace the cap and threaded fasteners onto the terminal block.
3. Place the relay panel into position in the overhead. Align and re-install the six (6) AN525-10R6 screws removed in Removal step 3.
4. Re-connect the MS27467T25B19P and MS27467T13B98P connectors onto the bracketed receptacles aft of the relay panel.
5. Restore bus power and test air conditioning system for proper operation.