Service Kit

Title: Bell 429 Air Conditioner Relay Box update

Date: 27 August 2015 (Rev A)

Applicability: Bell Helicopter Model 429 Equipped with the Air Comm Corporation 429EC-200 and -202 Air Conditioning Systems

Reference: FAA / STC # SR00693DE, Bell Helicopter 429 Air Conditioning System

Compliance: Recommended within 100 flight hours

Discussion:
In rare cases, an anomaly may occur when the non-essential (NE) bus de-energized (possibly due to an OEI event) and the aircraft is in forward flight with the air conditioner operating. Under certain conditions, the ram air flowing through the condenser may rotate the blower motor causing a small voltage to be generated and applied to the bus which prevents some NE bus loads, including the indicator light, from de-energizing. The potential for occurrence is greater at higher forward airspeeds.

Note that the applicability does NOT include Air Comm 429EC-204 and 429EC-206 air conditioning systems which superseded the earlier -200 and -202 systems in July 2015.

This Service Kit provides the instructions and list of components for modifying the air conditioning system relay panel box to alleviate this issue. The modification adds a blocking diode into the condenser blower circuit and can be obtained for no charge from the service department at Air Comm corporation. Please contact us at: Phone 303-440-4075, Fax 303-440-6355, or E-mail service@aircommcorp.com

Approval:
The information provided within this document is based on FAA approved data.

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

Bill of Materials:

Item	Part Number	Description	Quantity
1	S-8522EC-1	Diode Assembly	1
2	MS25036-156	Terminal Eye, Crimp	1
3	MS35206-244	Screw, 8-32 x .44L	2
4	MS21042L08	Nut, 8-32 UNC	2
5	NAS620-8L	Washer, no.8 flat	4

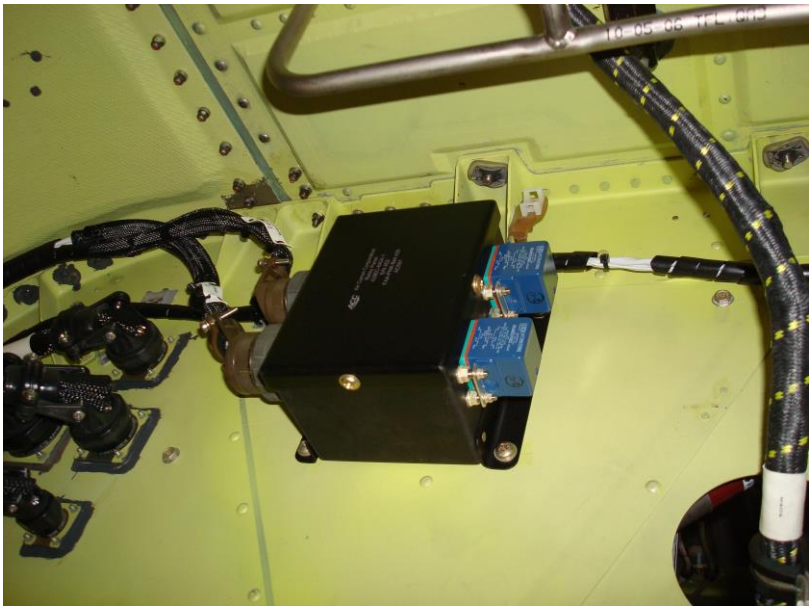
Revision	Issue Date	Inserted By	Approved by	Description of Changes
NC	8/12/15	JMB	KDP	Initial Release
A	8/27/15	JMB	KDP	Item 3 was MS35206-243, Item 5 was NAS1149FN816P, added Loctite 222 as acceptable alternate

1.0 Work Instructions

CAUTION

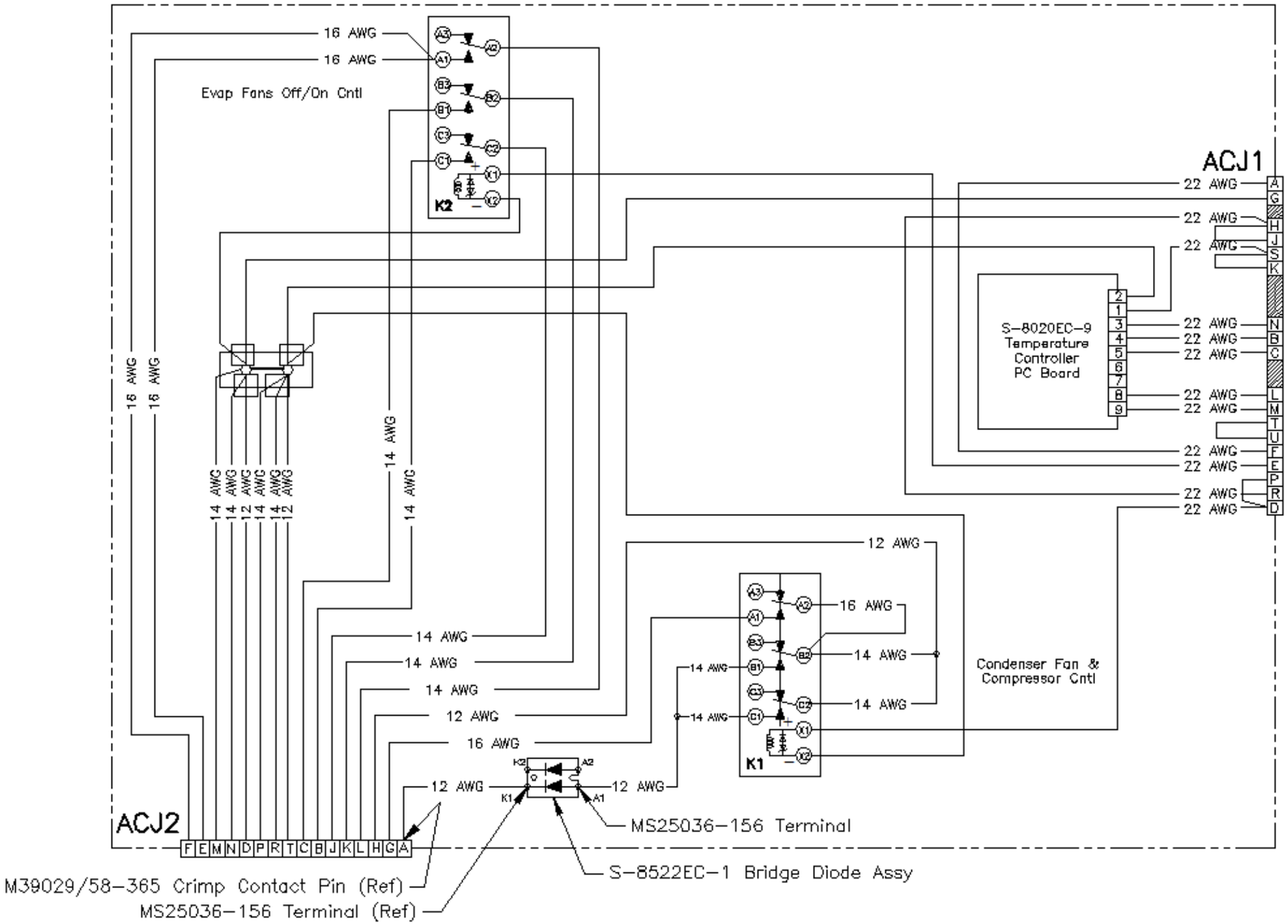
Disconnect the aircraft battery and external power prior to starting work.

1.1 Access the AC Relay Panel (shown below) labeled 429EC-8424-2 and remove the cover (3 phillips head screws). Note that the modification can be done with the Relay Panel in place, although removing the box will simplify the updates.



1.2 Modify the relay panel box per the schematic and the instructions in steps 1 thru 4 in the figures below.

1.3 Re-install the relay box. Mate the harness connectors to the relay box and verify the evaporator blowers, the compressor clutch and condenser blower functions.



429EC-8424-2 Relay Panel Schematic (Modified with Bridge Diode)

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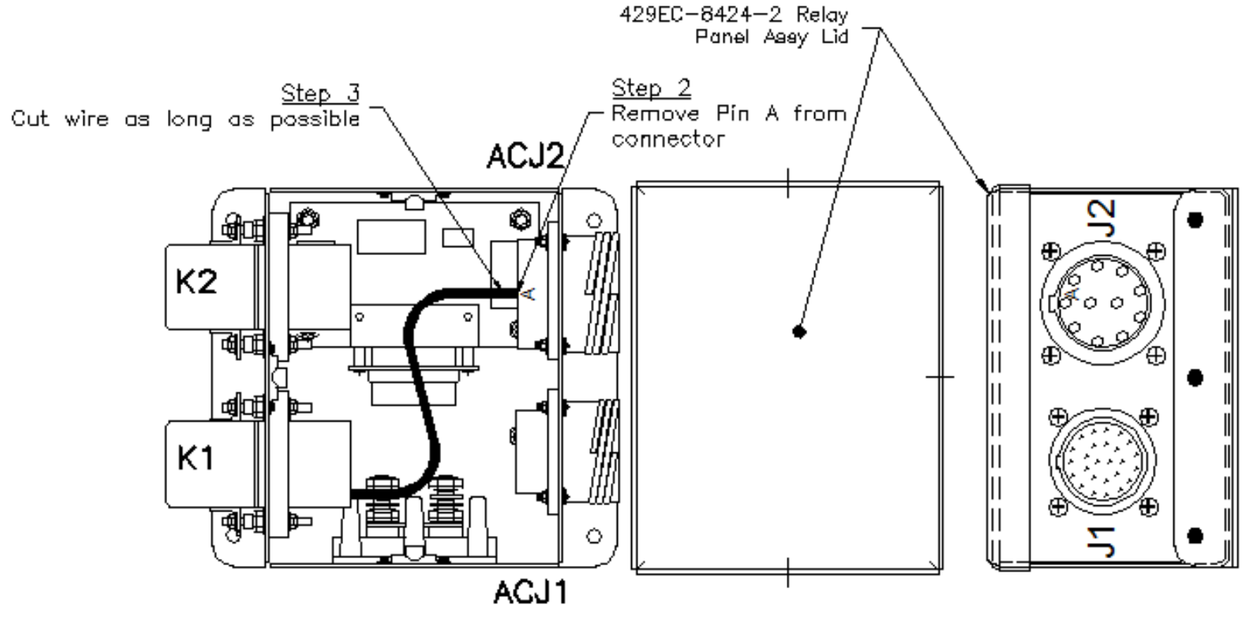
BEFORE



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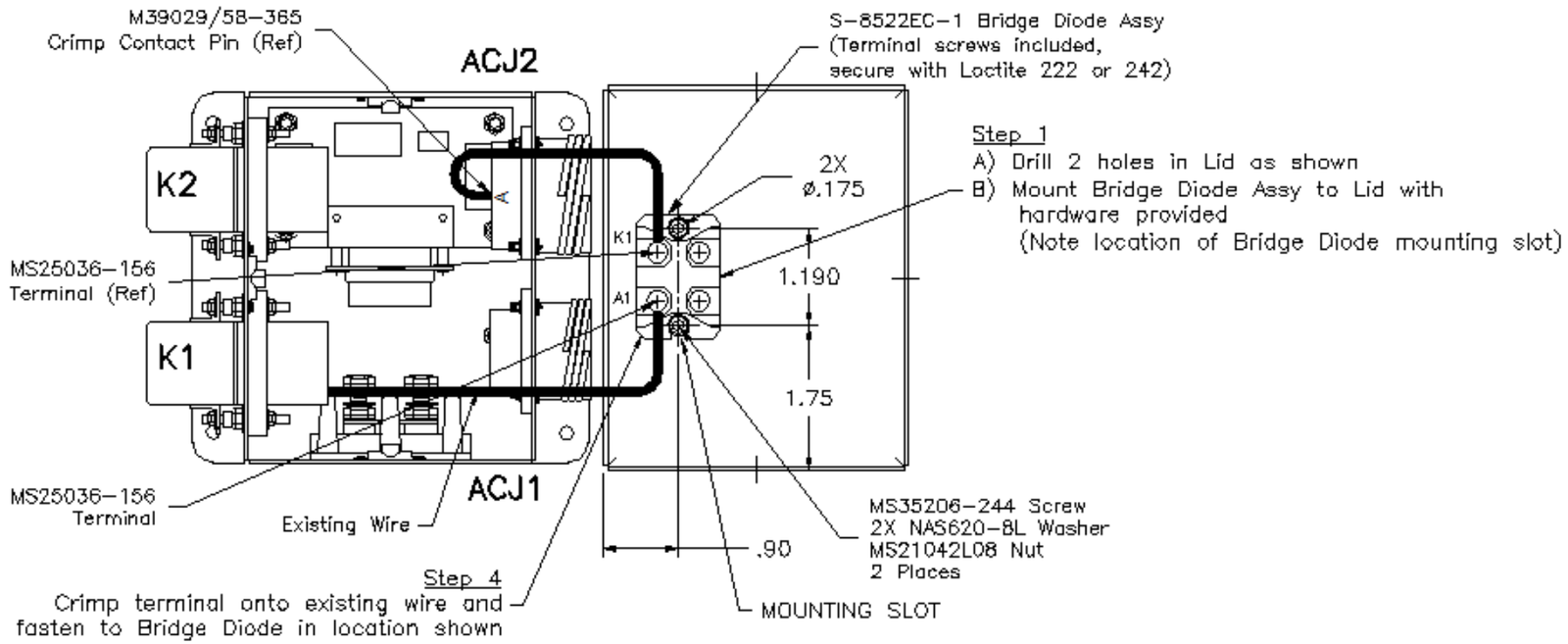

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