

**MT-9042A DUAL COUPLER MOUNT ASSEMBLY
ROCKWELL COLLINS PART NUMBER (RCPN) 622-8124-001**

SERVICE BULLETIN MT-9042A-23-1

**COMMUNICATIONS - MT-9042A - TUNE FAULT MITIGATION REGARDING
HIGH ANTENNA LOOP RESISTANCE**

TRANSMITTAL INFORMATION SUMMARY

Summary

This is the initial release of Service Bulletin MT-9042A-23-1 for the MT-9042A Dual Coupler Mount Assembly.

Service Bulletin Revision History

REVISION	DATE OF RELEASE
Initial Release	March 11, 2016

NOTE: This service bulletin may be installed only by a Rockwell Collins representative or an authorized Rockwell Collins Service Center.

Notice

INFORMATION SUBJECT TO EXPORT LAWS

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1. Planning Information

A. Effectivity

The modification procedure described in this service bulletin is applicable to MT-9042A Dual Coupler Mount Assembly listed in the following table.

UNIT/MODEL	ROCKWELL COLLINS PART NUMBER	APPLICABLE TO SERIAL NUMBERS	PRODUCTION INSTALLED SERIAL NUMBERS
MT-9042A	622-8124-001	ALL	4739, 4779, 4840, 4873 through 4876, 4879 through 4889, 4897-5115, 45C1TX, 45M175, 47891T, 47891V, 47892C, 47892D, 47892F, 47892G, 47N3C3 and all future builds

NOTE: The modification contained in this service bulletin is strictly applicable to the status(es) listed and not applicable to additional status(es) within the product family or MT-9042A part number.

NOTE: Any serial numbers not marked prior to Rev J will be impacted.

B. Concurrent Requirements

None required.

C. Reason

(1) Description of Existing Condition

Existing units may exhibit high antenna loop resistance resulting in High Frequency (HF) tune faults.

(2) Extent Condition Encountered

Any MT-9042A, RCPN 622-8124-001 may be affected.

(3) Expected Benefits of Modification

(a) Modified units will have reduced antenna loop resistance.

(b) Implementation of this Service Bulletin is total and permanent.

(4) Safety Intent of Corrective Action

Not applicable.

(5) Regulatory Action

Not applicable.

D. Description

Addition of torque on fasteners and removal of lock washers within the antenna loop.

E. Compliance

X	Optional - Service Bulletin for convenience or option.
	Recommended - Service Bulletin to introduce improvements.
	Highly Recommended - Service Bulletin recommended to be accomplished to prevent significant operational disruptions.
	Mandatory - Service Bulletin must be accomplished.

F. Approval

MT-9042A, RCPN 622-8124-001, conforms to Federal Aviation Administration (FAA) Technical Standard Order (TSO) C31d and C32d.

G. Manpower

The total estimated time to accomplish the work in this Service Bulletin is 1.5 man hours.

TASK	ESTIMATED HOURS
Preparation	0.5
Installation	1.0
Testing	0.0
Total	1.5

H. Weight and Balance

None.

I. Electrical Load Data

Not changed.

J. Software Accomplishment Summary

Not applicable.

K. References

- (1) The following publications were used as source data to develop this Service Bulletin and are available if required.
 - (a) HF-9000 High-Frequency Communications System Operation and Organizational Maintenance Instruction Book (IB), RCPN 523-0806627
 - (b) HF-9000 Antenna Coupler Intermediate Maintenance Instruction Book (IB), RCPN 523-0777201
 - (c) HF-9000 Antenna Coupler Depot Maintenance Instruction Book (IB), RCPN 523-0775446
 - (d) Avionics Standard Shop Practices Instruction Book, RCPN 523-0768039 (20-00-01)
 - (e) All Avionics Service Information Letter 3-93, titled "Non-Procurable Equipment Cleaning Solutions", RCPN 523-0804806
- (2) The following engineering documents were used as source data to develop this Service Bulletin and are not available to the customer. All necessary information derived from them is contained in this Service Bulletin.
 - (a) Engineering drawing: MT-9042A Dual Coupler Mount Assembly, RCPN 622-8124-001
 - (b) Rockwell Collins Engineering Change Order (ECO): ECO-0529351

L. Other Publications Affected

None.

M. Interchangeability and Intermixability of Parts

Fully interchangeable.

2. Material Information

A. Cost and Availability

No kit required.

NOTE: The current charges to install this service bulletin is \$1,373.00 United States Dollar (USD) and may be subject to future price adjustments. Pricing is only valid through December 31, 2016.

B. Industry Support Information

- (1) The charge to install this service bulletin will be labor and material as quoted by the installing service agency.
- (2) This service bulletin may be installed only by a Rockwell Collins representative or an authorized Rockwell Collins Service Center.
- (3) For units in warranty, Rockwell Collins will install this service bulletin at no charge for the materials and labor. For units out of warranty, cost of installation is the responsibility of the equipment owner.

C. Material Necessary for Each component

- (1) Materials to be purchased.

None required.

NOTE: Material pricing is included in total service bulletin price. Refer to Section 2.A.

- (2) Materials supplied by operator.

None required.

D. Material Necessary for Each Spare

None required.

E. Reidentified Parts

None required.

F. Special Equipment or Tooling Required

Use the following tools to modify one MT-9042A Dual Coupler Mount Assembly.

PART NUMBER	QUANTITY	ESTABLISHED PRICE	DESCRIPTION	ESTABLISHED DELIVERY SCHEDULE	MANUFACTURER'S NAME IF NOT ROCKWELL COLLINS)
Commercial Grade	1	N/A	Micro Ohmmeter or equivalent	N/A	Keithley 580

3. Accomplishment Instructions

A. Modification Procedure

WARNING: BEFORE ATTEMPTING TO REMOVE ANY ASSEMBLY/PART FROM THE EQUIPMENT, ENSURE ALL POWER AND EQUIPMENT ARE DISCONNECTED FROM THE RECEIVER-TRANSMITTER AS WELL AS ANTENNA COUPLER.

CAUTION: THIS EQUIPMENT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) COMPONENTS THAT CAN BE DAMAGED BY STATIC VOLTAGES PRESENT IN MOST REPAIR FACILITIES.

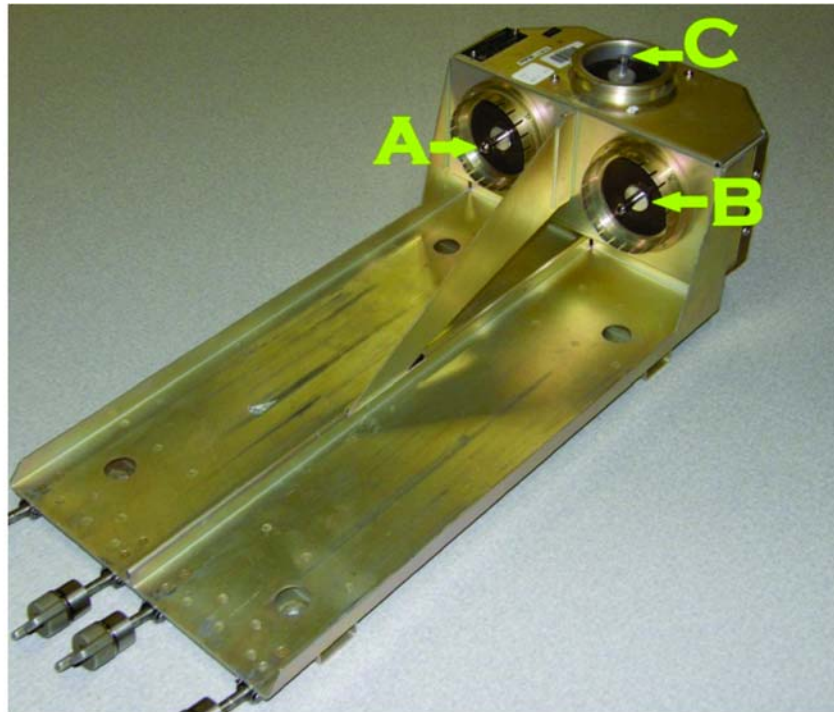
NOTE: For detailed repair/cleaning instructions, refer to the referenced Avionics Standard Shop Practices Instruction Book and the referenced All Avionics Service Information Letter 3-93, titled "Non-Procurable Equipment Cleaning Solutions".

NOTE: To install this service bulletin, the dual coupler mount must be returned to Rockwell Collins, an authorized Collins Service Center, or performed at customer facility by a Rockwell Collins field engineer. Prior to installation of the modification, the unit is tested. Any additional work required for the unit to meet Rockwell Collins test specifications, that is not covered by warranty or as provided for in prior service bulletins or service information letters, is billed on a time and material basis. A purchase order authorizing the modification must accompany the unit when returning for modification.

NOTE: If returning the unit for modification, it is recommended that units be returned to the nearest Collins Service Center, or units may be returned to the following service center:

Collins Aviation Service
Cedar Rapids Service Center
Rockwell Collins
855 35th Street NE
Cedar Rapids, IA 52498
USA
FAX: 1.319.295.5379

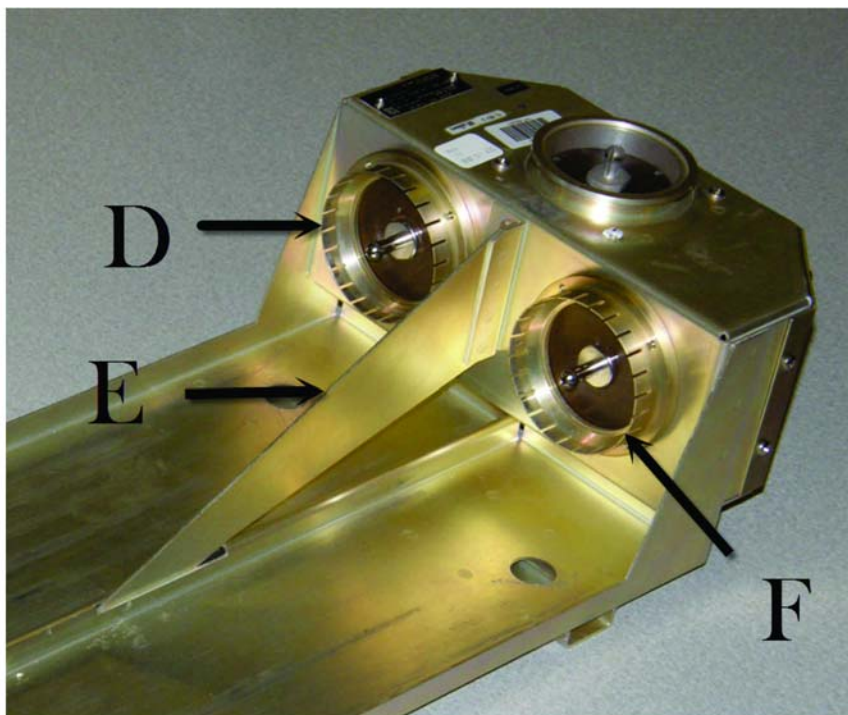
- (1) Pretest the dual coupler mount prior to modification. Testing where applicable can take place on the airborne platform.
 - (a) Use a milliohmeter to measure the resistance from center pin A to antenna center pin C and from center pin B to antenna center pin C. Refer to Figure 1, points A, B and C. This measurement should be less than 1 milliohm. If measurement is greater than 1 milliohm then installation of this service bulletin is recommended.



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Measure Resistance
Figure 1

- (b) Use a milliohmeter to measure the resistance from ground ring D to chassis E and from ground ring F to chassis E. Refer to Figure 2, points D, E and F. This measurement should be less than 1 milliohm. If measurement is greater than 1 milliohm then installation of this service bulletin is recommended.



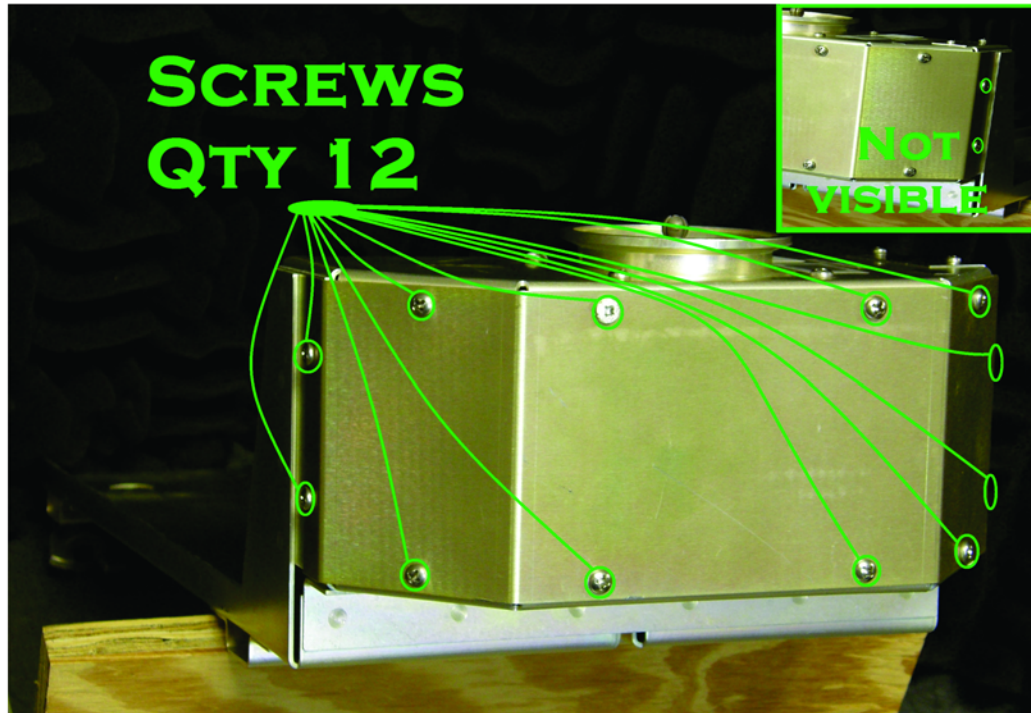
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Measure Resistance From Ground
Figure 2

(2) PROCEDURE 1, how to install service bulletin.

NOTE: Before performing modification read and understand all steps.

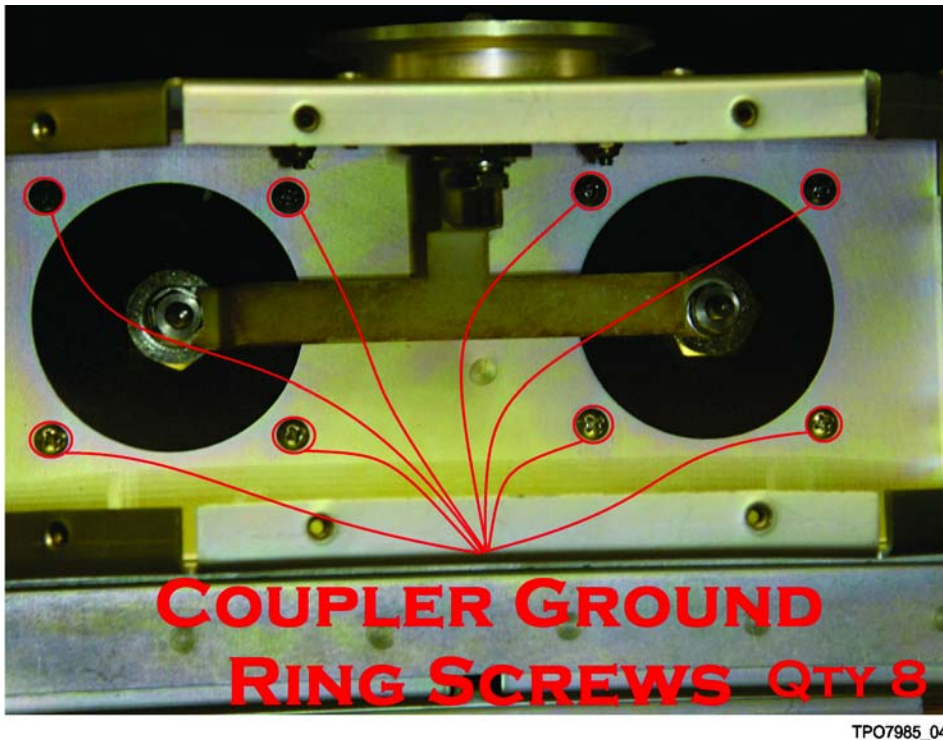
(a) Remove 12 cover screws. Refer to Figure 3.



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Cover Screws
Figure 3

- (b) Locate and remove contact rings by removing four (4) screws for each ring. Refer to Figure 4, remove and discard lock washers.

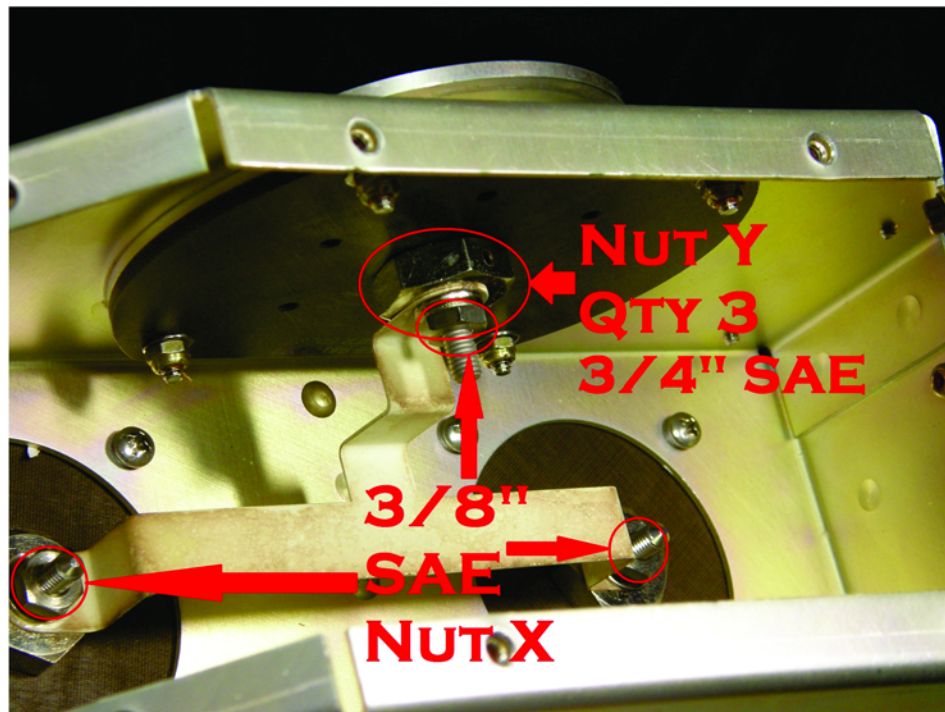


Coupler Ground Ring Screws
Figure 4

- (c) Reinstall ground rings ensuring ground rings bottom out on mount chassis and torque four (4) screws each ring to 12 +/- 1.1 inch pounds. Refer to Figure 4.
- (d) Repeat Step 3.A.(2)(b) and Step 3.A.(2)(c) for both ground rings D and F. Refer to Figure 2, D and F.

NOTE: Before performing Step 3.A.(2)(e), read entire step.

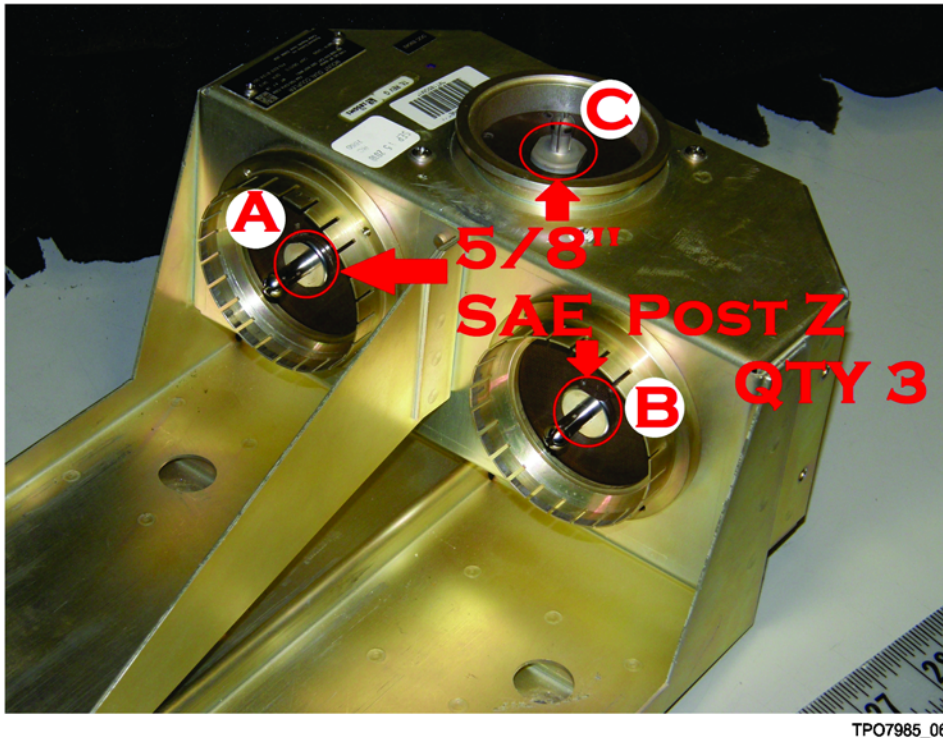
- (e) Ensure electrical contact points A, B and C are restrained from turning using 5/8 SAE wrench or similar tool when torquing. Refer to Figure 5 and Figure 6. Protect brown insulator from damage, such as scrapes and gouges during torquing of points A, B and C. Refer to Figure 5 and Figure 6. Torque three (3), 3/8 SAE nuts for the electrical contact to 26 +/- 2 inch pounds. Refer to Figure 5 and Figure 6.



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Nut Locations
Figure 5

NOTE: To help protect brown insulator from tool damage, tape on the end of the tool works well.



Post Locations
Figure 6

- (f) Reinstall cover using 12 screws, hand tighten or torque to 12 +/- 1.1 inch pounds. Refer to Figure 3.

B. Testing Procedure

- (1) Using a milliohmeter measure the resistance from coupler mating center pin A to antenna center pin C and from coupler mating center pin B to antenna center pin C. Refer to Figure 1, points A, B and C. This measurement should now be less than 1 milliohm.
- (2) Using a milliohmeter measure the resistance from ground ring D to chassis E and from ground ring F to chassis E. Refer to Figure 2, points D, E and F. This measurement should now be less than 1 milliohm.

C. Identification Procedure

NOTE: The identification procedure must be accomplished in order for the service bulletin to be complete.

On top of the MT-9042A dual coupler mount near RCPN 622-8124-001, stamp RWK Rev J. Use permanent ink or other suitable marking material.