

## **Temporary Maintenance Instruction TMI139-575**

### **Coaxial RF connectors M39012 series – Assemble procedure.**

#### **All AW139 Helicopters**

*The technical content of this document is approved under the authority of DOA nr. EASA.21J.005.*

*The present TMI will be evaluated for its introduction in the standard set of Technical Publication.*

*If no further notice is received, the present document expires on: January 30<sup>th</sup> 2025.*

**2024-01-30**

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**Introduction**

This TMI provides the instructions and requirements to perform the Coaxial RF connectors M39012 series – Assemble procedure.

Following procedure contained in this TMI updates and supersedes the contents of the relative Data Modules inside IETP:

<b>ANNEX</b>	<b>DATA MODULE CODE</b>	<b>DATA MODULE TITLE</b>
Annex 1	CSPP-A-20-10-08-14B-710A-D	Coaxial RF connectors M39012 series – Assemble procedure

The content of this TMI will be endorsed within the applicable Maintenance Manual at the earliest opportunity.

# Coaxial RF connectors M39012 series – Assemble procedure

**Table of contents**

Refer to attached annex

**List of tables**

Refer to attached annex

**List of figures**

Refer to attached annex

***References***

Refer to attached annex

***Preliminary Requirements*****Required conditions**

Refer to attached annex

**Support equipment**

Refer to attached annex

**Supplies**

Refer to attached annex

**Spares**

Refer to attached annex

**Safety condition**

Refer to attached annex

***Procedure***

Refer to attached annex

***Requirement after job completion***

Refer to attached annex

# ANNEX 1

## Coaxial RF connectors M39012 series – Assemble procedure

### Table of contents

References  
Preliminary requirements  
Procedure  
Requirements after job completion

### List of tables

1 References  
2 Required conditions  
3 Support equipment  
4 Supplies  
5 Spares

### List of figures

1 Coaxial RF connectors M39012 series - Trim dimensions  
2 Coaxial RF connectors M39012 series - Cable jacket diameter increase  
3 Coaxial RF connectors M39012 series - Assemble procedure

### References

*Table 1 References*

Data module	Title
<a href="#">CSPP-A-20-00-01-02A-010A-D</a>	List of local supply tools for standard practices – General data
<a href="#">CSPP-A-20-00-02-01A-013A-D</a>	List of consumables for standard practices – Numeric index
<a href="#">CSPP-A-20-10-00-00A-251A-D</a>	Standard practices (Electrical system) – Clean with chemical agents
<a href="#">CSPP-A-20-10-01-02A-62AA-D</a>	Wires and cables (Wires and cables stripping) – Strip
<a href="#">CSPP-A-20-10-01-02A-62AB-D</a>	Wires and cables (Wires and cables stripping) – Strip
<a href="#">CSPP-A-20-10-03-00A-010A-D</a>	Heat shrink sleeves, moulded parts, insulation sleeve and sleeve markers – General data
<a href="#">CSPP-A-20-10-03-02A-720A-D</a>	Moulded parts – Install procedure

### Preliminary requirements

#### Required conditions

*Table 2 Required conditions*

Required condition	Data module
None	

#### Support equipment

*Table 3 Support equipment*

Nomenclature	Identification No.	Qty
Crimp tool (King)	KTH1000	1 EA

Die (King)	KTH1077	1 EA
Multimeter	Local supply	1 EA

## Supplies

*Table 4 Supplies*

Nomenclature	Identification No.	Qty
Lint-free cloth	C011	AR
Abrasive paper	C017	AR
Solvent	C005	AR
Isopropyl alcohol	C039	AR
Aliphatic naphtha	C059	AR
Acetone	C087	AR

## Spares

*Table 5 Spares*

Nomenclature	Identification No.	Qty
None		

## Safety conditions

### **WARNING**

The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- Isopropyl alcohol (C039)
- Solvent (C005)
- Aliphatic naphtha (C059)
- Acetone (C087).

### ***Procedure***

#### **Note 1**

This procedure is applicable to coaxial RF connectors P/N 122-47-9 and P/N 126-35-9.

#### **Note 2**

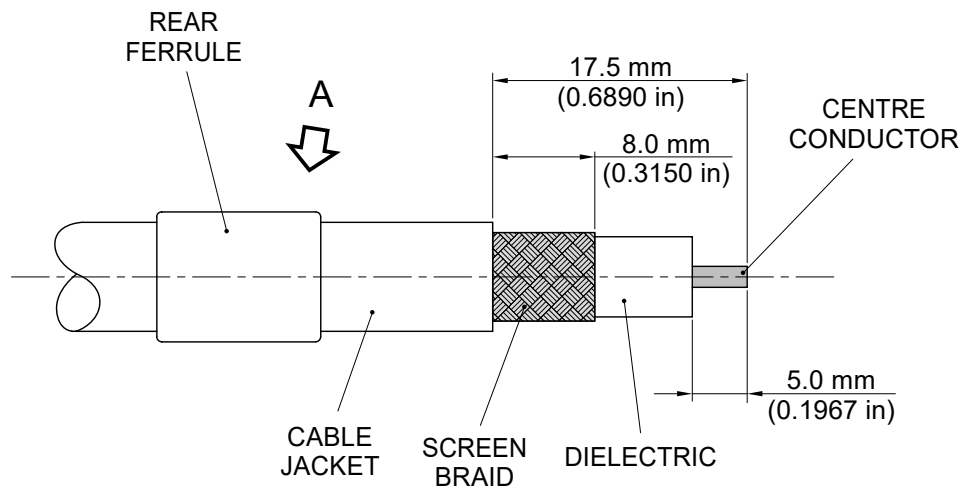
If you use a single step ferrule, orientate the ferrule on the cable as shown in Detail A of Fig 1.

- 1 Slide the crimp ferrule over the cable as shown in Fig 1.
- 2 If it is necessary to increase the diameter of the cable jacket to improve the mechanical strength of the connection, continue as follows:
  - 2.1 Carefully and equally sand the cable jacket to the dimensions shown in Fig 2 with 320 grit Abrasive paper (C017).
  - 2.2 Clean and degrease the sanded area with a Lint-free cloth (C011) moist with Solvent (C005), Isopropyl alcohol (C039), Aliphatic naphtha (C059) or Acetone (C087).
  - 2.3 Install a 40 mm length of M23053/5-107-0 heatshrink sleeve onto the sanded area. Refer to CSPP-A-20-10-03-00A-010A-D. Make sure that there is a minimum dimension of 18 mm between the end of the cable and the heatshrink sleeve.
- 3 Strip the cable jacket to the dimensions shown in Fig 1. Refer to CSPP-A-20-10-01-02A-62AA-D or CSPP-A-20-10-01-02A-62AB-D. Be careful to prevent damage to the screen braid.

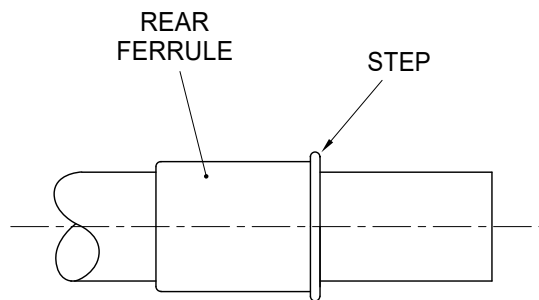
- 4 Trim the outer screen braid and flat inner braid to the dimensions shown in [Fig 1](#).
- 5 Strip the dielectric to the dimensions shown in [Fig 1](#). Refer to [CSPP-A-20-10-01-02A-62AA-D](#) or [CSPP-A-20-10-01-02A-62AB-D](#). Be careful to prevent damage to the centre conductor.
- 6 Put the centre conductor in the centre contact crimp bucket as shown in [Fig 3](#) (Phase 1).
- 7 Crimp the centre contact onto the conductor with the [Crimp tool \(King\) \(KTH1000\)](#) and the [Die \(King\) \(KTH1077\)](#), or with an equivalent crimping tool.
- 8 Examine the center contact for correct installation. Make sure that it is in its correct position and that the crimping procedure is done correctly.
- 9 Carefully rotate the dielectric to lightly flare the outer braid and flat the inner braid.
- 10 Slide the connector body crimp spigot over the conductor and the dielectric and under the outer screen braid and flat the inner braid as shown in [Fig 3](#) (Phase 2) until the centre contact snaps into place or the dielectric bottoms in the connector.
- 11 Make sure that the connector body is in its correct position on the dielectric and unable to move.
- 12 Slide the crimp ferrule onto the screen braid until it touches the connector body as shown in [Fig 3](#) (Phase 3), then trim the excess braid if necessary.
- 13 Crimp the ferrule onto the screen braid with the [Crimp tool \(King\) \(KTH1000\)](#) and the [Die \(King\) \(KTH1077\)](#), or with an equivalent crimping tool.
- 14 Do a function test of the assembled connector with the [Multimeter \(Local supply\)](#):
  - Make sure that there is continuity between the two centre contacts
  - Make sure that there is isolation between the centre contact and the connector body.
- 15 If the test is not satisfactory, remove the connector and repeat the operation from [Step 1](#) thru [Step 14](#) to assemble it again.
- 16 Install the connector sleeve. Refer to [CSPP-A-20-10-03-02A-720A-D](#).
- 17 Clean the assembled connector. Refer to the applicable steps of [CSPP-A-20-10-00-00A-251A-D](#).

### ***Requirements after job completion***

- 1 Remove all the tools and the other items from the work area. Make sure that the work area is clean.

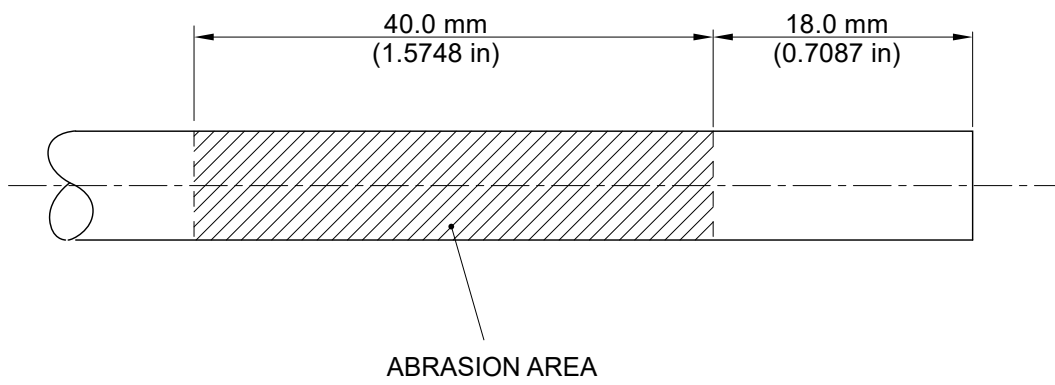


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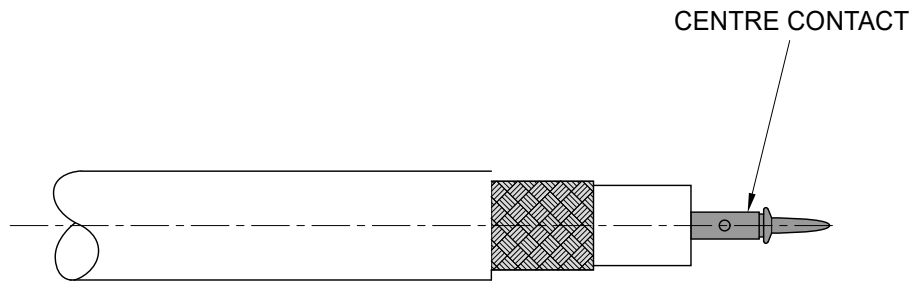
Figure 1 Coaxial RF connectors M39012 series - Trim dimensions



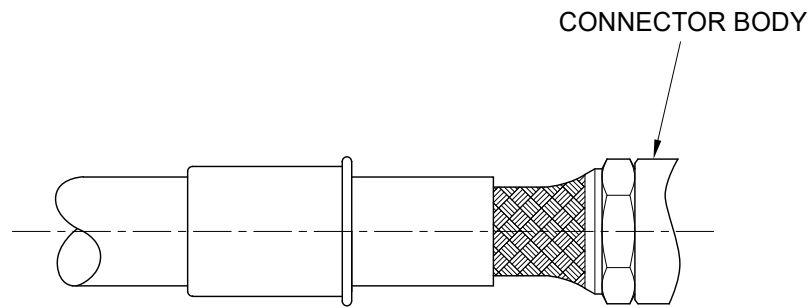
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*Figure 2 Coaxial RF connectors M39012 series - Cable jacket diameter increase*

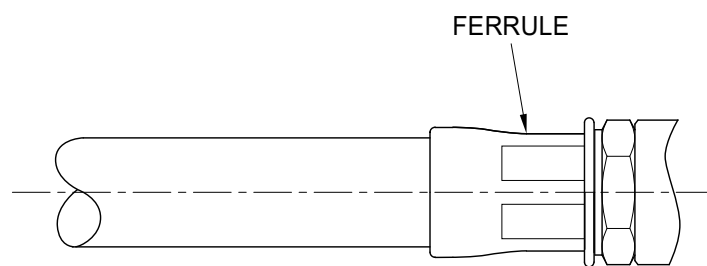




PHASE 1



PHASE 2



PHASE 3

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Figure 3 Coaxial RF connectors M39012 series - Assemble procedure