BOMBARDIER
Toronto (de Havilland)
PROPRIETARY INFORMATION

PPS 9.46

PRODUCTION PROCESS STANDARD

Assembly of Twinax Connectors

Issue 1
- This is a new standard.
- Direct PPS related questions to PPS.Group@aero.bombardier.com or (416) 375-4365.
- This PPS is effective as of the distribution date.

Prepared By:	(Michael Wright)	June 19, 2012
	Production Process Standards (PPS)	
Approved By:	(L.K. John)	June 19, 2012
	Materials Technology	
	(B. DeVreede)	June 20, 2012
	Quality	

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1 Scope

1.1 This Production Process Standard (PPS) specifies the procedure and requirements for assembly of twinax connectors.

1.1.1 This PPS complements the engineering drawings that specify its use as an authorized instruction and the procedure specified must be followed to ensure compliance with all applicable specifications. In general, if this PPS conflicts with the engineering drawing, follow the engineering drawing. The requirements specified in this PPS are necessary to fulfil the engineering design and reliability objectives.

1.1.2 Refer to PPS 13.26 for the subcontractor provisions applicable to this PPS.

1.1.3 Procedure or requirements specified in a Bombardier BAPS, MPS, LES or P. Spec. **do not** supersede the procedure or requirements specified in this PPS. Similarly, the procedure and requirements specified in this PPS are not applicable when use of a BAPS, MPS, LES or P. Spec. is specified.

2 Hazardous Materials

2.1 Before receipt at Bombardier Toronto (de Havilland), all materials must be approved and assigned Material Safety Data Sheet (MSDS) numbers by the Bombardier Toronto (de Havilland) Environment, Health and Safety Department. Refer to the manufacturer's MSDS for specific safety data on any of the materials specified in this PPS. If the MSDS is not available, contact the Bombardier Toronto (de Havilland) Environment, Health and Safety Department.

3 References

3.1 PPS 9.07 - Soldering of Electrical Terminals.

3.2 PPS 9.24 - Wire and Cable Stripping.

3.3 PPS 13.26 - General Subcontractor Provisions.

3.4 PPS 14.01 - Torquing and Tightening.

4 Materials and Equipment

4.1 Materials

4.1.1 Twinax cables as specified on the engineering drawing or wiring list.

4.1.2 Twinax connectors as specified on the engineering drawing or wiring list.

4.2 Equipment

4.2.1 Soldering equipment as specified in PPS 9.07.

4.2.2 Wire and cable stripping equipment as specified in PPS 9.24.

5 Procedure

5.1 General

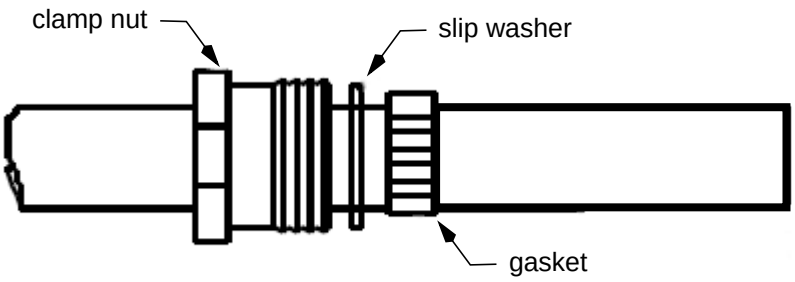
5.1.1 Twinaxial cable (or twinax cable) is a type of cable similar to coaxial cable but with two inner conductors instead of one.

5.1.2 Refer to section 5.2 for the procedure for assembly of Emteq BTW1M1F-3 and BTW1M1F-4 twinax connectors. For twinax connectors other than Emteq BTW1M1F-3 and BTW1M1F-4 twinax connectors, refer to Liaison Engineering for assembly instructions.

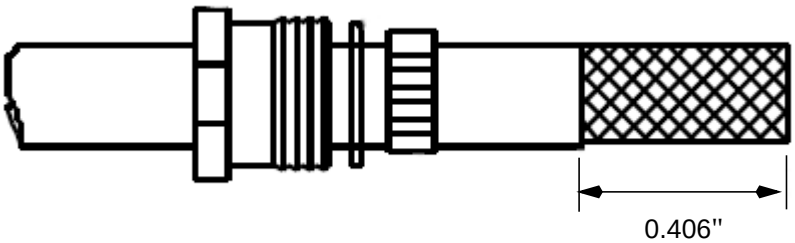
5.2 Assembly of Emteq BTW1M1F-3 and BTW1M1F-4 Twinax Connectors

5.2.1 Assemble Emteq BTW1M1F-3 and BTW1M1F-4 twinax connectors as follows:

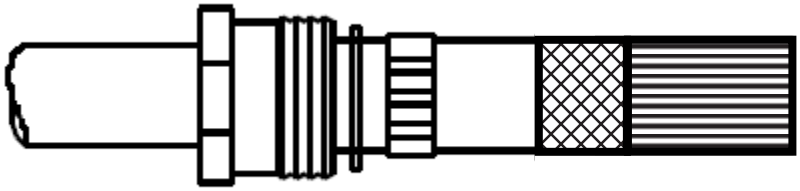
Step 1. Slide the twinax connector clamp nut, slip washer and gasket over the end of the twinaxial cable as shown below.



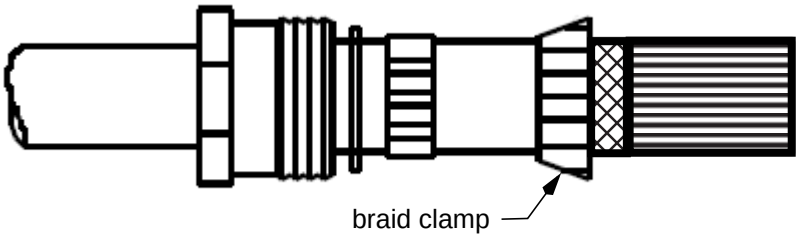
Step 2. Strip the outer jacket from the end of the twinaxial cable according to PPS 9.24 to expose 0.406" of the braided shield as shown below.



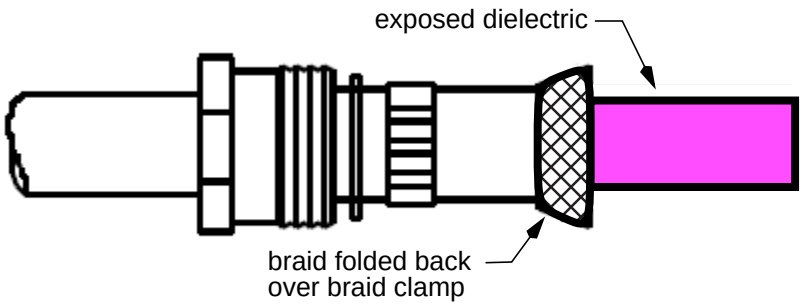
Step 3. Comb the braided shield and taper over the end of the twinaxial cable as shown below.



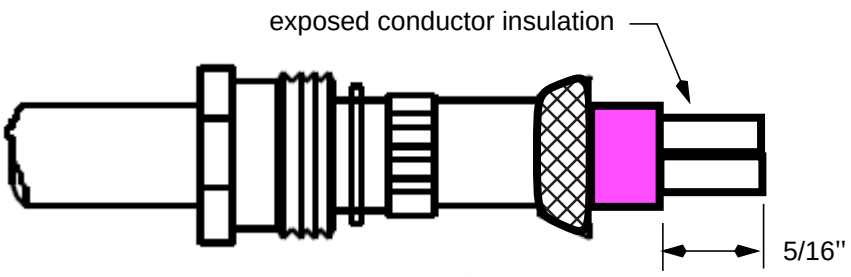
Step 4. Slide the twinax connector braid clamp over the combed braid and seat against the end of the outer jacket as shown below.



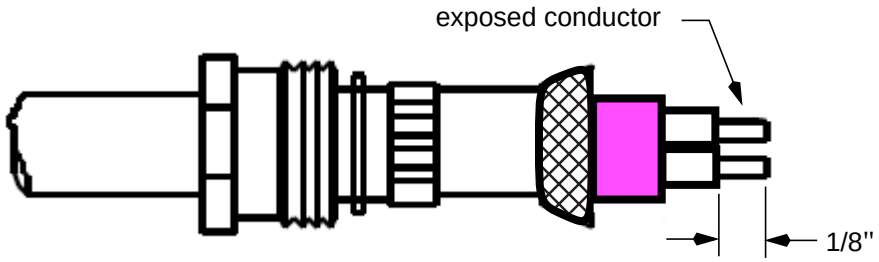
Step 5. Form the combed braid back over the braid clamp and trim flush with the end of the braid clamp/end of the outer jacket as shown below.



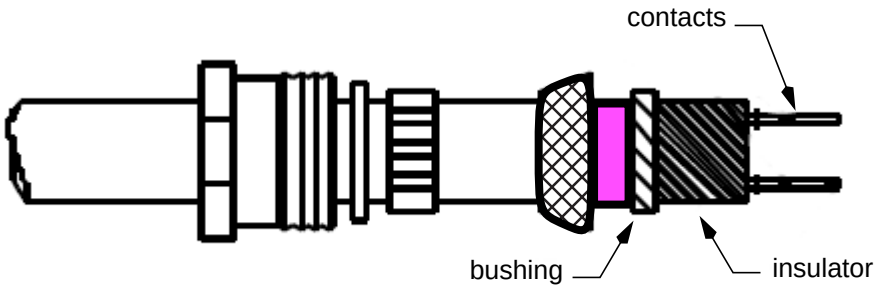
Step 6. Trim back the dielectric 5/16" from the end of the twinaxial cable end according to PPS 9.24 as shown below.



Step 7. For each of the conductors, trim back the conductor insulation 1/8" according to PPS 9.24 as shown below.

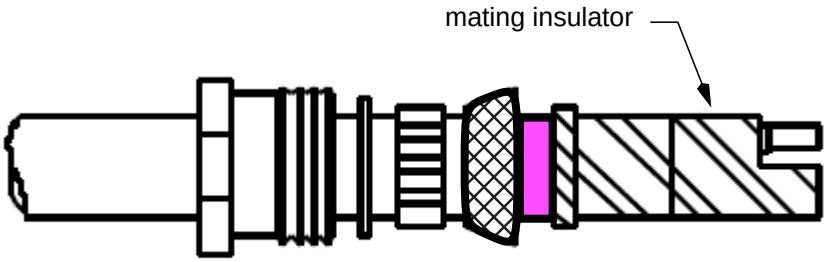


Step 8. Assemble the twinax connector bushing, insulator and contacts over the conductors as shown below.



Step 9. Solder contacts through cross holes according to PPS 9.07.

Step 10. Fit the mating insulator over the contacts as shown below.



Step 11. Slide the gasket, slip washer and clamp nut against the braid clamp and the connector body over the mated insulators in order to thread the clamp nut into the connector body. Tighten the clamp nut to 30 in. lbs. according to PPS 14.01, such that the vee gasket is split by braid clamp.

6 Requirements

6.1 Check solder connections according to PPS 9.07 before assembly of the connector body.

6.2 Check all completed cable assemblies for continuity and short circuits.

7 Safety Precautions

7.1 Observe general shop safety precautions when performing the procedure specified herein.

8 Personnel Requirements

8.1 Personnel responsible for assembly of twinax connectors must have a good working knowledge of the applicable procedure and requirements as specified herein and must have exhibited their competency to their supervisor.