BOMBARDIER
Toronto (de Havilland)
PROPRIETARY INFORMATION

PPS 9.45

PRODUCTION PROCESS STANDARD

Removal of Installed Tinel-Lock Rings

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

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1 Scope

1.1 This Production Process Standard (PPS) specifies the procedure and requirements for removal of installed Tinel-Lock rings if necessary for re-work or repair of an overbraid shielded harness.

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 13.26 - General Subcontractor Provisions.

4 Materials and Equipment

4.1 Materials

4.1.1 No materials specified.

4.2 Equipment

4.2.1 Tinel-Lock ring removal cutting tool (e.g., Knipex AD-1490).

4.2.2 Freeze spray (e.g., Tech Spray 1672-10S).

4.2.3 Cold resistant type gloves.

4.2.4 Flat bladed screwdriver.

5 Procedure

5.1 Take care to avoid damaging the overbraid when removing the installed Tinel-Lock ring as specified herein. If damage to the overbraid occurs, refer to Bombardier Toronto (de Havilland) MRB or Bombardier Toronto (de Havilland) delegated MRB for disposition.

5.2 If necessary for rework or repair of an overbraid shielded harness, the Tinel-Lock ring may be removed as follows:

Step 1. If the Tinel-Lock ring is positioned close to the spacer or boot groove shoulder so that the cutting tool will not fit, move the ring slightly. To move the ring, saturate the ring with freeze spray (this will cause the ring to expand slightly) and then use a flat bladed screwdriver to carefully pry the ring away from the boot groove shoulder.

Step 2. Position the cutting blades of the removal tool (ref. paragraph 4.2.1) squarely over the Tinel-Lock ring.

Step 3. WIth the cutting blades of the tool squarely over the Tinel-Lock ring, firmly squeeze the cutter handles together to cut through the ring. Take care to avoid cutting into the overbraid and/or connector/adapter termination land. Due to the hardness of the ring material, extended use of the tool will cause it to dull and may eventually lead to the blades breaking; sharpen and/or replace tools as needed.

Step 4. Pull the overbraid and cut ring away from the connector/adapter termination land and either spread the ring open or make a second cut on the opposite side of the ring to completely remove the ring from the overbraid harness.

6 Requirements

6.1 If damage to the overbraid occurs during Tinel-Lock ring removal, refer to Bombardier Toronto (de Havilland) MRB or Bombardier Toronto (de Havilland) delegated MRB for disposition.

7 Safety Precautions

7.1 Wear cold resistant type gloves when using freeze spray and when prying the ring away from the boot groove shoulder to prevent injury.

8 Personnel Requirements

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