Customer Services

Advisory Wire

REFERENCE NO:	AW300-30-0354, Basic Issue	INFORMATION TYPE:	Maintenance
ATA:	30-12 36-21	EFFECTIVITY:	Challenger 300 (20003 – 20500) Challenger 350 (20501 – 20999)

SUBJECT: **Potential Piccolo Tube Damage When Replacing a Bleed Loop Element**

1. REFERENCES:

   Ref. 1.1: Customer Forum/Newsletter: January 2014/Volume 11/Issue 2
   Ref. 1.2: BD-100 Aircraft Maintenance Manual, Tasks 36-21-17-000-801/-802/-803 and, Tasks 36-21-17-400-801/-802/-803

2. INTRODUCTION:

   The content of the Advisory Wire (AW) is in response to an increasing number of piccolo tubes damaged during maintenance. This AW is a partial republication of a previous newsletter article (Ref. 1.1) with additional maintenance tips and data reporting information.

3. DESCRIPTION:

   Many reports of piccolo tube dents on the Challenger 300/350 aircraft have been submitted to the Bombardier for an engineering disposition, to determine whether the piccolo tube, damaged during maintenance, is still considered serviceable or whether it must be replaced.

   Piccolo tubes have thin walls making them susceptible to denting. For this reason, there have been many engineering dispositions where the damaged piccolo tube had to be replaced.

As shown in the photo to the right, a dent can be noted on the surface of the piccolo tube just above where the electrical connector of the Leak-Detection Element (LDE) is located. The dent on the piccolo tube is created when the wrench tool unintentionally comes into contact with the piccolo tube when tightening or loosening an LDE connector.

Replacing an LDE is a relatively simple task, however, you are working in a tight area so when loosening/tightening the LDE connector it is easy for the wrench tool to come into contact with the piccolo tube. This is especially true for the LDE connectors located towards the outboard section of the wing where maneuverability with a wrench tool is limited.

A revision to the removal/installation tasks (Ref. 1.2) of the LDEs will be issued to convey some of the precautionary measures listed in this article.

The following maintenance tips have been developed to mitigate the risk of damaging a piccolo tube when replacing an LDE:

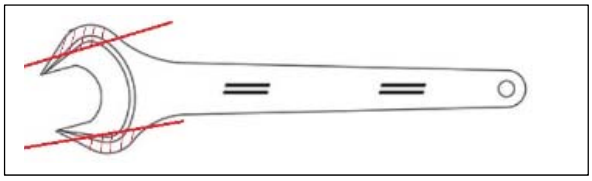
- When loosening/tightening any LDE connector, ensure you have a firm grip on the wrench tool to prevent accidental slippage.
- Before loosening/tightening the LDE connector, place a non-metallic piece of material between the piccolo tube and the wrench tool.

To the left is a picture of piece of Teflon™ material which can be placed over the piccolo tube surface before loosening/tightening the LDE connector.

Should the wrench tool come into contact with the Teflon material, damage to the piccolo tube could be avoided or minimized.

Similarly, a piece of cloth folded a couple of times over the piccolo tube can be just as helpful.

- To allow more clearance between the wrench tool and the piccolo duct, you can modify an inexpensive open-end wrench by removing some material from the sides as shown.



4. Reporting Damage:

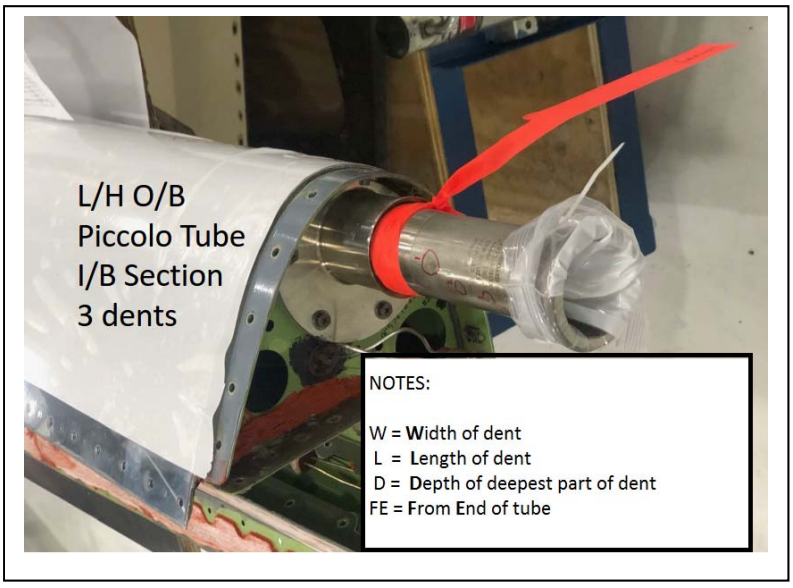
   If damage is found on a piccolo tube, you can submit a Service Request for Product Support Action (SRPSA) to Bombardier to have service engineering perform a damage tolerance analysis. Once the damage has been evaluated, an engineering disposition will be provided to determine if the piccolo tube is considered serviceable or whether it must be replaced.

   For service engineering to perform the analysis, detailed information relating to the damage found on the piccolo tube has to be provided. The analysis is chargeable via the SRPSA system so if time is spent communicating back-and forth with the Operator to obtain the missing information, more time will be added to the total cost of the SRPSA.

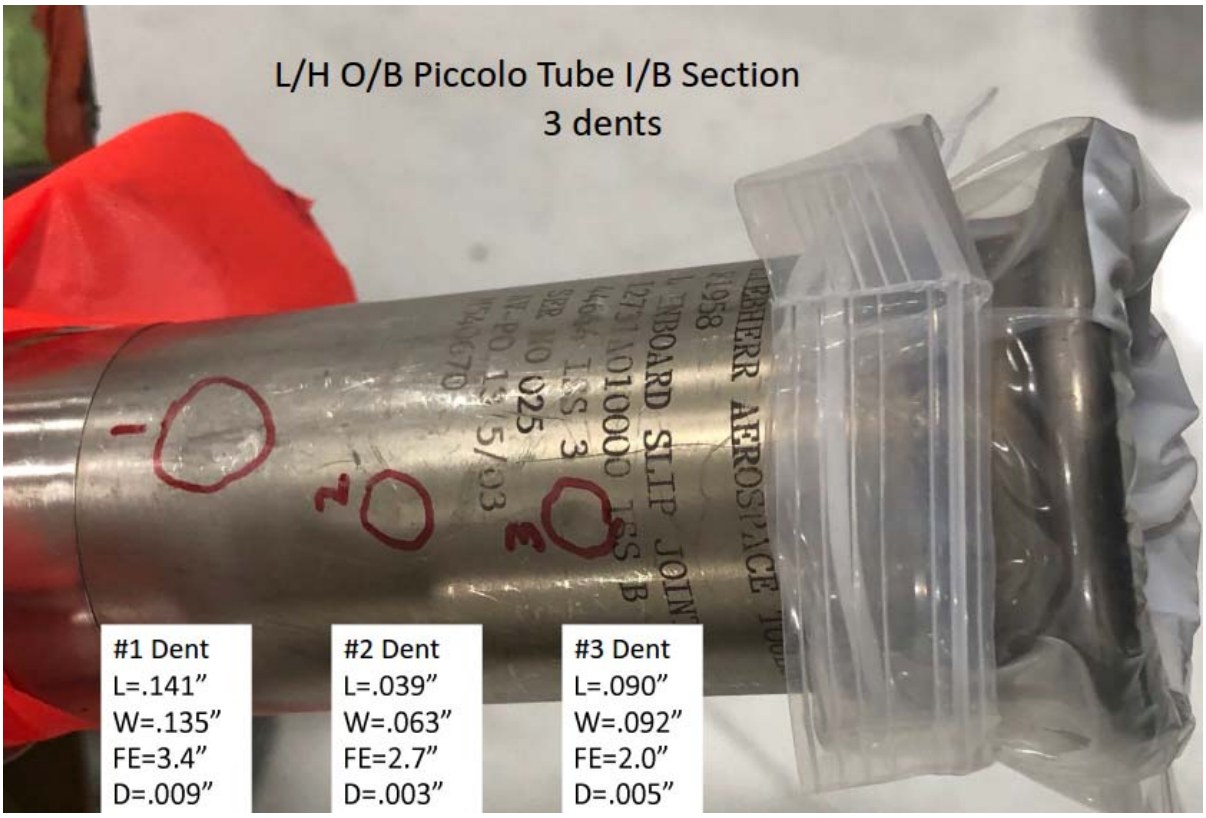
   In order to minimize costs and provide you with a timely response to the SRPSA, it is advisable to provide the following information related for each dent or damage found on the piccolo tube:

   - Identify the size of the dent in terms of Width, Length and Depth
   - Identify the location of the dent with reference to the piccolo tube
   - Indicate whether the dent has sharp edges (cracks are not permissible rendering piccolo tube unserviceable)
   - If more than one dent on the same piccolo tube, identify the space between each dent

   Example of damage as pictured below was provided by Operator



Example of damage provided by Operator



5. ACTION:

   Operators should be familiar with the information in this AW.

   Should you have any queries pertaining to this AW or requiring additional information please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC).