BOMBARDIER
Toronto (de Havilland)
PROPRIETARY INFORMATION

PPS 2.34

PRODUCTION PROCESS STANDARD

Installation of Deutsch Pres-Loc Fasteners

Issue 4
- This standard supersedes PPS 2.34, Issue 3.
- Vertical lines in the left hand margin indicate technical changes over the previous issue.
- 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 the installation of Deutsch Pres-Loc fasteners.

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.

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 General

3.1.1 Unless a specific issue is indicated, the issue of the reference documents specified in this section in effect at the time of manufacture shall form a part of this specification to the extent indicated herein.

3.2 Bombardier Toronto (de Havilland) Specifications

3.2.1 PPS 1.09 - Drilling and Reaming.

3.2.2 PPS 2.01 - Installation of Solid Rivets.

3.2.3 PPS 13.26 - General Subcontractor Provisions.

3.2.4 PPS 27.05 - Manual Edge Finishing.

4 Materials and Equipment

4.1 Materials

4.1.1 Unless otherwise specified in this section, use only the materials specified; use of superseding or alternative materials is not allowed.

4.1.2 Deutsch Pres-Loc fasteners as specified on the relevant engineering drawing. Refer to Figure 1 for a general description of the Deutsch Pres-Loc fastener. Refer to Figure 2 for a breakdown for the Deutsch Pres-Loc fastener part number.

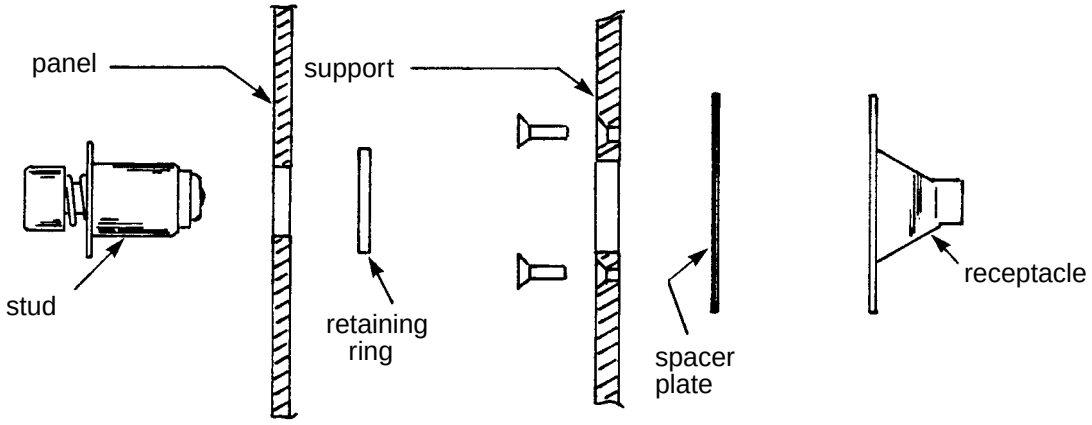

Figure 1 - General Description Deutsch Pres-Loc Fastener

Basic Part Number
PL500 - Protruding Button (Complete Assembly)
PL501 - Protruding Button (stud)
PLBM - Receptacle
PLRM - Retaining Ring
PLS - Spacer Plate

Fastener Size
00 - Nominal Stud Diameter = 1/4"

Grip Length

DASH NUMBER	GRIP LENGTH	DASH NUMBER	GRIP LENGTH
1	0.062" - 0.125"	5	0.313" - 0.375"
2	0.126" - 0.187"	6	0.376" - 0.437"
3	0.188" - 0.250"	7	0.438" - 0.500"
4	0.251" - 0.312"	8	0.501" - 0.562"

If the grip length is “1”, use 2 PLS spacer plates.
If the grip length is “2”, use 1 PLS spacer plate.

PL500 00 3

Figure 2 - Part Number Breakdown

4.2 Equipment

4.2.1 Installation tool (e.g., TS.464.51.10).

4.2.2 “T” handle drill jig (e.g.,TS.519.11.20 MK 35).

4.2.3 Vixen file deburring tool (e.g., SD8066).

5 Procedure

5.1 General

5.1.1 The Deutsch Pres-Loc fastener is a push-button type, quick-release panel fastener typically used to secure access covers, furnishing panels, etc., on the aircraft interior.

5.1.2 In this standard, the part of the assembly in which the fastener stud is installed is termed the panel and the part to which the receptacle is riveted is termed the support.

5.1.3 If possible, pre-drill the stud hole through the panel and support simultaneously to ensure hole alignment. Use of a #40 (0.0980") drill is recommended.

5.1.4 Perform all drilling of holes according to PPS 1.09.

5.2 Preparation of Panel

5.2.1 Prepare the panel as follows:

Step 1. Pre-drill the stud hole in the panel (and support, if possible). Use of a #40 (0.0980") drill is recommended.

Step 2. Drill the stud hole to a final size of 0.257" - 0.267". Use of an F (0.2570") size drill is recommended.

Step 3. Deburr the stud hole using a rosette type countersink. Ensure that the resultant edge break does not exceed 0.010".

5.3 Preparation of Support

5.3.1 Prepare the support as follows:

Step 1. Pre-drill the stud hole (if still necessary). Use of a #40 (0.0980") drill is recommended.

Step 2. Locate and drill off rivet holes for the receptacle according to PPS 2.01. Use of a drill jig (e.g., TS.519.11.20 MK 35) is recommended.

Step 3. Countersink the rivet holes according to PPS 2.01, on the side of the support which is to mate with the panel.

Step 4. Drill the stud hole to the final size of 0.328" - 0.338". Use of a 21/64" (0.3281") size drill is recommended.

Step 5. Deburr the stud hole using a hole deburring tool according to PPS 27.05. Ensure that any resultant edge break does not exceed 0.010" in depth.

Step 6. Remove any standing burrs from the exit side of the rivet holes using a vixen file or similar flat deburring tool according to PPS 27.05.

5.4 Installation of Stud

5.4.1 Install the stud as follows (see Figure 3):

Step 1. Place the stud (upside down) on a suitable support block having a 1/4" hole drilled in it to receive the stud push button.

Step 2. Place the panel (upside down) over the stud barrel.

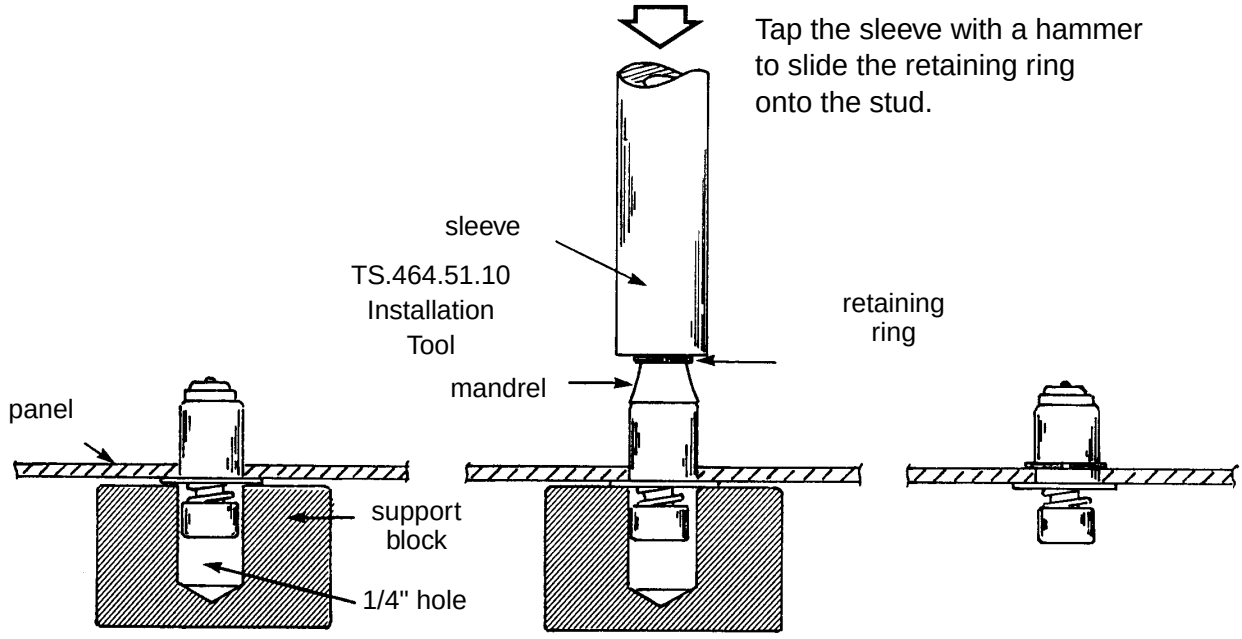

Fig. 3-A Fig. 3-B Fig. 3-C

Figure 3 - Installation of Stud

Step 3. Fit the retaining ring onto the installation tool (e.g., TS.464.51.10) mandrel and slide the ring down to the flared end.

Step 4. Place the installation tool sleeve over the mandrel and position the tool on the end of the stud.

Step 5. Tap the sleeve gently with a hammer to slide the retaining ring completely down the stud barrel so as to bottom against the panel.

5.5 Installation of Receptacle (see Figure 4)

5.5.1 Install the receptacle as follows:

Step 1. Rivet receptacles to the back side of the support according to PPS 2.01.

Step 2. If specified on the engineering drawing, include one or two spacer plates between the receptacle and the support sheet.

Step 3. Shave the rivet heads flush with the support surface to facilitate proper seating of the panel.

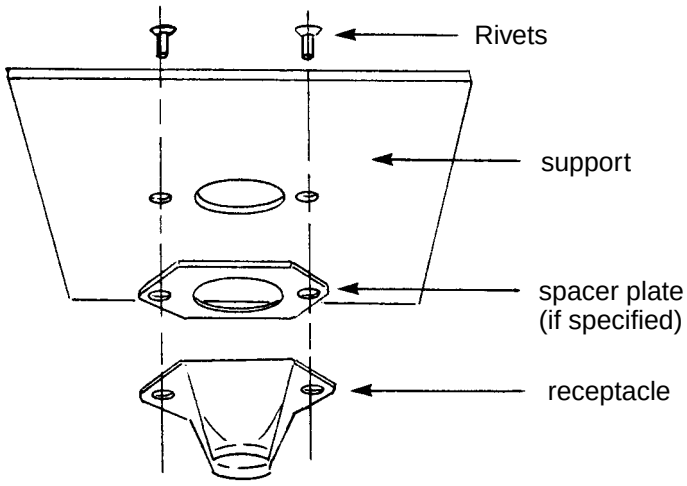

Figure 4 - Installation of Receptacle

6 Requirements

6.1 Ensure that the fastener location meets the requirements of the engineering drawing.

6.2 Ensure that the stud flange seats flush against the outer surface of the panel and the stud retaining ring is pushed fully down the stud barrel.

6.3 Ensure that rivet heads have been shaved flush with the support surface.

6.4 If specified on the engineering drawing, spacer plates shall have been included between the support sheet and the receptacle.

7 Safety Precautions

7.1 The safety precautions specified herein are specific to Bombardier Toronto to meet Canadian Federal and Provincial government environmental, health and safety regulations. It is recommended that other facilities consider these safety precautions; however, suppliers, subcontractors and partners are responsible for ensuring that their own environmental, health and safety precautions satisfy the appropriate local government regulations.

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

8 Personnel Requirements

8.1 Personnel responsible for installation of Deutsch Pres-Loc fasteners must have a good working knowledge of the procedure and requirements as specified herein and must have exhibited their competency to their supervisor.