**BOMBARDIER**
Toronto (de Havilland)
**PROPRIETARY INFORMATION**

# PPS 9.15

**PRODUCTION PROCESS STANDARD**

## Installation of Eldema DHP Lamp Sockets

Issue 3
- This standard supersedes PPS 9.15, Issue 2.
- Vertical lines in the left hand margin indicate changes over the previous issue.
- 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) | December 14, 2011 |
| | Production Process Standards (PPS) | |
| Approved By: | (L.K. John) | December 14, 2011 |
| | Materials Technology | |
| | (B. DeVreede) | December 15, 2011 |
| | Quality | |

Signed original on file. Validation of paper prints is the responsibility of the user.

## TABLE OF CONTENTS

**Sections** **Page**



**Tables**



**Figures**

## 1 Scope

1.1 This Production Process Standard (PPS) specifies the procedure and requirements for installation of Eldema DHP Press-In-Place lamp sockets in aircraft instrument and switch panels.

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 1.09 - Drilling and Reaming.

3.2 PPS 13.26 - General Subcontractor Provisions.

## 4 Materials and Equipment

### 4.1 Materials

4.1.1 Eldema press-in-place lamp sockets, type DHP as specified on the engineering drawing. Refer to Figure 1 for a general description of Eldema DHP lamp sockets.

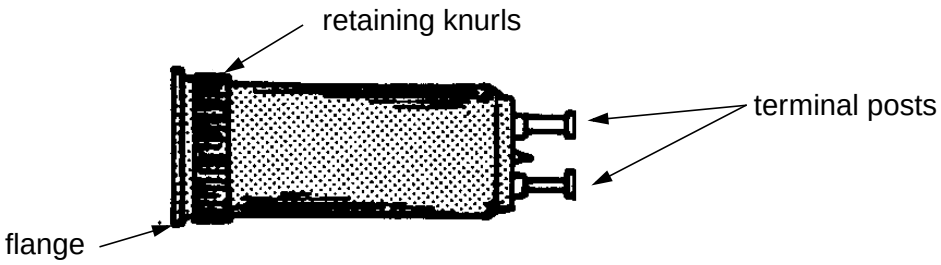



**Figure 1 - General Description of DHP Lamp Socket**

### 4.2 Equipment

4.2.1 Installation tool kit (e.g., Eldema Z-090-142). Installation tools must be capable of installation of Eldema DHP type lamp sockets without damage to the panel or socket.

4.2.2 Countersink, rosette type, 90° included angle.

4.2.3 Suitable arbour press or drill press.

## 5 Procedure

### 5.1 General

5.1.1 Eldema DHP type lamp sockets are basically a one piece self-retaining assembly designed for press fit mounting into an instrument panel.

5.1.2 Installation consists of inserting the lamp socket into a prepared hole from the front of the panel, placing the socket/panel assembly onto a support tool and pressing the socket into the panel using a punch tool and hammer.

5.1.3 Drill all holes according to PPS 1.09.

### 5.2 Preparation of Panel

5.2.1 Prepare the panel for insertion of the lamp socket as follows:

Step 1. Pre-drill the mounting hole in the panel according to Table 1.

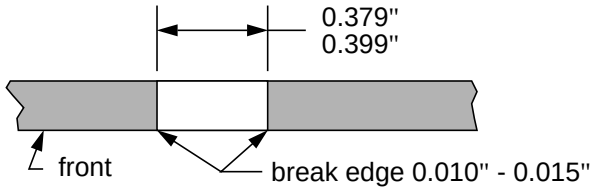
Step 2. Drill the mounting hole to final size according to Table 1.

Step 3. Break the hole edge on the front of the panel approximately 0.010" - 0.015" using a rosette type countersink.

Step 4. Remove the standing burr only from back side of panel, do not break the hole edge.

**Table 1 - Hole Preparation Data**

| LAMP SOCKET | MOUNTING HOLE | | |
|---|---|---|---|
| | RECOMMENDED PRE DRILL SIZE | RECOMMENDED FINAL DRILL | HOLE SIZE |
| DHP-15B | 3/8" | X (0.3970") | 0.397" - 0.399" |




## 5.3 Installation of Lamp Socket

5.3.1 Install lamp sockets as follows (see Figure 2):

Step 1. Insert the lamp socket into the mounting hole from the front of panel and align the lamp socket terminal posts in the correct orientation for soldering according to the engineering drawing.

Step 2. Place the socket/panel assembly on the Z-090-142-2 support tool.

Step 3. Insert the installation punch into the lamp socket and, holding the assembly square to the panel, press the socket fully into the panel using a suitable arbour press or drill press. Alternatively, tap the installation punch with a suitable hammer to set the socket flange flush against the front of the panel.

Step 4. Check that lamp socket flange is fully seated against face of panel and socket is square to panel.

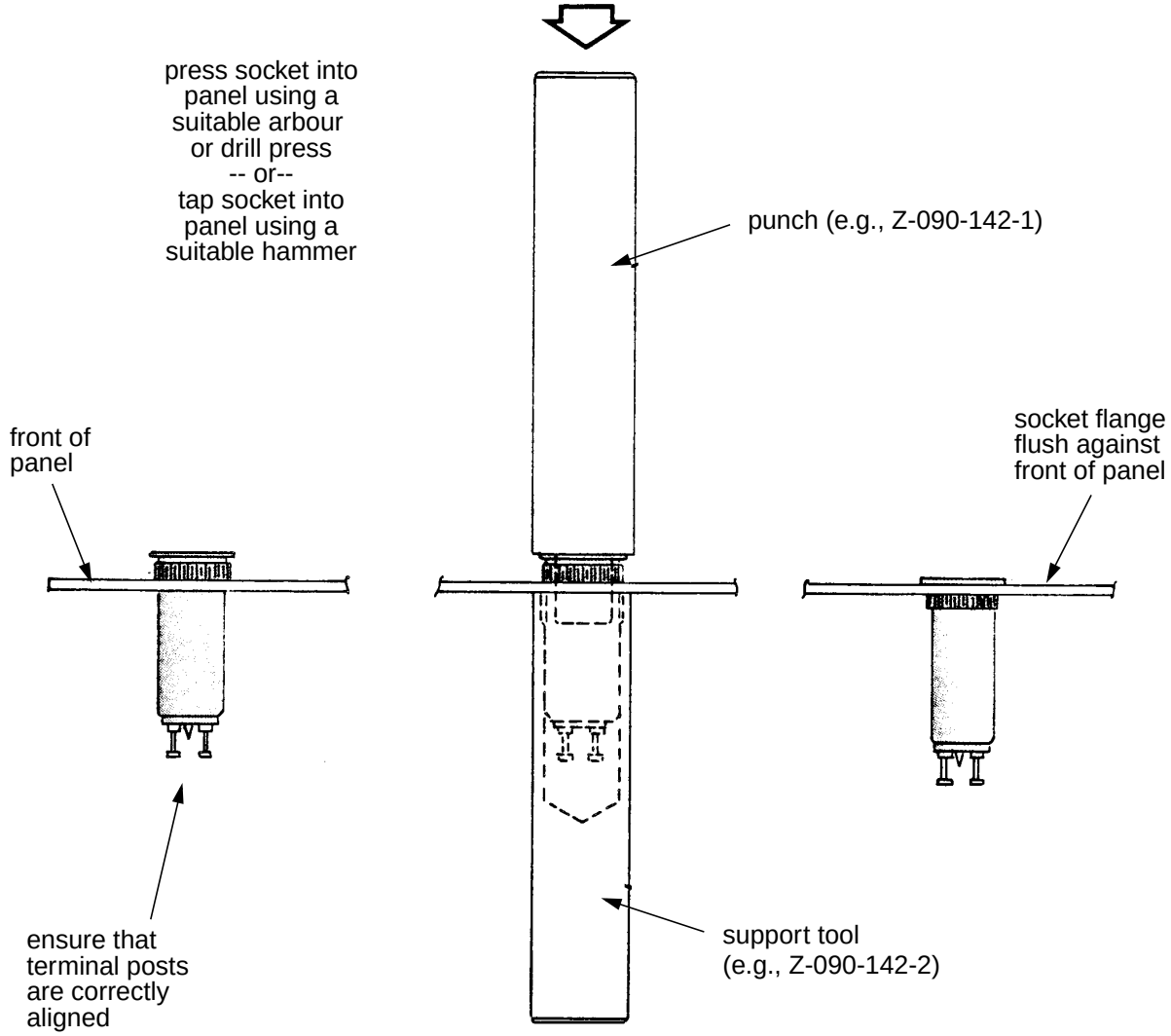



**Figure 2 - Installation of DHP Lamp Socket**

### 5.4 Removal of Lamp Socket

5.4.1 If necessary, Eldema lamp sockets may be removed from a panel as follows:

Step 1. Place the panel upside down onto a 1/2" O.D. x 0.032" W.T. stainless steel tube to support the panel around the periphery of the socket flange.

Step 2. Drive the socket out from the back of the panel using a suitable punch and hammer (see Figure 3).

5.4.2 The lamp socket will be damaged or destroyed during removal and must be discarded.

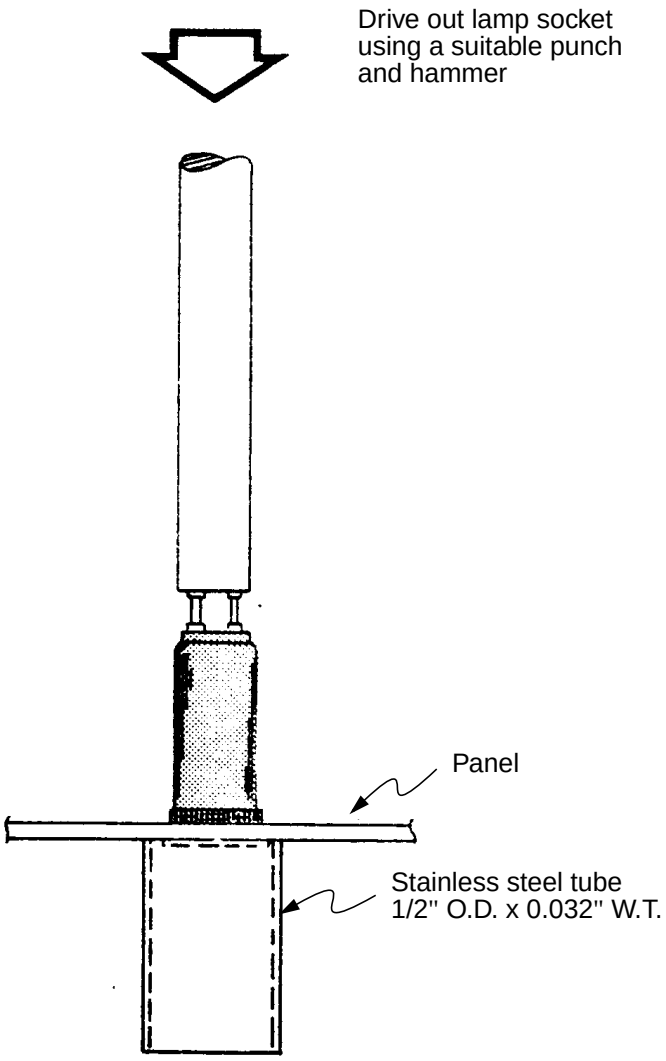



**Figure 3 - Removal of DHP Lamp Socket**

## 6 Requirements

6.1 The lamp socket location and orientation of the lamp socket terminal posts must be as specified on the engineering drawing.

6.2 Installed lamp sockets must be square to the face of the panel and the socket flange flush against the front of the panel.

6.3 Loose socket assemblies are not acceptable.

## 7 Safety Precautions

7.1 The procedures specified herein present no specific safety hazards when carried out according to accepted plant safety regulations.

## 8 Personnel Requirements

8.1 Personnel responsible for installation of Eldema DHP Press-In-Place lamp sockets in aircraft instrument and switch panels must have a good working knowledge of the procedure and requirements as specified herein and must have exhibited their familiarity to their supervisor.