DE HAVILLAND AIRCRAFT OF CANADA LIMITED

PPS 16.09

PRODUCTION PROCESS STANDARD

PROPRIETARY INFORMATION

FUNGI RESISTANT TREATMENT

Issue 3
- This standard supersedes PPS 16.09, Issue 2.
- Vertical lines in the left hand margin indicate technical changes over the previous issue.
- Direct PPS related questions to christie.chung@dehavilland.com or (416) 375-7641.
- This PPS is effective as of the distribution date.

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PPS Group

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M&P Engineering

Issue 3 - Summary of Changes (over the previous issue)

The following summaries are not detailed and are intended only to assist in alerting PPS users to changes which may affect them. Refer to the applicable sections of this PPS for detailed procedure and requirements.

- Updated to current PPS format.
- Replaced throughout PPS where “Bombardier” is specified with “De Havilland Aircraft of Canada Limited” or “DHC”.
- Added additional Safety Precautions statements.
- Revised personnel requirements to have a good working knowledge of the procedure and requirements in place of just having the basic understanding.

TABLE OF CONTENTS

Sections **Page**

1 SCOPE

1.1 This Production Process Standard (PPS) specifies the procedure and requirements for the protective treatment of communications, electronic and electrical equipment for resistance to fungi growth.

1.1.1 This PPS complements the engineering drawings that specify its use as an authorized instruction. The procedure specified in this PPS shall 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.

2 HAZARDOUS MATERIALS

2.1 Before receipt at De Havilland Aircraft of Canada Limited (DHC), all materials shall be approved and assigned Material Safety Data Sheet (MSDS) numbers by the DHC 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 DHC Environment, Health and Safety Department.

3 REFERENCES

3.1 PPS 13.26 - General Subcontractor Provisions.

3.2 PPS 31.17 - Solvent Usage.

4 MATERIALS AND EQUIPMENT

4.1 Materials

4.1.1 Varnish, Schenectady ST-7.

4.1.2 Silicone, Dow Corning 4X.

4.1.3 Denatured alcohol.

4.2 Equipment

4.2.1 Wiping cloth (e.g., DSC 378-2) or suitable brush.

5 PROCEDURE

5.1 Limitations

5.1.1 Apply the protective treatment or overall spray treatment to components or assemblies as specified by the engineering drawing or applicable Engineering Order.

5.1.2 When an engineering drawing or Engineering Order specifies the application of this PPS, clean and protect all solder joints made in the course of assembly and installation of hardware with fungi resistant material, including solder joints interconnecting proprietary assemblies.

5.2 Preparation of Completed Assemblies

5.2.1 Remove equipment covers and shields to expose the area requiring treatment as fully as possible.

5.2.2 Bend back untreated cables and cords for access. Loosen terminal boards to expose the undersides.

5.3 Cleaning

5.3.1 Remove dirt and dust by wiping the part with a clean cloth and by blowing the surface with dry air.

5.3.2 Remove grease spots by solvent cleaning according to PPS 31.17.

5.3.3 Remove solder flux deposits by wiping and brushing the joint using a clean cloth or brush and denatured alcohol.

5.4 Application of Varnish

5.4.1 If possible treat items to be varnished before assembly or assemble the items to be varnished and apply an overall spray coating before assembling parts to remain free of varnish.

5.4.2 For small areas such as solder joints, apply varnish without thinning using a paint brush. Stir the varnish thoroughly before using.

5.4.3 Spray coat when the size, complexity or quantity of parts lends itself to spray methods.

5.4.4 Thin the varnish for spraying in the proportion of 9 parts varnish to 1 part solvent as specified in PPS 31.17.

5.4.5 Examine all parts and assemblies before spraying and, if overspray could adversely affect the performance of parts, shield such parts from varnish using masking tape, cardboard and dummy components in sockets.

5.5 Application of Silicone 4X

5.5.1 In some cases (e.g., wafer switches with numerous solder joints) varnish cannot be applied to components requiring protection from fungi growth. Treat such parts, as listed on the engineering drawing or Engineering Order, with Silicon 4X as follows:

Step 1. If both varnish and silicone are to be applied to a part, mask off the area to be treated with silicone and apply the varnish.

Step 2. Allow the varnish to dry.

Step 3. Mask off the varnished area.

Step 4. Remove the mask from the silicone treatment area.

Step 5. Apply a spray coat of Silicone 4X. Shake the silicone aerosol spray bomb vigorously before releasing the contents. Silicone 4X is a non-drying material, therefore it must be used sparingly.

5.5.2 Overspray of the silicone is not critical, but it is recommended that when silicone only is applied to a part, both the non-coated and varnished surfaces be masked as much as possible from overspray.

6 REQUIREMENTS

6.1 Visually examine components to ensure that the varnish or Silicone 4X has been applied as specified.

6.2 Ensure all masking tape, cardboard or dummy components are removed. Replace shields or protective covers. Restore terminal boards and wires to the original location.

7 DHC SAFETY PRECAUTIONS

7.1 The safety precautions specified herein are specific to DHC to meet Canadian Federal and Provincial government environmental, health and safety regulations. It is strongly 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 standard plant safety precautions when performing the procedure specified herein.

7.3 Refer to PPS 31.17 for the safety precautions for handling and using solvents.

8 PERSONNEL REQUIREMENTS

8.1 Personnel responsible for the protective treatment of communications, electronic and electrical equipment for resistance to fungi growth shall have a good working knowledge of the applicable procedure and requirements as specified herein and shall have exhibited their competency to their supervisor.