



STANDARD OVERHAUL PRACTICES MANUAL

APPLICATION OF CORROSION PREVENTIVES TO INTERIOR OF CLOSED END TUBES

**PART NUMBER
NONE**

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PUBLISHED BY BOEING COMMERCIAL AIRPLANES GROUP, SEATTLE, WASHINGTON, USA
A DIVISION OF THE BOEING COMPANY
PAGE DATE: Jul 01/2009

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STANDARD OVERHAUL PRACTICES MANUAL

Revision No. 10
Jul 01/2009

To: All holders of APPLICATION OF CORROSION PREVENTIVES TO INTERIOR OF CLOSED END TUBES 20-41-03.

Attached is the current revision to this STANDARD OVERHAUL PRACTICES MANUAL

The STANDARD OVERHAUL PRACTICES MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

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Location of Change

Description of Change

NO HIGHLIGHTS

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HIGHLIGHTS

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A = Added, R = Revised, D = Deleted, O = Overflow

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All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed		Revision		Filed	
Number	Date	Date	Initials	Number	Date	Date	Initials



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All temporary revisions to this manual will be accompanied by a cover sheet bearing the temporary revision number. Enter the temporary revision number in numerical order, together with the temporary revision date, the date the temporary revision is inserted and the initials of the person filing. When the temporary revision is incorporated or cancelled, and the pages are removed, enter the date the pages are removed and the initials of the person who removed the temporary revision.

Temporary Revision		Inserted		Removed		Temporary Revision		Inserted		Removed	
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INTRODUCTION

1. General

- A. The instructions in this manual tell how to do standard shop procedures during maintenance functions from simple checks and replacement to complete shop-type repair.
- B. This manual is divided into separate sections:
 - (1) Title Page
 - (2) Transmittal Letter
 - (3) Highlights
 - (4) Effective Pages
 - (5) Contents
 - (6) Revision Record
 - (7) Record of Temporary Revisions
 - (8) Introduction
 - (9) Procedures
- C. Refer to SOPM 20-00-00 for a definition of standard industry practices, vendor names and addresses, and an explanation of the True Position Dimensioning symbols used.
- D. The data is general. It is not about all situations or specific installations. Use it as a guide to help you write minimum standards.
- E. If the component overhaul instructions are different from the data in this subject, use the component overhaul instructions.

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INTRODUCTION

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APPLICATION OF CORROSION PREVENTIVES TO INTERIOR OF CLOSED END TUBES

1. INTRODUCTION

- A. The data in this subject comes from Boeing Process Specification BAC5720. The airline has a copy of the Boeing Process Specification Manual.
- B. The data is general. It is not about all situations or specific installations. Use this data as a guide to help you write minimum requirements.
- C. BAC5720 puts these procedures into three types. Type 1 applies corrosion preventive compound. Type 2 applies primer. Type 3 hermetically seals tubes.

2. MATERIALS

- A. Corrosion Preventive Compound – MIL-C-11796 (SOPM 20-60-02)
- B. Primer, Epoxy - Polyamide, Chemical and Solvent Resistant – MIL-P-23377
- C. Primer, Alkyd, Wood and Ferrous Metals – TT-P-636
- D. Primer, Synthetic, Rust Inhibiting – TT-P-664
- E. Primer, Corrosion Inhibiting – BMS 10-11, Type 1 (SOPM 20-60-02)
- F. Primer, Epoxy, High Temperature – BMS 10-53 (Obsolete – Superseded by MIL-P-23377)

3. GENERAL

- A. Complete all work, and apply plating and other permanent finishes, before you start to apply the corrosion preventives to the interior of the tubes.
- B. Make sure the tubing interiors are clean and fully dry. If necessary, bake the parts at a maximum temperature of 220°F to be sure that faying surfaces and interior of tubes are fully dry.
- C. Do not put tubes in alkaline cleaners if they cannot be fully rinsed and drained. This includes parts with unsealed faying surfaces. As an alternative, these tubes can be flushed with solvent.

4. TYPE 1 – APPLICATION OF CORROSION PREVENTIVE COATINGS

- A. Use only clean corrosion resistant compound, to prevent contamination by unwanted matter in the tubes.
- B. Use a sufficient amount of compound to completely coat the interior of the part. You can put more compound in, but make sure all possible compound drains out when you drain the part.
- C. During the application procedure, keep the corrosion preventive compound within these temperature ranges:

MIL-C-11796 Class 1 or 1A	170-200°F
MIL-C-11796 Class 2	160-190°F
MIL-C-11796 Class 3	150-180°F

- D. Single Tubes (Figure 1)
 - (1) Put corrosion preventive compound into Hole 1 until the compound comes out Hole 2.
 - (2) Let the filled part wait in this position for 2 minutes.
 - (3) Turn the tube upside down and let it fully drain.
 - (4) Wipe the compound from the outside surfaces of the tubes.
- E. Multiple Tube Assemblies (Figure 1)

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- (1) Turn and move these assemblies as necessary to be sure that each tube is fully filled and drained. An example is shown where each hole is at a different height.
 - (2) Put corrosion preventive compound into the lowest hole until the compound comes out the next higher hole. Plug that hole and continue to fill the unit. Let the compound come out each higher hole before you plug each one in sequence. The tubes will also become hotter as they become filled by the hot corrosion preventive compound.
 - (3) When the assembly is fully filled, as you can see when the compound comes out the top hole, let the filled unit wait for 2 minutes in this position.
 - (4) Now turn the assembly upside down, remove the plugs from the holes and let the unit fully drain.
- F. Corrosion preventive compound can also be applied with the parts fully put into a tank of hot compound, if exterior coatings will not be damaged and if interior of tubing can be examined for complete coverage. Keep the part under the surface of the compound for 2 minutes. Then remove it from the tank and let it drain, but keep it within the temperature range specified above for the corrosion preventive compound used. Drain time can be decreased if you apply compressed air at the fill holes.
- G. After the part is fully drained, wipe the compound off the exterior surfaces.
- H. Plug the fill and drain holes as specified by the overhaul instructions.

5. TYPE 2 – APPLICATION OF PRIMER

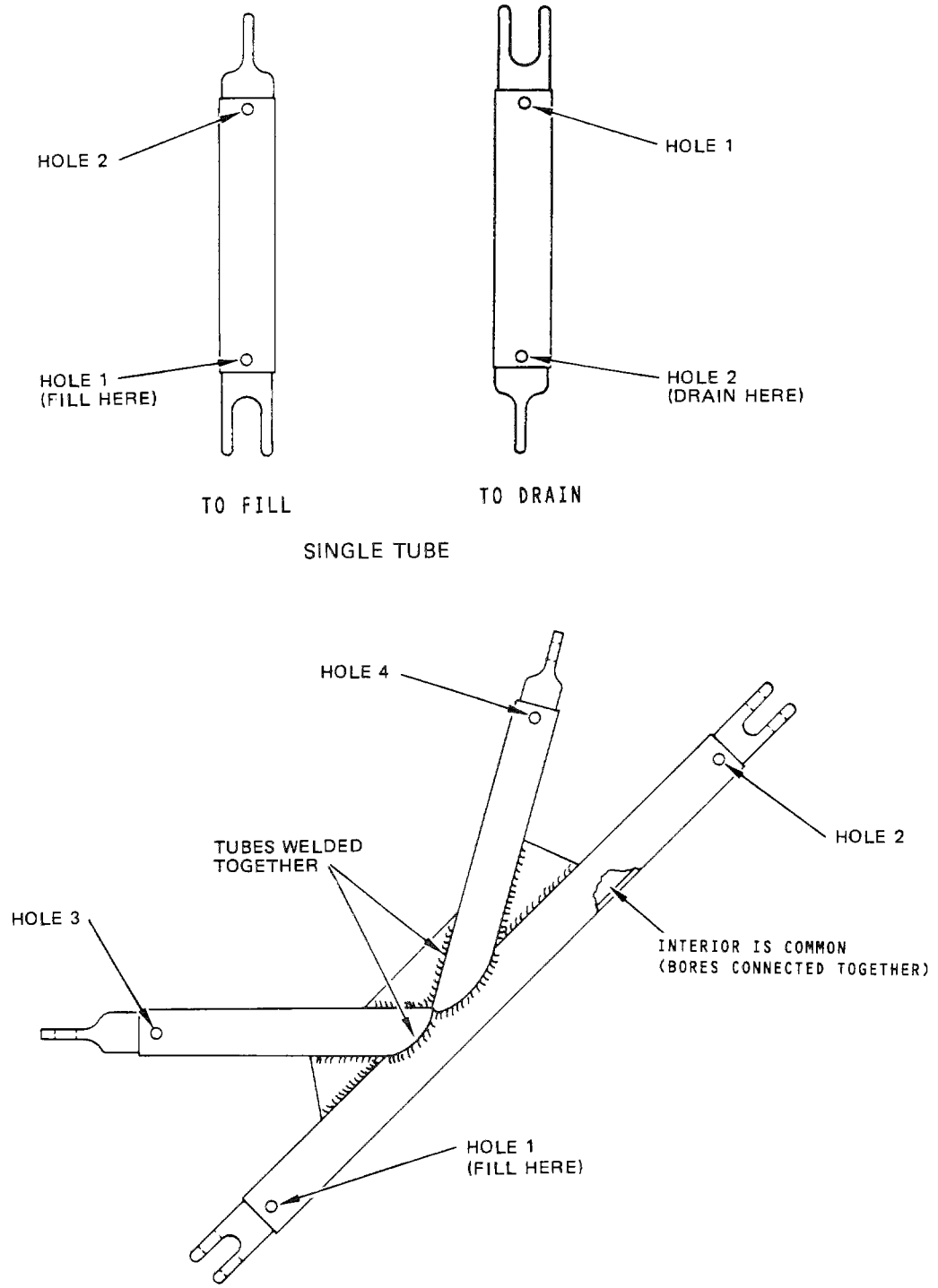
- A. Use the primer specified by the overhaul instructions.
- B. Fill the tubing with primer at the tube openings or the fill and drain holes.
- C. Make sure the primer fills all interior areas and makes a layer on all interior surfaces.
- D. Drain the primer from the tubes. Send compressed air through the tubes to remove solvent vapor that could wash out the primer coating.
- E. Make sure all collected primer comes out from the tubes.
- F. Wipe the primer off the exterior surfaces.
- G. Plug the fill and drain holes, unless they are also water drain holes, as specified by the overhaul instructions.

6. TYPE 3 – HERMETIC SEALING OF CLOSED TUBES

- A. Do not hermetic seal before stress relief or other heat treatment, unless the tubing has a vent hole to be sealed later.
- B. Apply all plating and coatings to exterior surfaces after hermetic sealing and heat treatment, if any.
- C. Procedure
 - (1) Fully clean and dry tubing interiors before you weld.
 - (2) Weld the tubing as indicated by the overhaul instructions. You can drill holes for leak tests before you weld.
 - (3) Do a leak test of the welded parts. See BAC5720 for details.

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TYPICAL MULTIPLE-TUBE ASSEMBLY

(FILL IN POSITION SHOWN. THEN TURN UPSIDE DOWN TO DRAIN)

Position to Fill and Drain Tubes
Figure 1

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