P&WC S.B. No. 41079

# BULLETIN INDEX LOCATOR 72-30-04

TURBOSHAFT ENGINE

X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS

GENERATOR CASE

MODEL APPLICATION

PT6C-67C

Compliance: CATEGORY 6

Summary: X-ray inspection after an in-process weld repair under the No. 2 bearing oil pressure

tube boss was not performed during part manufacturing. Do a one-time x-ray inspection of the No. 2 bearing oil pressure tube boss weld area at first overhaul.

Oct 15/2013 PT6C-72-41079
Cover Sheet

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### TURBOSHAFT ENGINE X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS GENERATOR CASE

### 1. Planning Information

### A. Effectivity

PT6C-67C Engine Serial No. PCE-KB0849, KB0851, KB0855, KB0866.

NOTE: The above effectivity list does not identify engines that have been converted from one engine model to another via an engine conversion service bulletin. To clarify the effectivity of converted engines, refer to the original engine effectivity above. For the parts embodied during the engine conversion, refer to conversion service bulletin.

### B. Concurrent Requirements

None.

#### C. Reason

### (1) Problem

X-ray inspection after an in-process weld repair under the No. 2 bearing oil pressure tube boss was not performed during part manufacturing.

### (2) Cause

Post-repair inspection was not performed.

### (3) Solution

Do a one-time x-ray inspection of the No. 2 bearing oil pressure tube boss weld area at first overhaul.

### D. Description

Do a one time inspection of the No. 2 Bearing oil-pressure-tube boss weld area.

#### E. Compliance

CATEGORY 6 - P&WC recommends to do this service bulletin when the subassembly (i.e. module, accessories, components, or build groups) is disassembled and access is available to the necessary part. Do all spare subassemblies.

### F. Approval

D.O.T./D.A.A. approved.

### G. Manpower

Estimate of 1.0 man-hours required to include this service bulletin at overhaul.

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### TURBOSHAFT ENGINE X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS GENERATOR CASE

### 1. Planning Information (Cont'd)

H. Weight and Balance

None.

I. Electrical Load Data

Not changed.

J. Software Accomplishment Summary

Not applicable.

K. References

Overhaul Manual P/N 3045333 (PT6C-67C)

L. Publications Affected

None.

M. Interchangeability and Intermixability of Parts

Interchangeability - Refer to Para. 2.C.

Intermixability - Not changed.

### 2. Material Information

A. Industry Support Information

Not applicable.

B. Material - Cost and Availability

Not applicable.

C. Material Necessary for Each Engine

Not applicable.

D. Reidentified Parts

None.

E. Tooling - Price and Availability

Not applicable.

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### TURBOSHAFT ENGINE X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS GENERATOR CASE

### 3. Accomplishment Instructions

- A. Disassemble the gas generator case, per the overhaul manual instructions.
- B. Do an X-ray inspection of the weld of the GGC no. 2 bearing oil-pressure-tube boss (identified on figure 1) as follows:

NOTE: Inspection must be performed by a NDT technician with CXRM Level II or Level III certification to perform the X-ray inspection to the latest revision of CNDTQ (or an equivalent internationally-recognized certification). The X-ray inspection is to be performed in accordance with CXRM-1 to CXRS - E.5 Class A and CXRM-Master requirements. CXRS -E.5 Class A documention allows some cracks. When doing this inspection, no detectable cracks are acceptable.

- (1) In a dark room, cut a X-ray film to fit around the no. 2 bearing oil tube located on the internal diameter of the GGC. Use black tape to close the contour of the cut on the X-ray film to avoid light exposure on the X-ray film.
- (2) Secure the X-ray film to the internal diameter of the no. 2 bearing boss with tape.
- (3) Perform the X-ray inspection of the No. 2 bearing boss weld and check for exhibition of cracks, gas holes, welding discontinuities and lack of fusion.

NOTE: The use of lead backing to reduce the back scatter may be required.

- (4) If the inspection of the weld reveals a defect, send the part for a repair.
- (5) If the part is free of defects, re-identify the GGC with "SB 41079" as follows:
  - (a) Locate the part number on the gas generator case.

NOTE: The part number should be at the 12 o'clock position on the band adjacent to the fuel nozzle bosses.

WARNING: USE EYE PROTECTION WHEN YOU WRITE WITH THE VIBRATION PEENING PROCEDURE

**CAUTION:** MAKE SURE TO REIDENTIFY PRIOR TO COATING RESTORATION

- (b) Use the vibration peening procedure, 0.003 to 0.006 in (0.08-0.015 mm) deep, and write "SB 41079" close to the part number (Ref. Fig. 3).
- C. Reassemble the gas generator case per the overhaul manual instructions.
- D. Write accomplishment of P&WC S.B. No. 41079 in the engine module log book.

#### 4. Appendix

Not applicable.

### PRATT & WHITNEY CANADA

### **SERVICE BULLETIN**

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### TURBOSHAFT ENGINE X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS GENERATOR CASE



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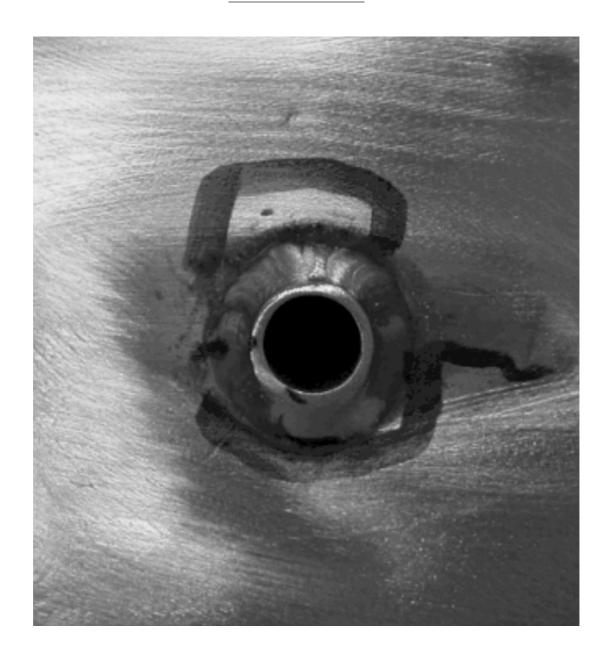
No. 2 Bearing Oil Pressure Tube Boss Area - Inspection Figure 1

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X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS

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No. 2 Bearing Oil Pressure Tube Boss Area - Inspection (Tube Removed For Clarity) Figure 2

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### TURBOSHAFT ENGINE X-RAY INSPECTION OF THE NO. 2 BEARING OIL-PRESSURE-TUBE BOSS OF THE GAS GENERATOR CASE



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GGC - Reidentification Figure 3