

PRATT & WHITNEY CANADA  
**SERVICE BULLETIN**

P&WC S.B. No. 3445

**BULLETIN INDEX LOCATOR**  
**72-20-00**

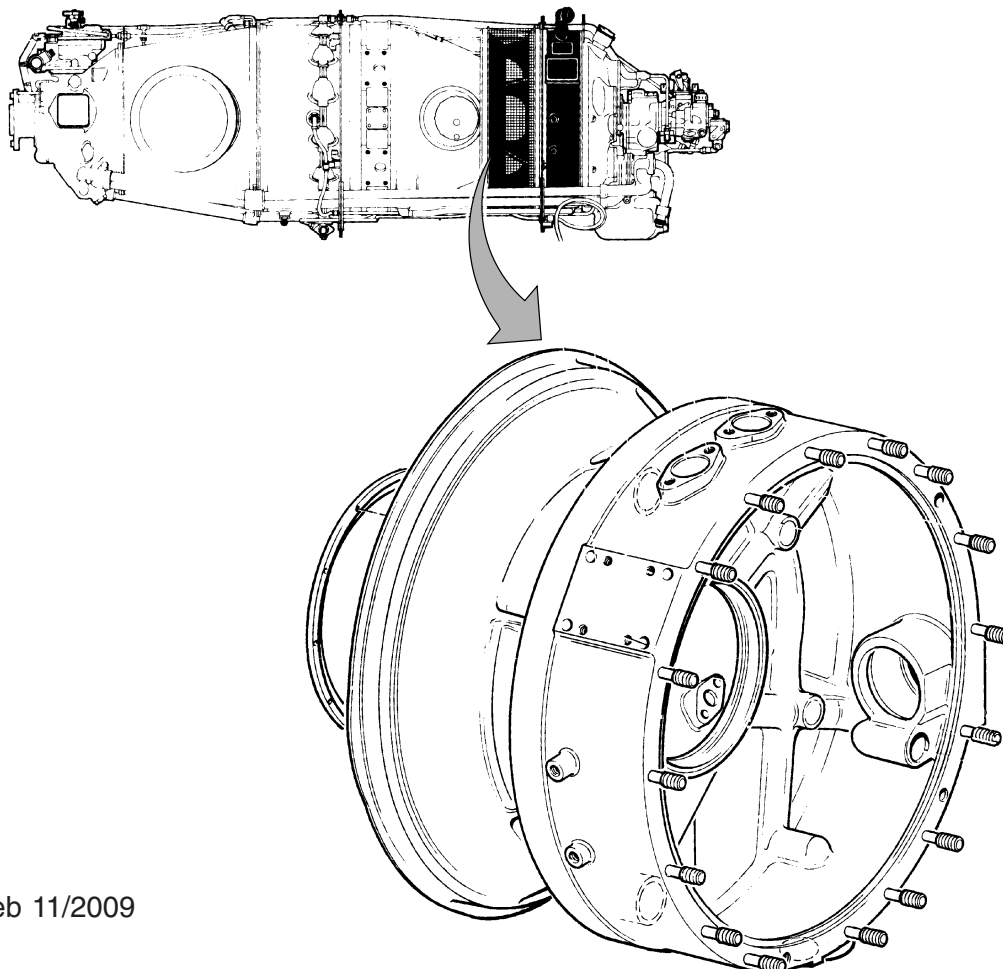
TURBOPROP ENGINE  
COMPRESSOR INLET CASE ASSEMBLY - REPLACEMENT/MODIFICATION OF

MODEL APPLICATION

PT6A-42A

Compliance: CATEGORY 7

Summary: In severe environmental conditions, corrosion can occur on the compressor inlet case assembly. Introduce a new compressor inlet case assembly that has a drain slot and improved protective treatment and sealant application. Also, to comply with the latest P&WC requirements, replace various cadmium plated studs with ones made from stainless steel.



Feb 11/2009

**PT6A-72-3445**  
Cover Sheet

24-Hour Global Service

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1. Planning Information

A. Effectivity

PT6A-42A Engines which are before and include Serial No. PCE-RM0415.

B. Concurrent Requirements

None.

C. Reason

(1) Problem

In severe environmental conditions, corrosion can occur on the compressor inlet case assembly.

(2) Cause

The protective coating on the compressor inlet case may not be optimal for all operating environments and moisture can collect at the six o'clock position.

(3) Solution

To improve corrosion resistance, replace the compressor inlet case assembly with a new one that has a drain slot at the six o'clock position, improved protective treatment and new sealant application at the gas generator mating flange.

D. Description

The existing compressor inlet case assembly is replaced with a new or modified one that has a improved corrosion resistance protective treatment.

E. Compliance

CATEGORY 7 - You can do this service bulletin when the supply of superseded parts is fully used.

F. Approval

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

G. Weight and Balance

None.

H. Electrical Load Data

Not changed.

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1. Planning Information (Cont'd)

I. Software Accomplishment Summary

Not applicable.

J. References

Illustrated Parts Catalog P/N 3021444 (72-20-00) (PT6A-42A)  
Overhaul Manual P/N 3021443 (72-20-00) (PT6A-42A)  
Overhaul Manual P/N 3021443 (72-30-00) (PT6A-42A)  
PWA Overhaul Standard Practices Manual P/N 585005

K. Publications Affected

Applicable PT6A Technical Manuals

L. Interchangeability and Intermixability of Parts

Interchangeability - Refer to Para. 2.D.

Intermixability - Not changed.

2. Material Information

A. Industry Support Information

Not applicable.

B. Material - Cost and Availability

You can get the procurable parts listed in Para. 2.D. from any Pratt & Whitney Canada Parts Distribution Center.

The estimated total cost of new parts needed to replace old parts is \$Quote (US, 2009).

The new parts are available.

C. Manpower

No more man-hours are necessary to include this service bulletin at overhaul.

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### D. Material Necessary for Each Engine

The quantity of materials listed in this section is on a per Engine basis.

<u>New P/N</u>	<u>Keyword</u>	<u>Old P/N</u>	<u>Qty</u>	<u>Est. Unit List Price (\$US, 2009)</u>	<u>Instructions Disposition</u>
3071393-01	Case Assembly, Compressor Inlet	3049269-02	1	Quote	(A)(B)
ST3174-031	. Stud Stepped	AN154744	4	32.44	(C)
ST3174-041	. Stud Stepped	AN154756	6	73.58	(C)
ST3174-056	. Stud Stepped	AN154774	3	130.80	(C)
ST3174-061	. Stud Stepped	AN154780	5	157.70	(C)
ST3174-011	. Stud Stepped	AN154720	18	56.09	(C)
3071392-01	. Case, Compressor Inlet	3049268-02	1	NP	(C)

(A) TWO WAY INTERCHANGEABLE - (ATA 200 Explanation Code 02):  
The old or the new part can replace the old or the new part.

(B) To get the new part it is possible to make a modification to the old part, or you can get the new part from any Pratt & Whitney Canada Distribution Center.

(C) NOT INTERCHANGEABLE - (ATA 200 Explanation Code 03):  
The old part must replace the old part; the new part must replace new part.

### E. Reidentified Parts

The following list of parts can be reworked:

<u>OLD P/N</u>	<u>NEW P/N</u>
3049269-02	3071393-01

### F. Tooling - Price and Availability

Not applicable.

### 3. Accomplishment Instructions

- A. Remove the parts listed under Old P/N in Para. 2.D., Material Information, in accordance with the applicable overhaul manual instructions (Ref. 72-30-00 GAS GENERATOR ASSEMBLY - DISASSEMBLY).
- B. The existing compressor inlet case P/N 3049269-02 can be modified and re-identified as follows (Ref. 72-20-00 COMPRESSOR INLET CASE AND SCREEN - REPAIR) and (Ref. Fig. 1):

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3. Accomplishment Instructions (Cont'd)

- (1) Machine slot at bottom dead centre location of compressor inlet case (Ref. A).
- (2) Break sharp edges 0.003 - 0.015 in.
- (3) Re-apply protective treatment PWA 830 in accordance with standard practice manual.
- (4) Remove old studs P/N AN154744 (4), P/N AN154756 (6), P/N AN154774 (3), P/N AN154780 (5) and P/N AN154720 (18) from compressor inlet case (Ref. Fig. 2).

NOTE: If required refer to (72-20-00 COMPRESSOR INLET CASE AND SCREEN - REPAIR) for any additional protective treatment.

- (5) Install new studs P/N P/N ST3174-031 (4), P/N ST3174-041 (6), P/N ST3174-056 (3), P/N ST3174-061 (5) and P/N ST3174-011 (18) respectively.
- (6) Torque studs in accordance with standard practice manual.

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

- (7) Put a line across the old part number. Use the vibration peening procedure, 0.003 to 0.006 in. (0.08-0.15 mm) deep, and write the new part number in the same general area.
- C. Install new or modified compressor inlet case listed under New P/N in Para. 2.D., Material Information, in accordance with the applicable overhaul manual instructions (Ref. 72-30-00 GAS GENERATOR - SUB-ASSEMBLY).

NOTE: Apply sealant (PWC09-022) to the gas generator case and compressor inlet case mating flange in a thin even film (Ref. Fig. 3).

- D. Write accomplishment of P&WC S.B. No. 3445 in the applicable engine module log book.

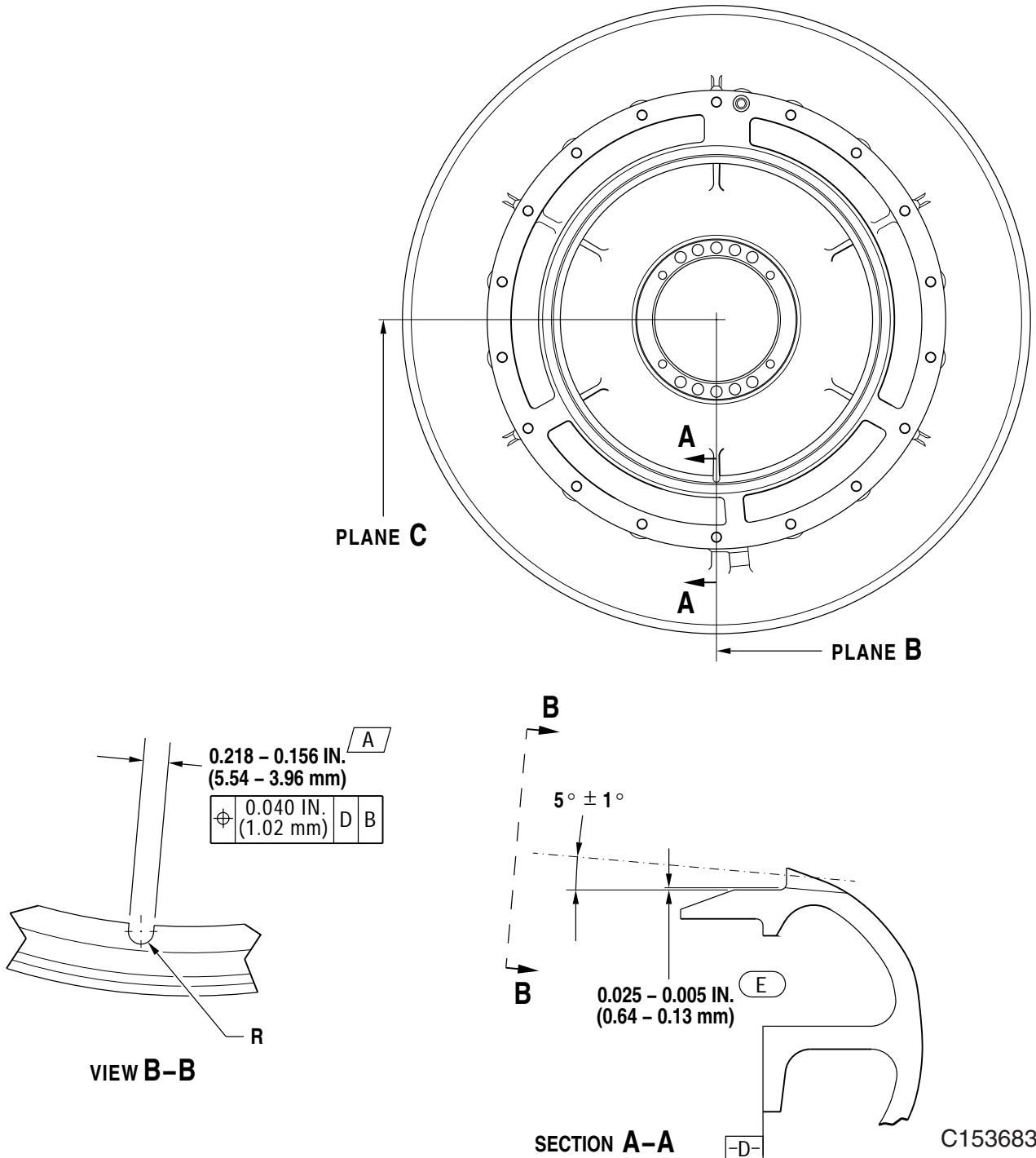
4. Appendix

- A. Refer to Figure 4 for the Compressor Inlet Case Assembly part progression.

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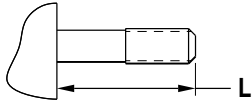


Compressor Inlet Case - Drain Slot  
Figure 1

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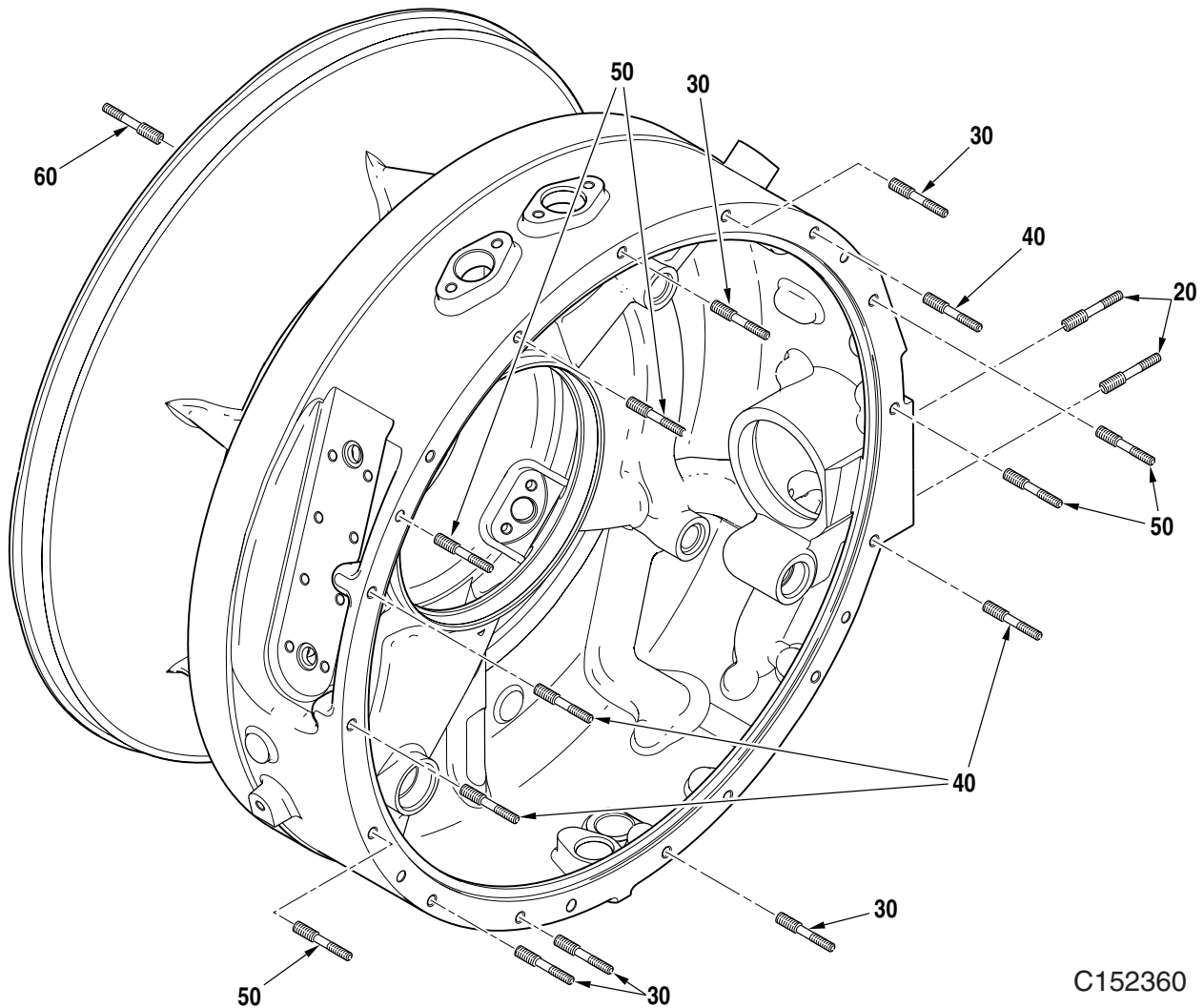
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## TURBOPROP ENGINE COMPRESSOR INLET CASE ASSEMBLY - REPLACEMENT/MODIFICATION OF

STUD PROJECTIONS	
	
PART NUMBER	LENGTH ( L )
ST3174-011	0.440 - 0.480
ST3174-031	0.690 - 0.710
ST3174-041	0.815 - 0.835
ST3174-056	1.000 - 1.020
ST3174-061	1.065 - 1.085

**NOTE:**

- 20 PRE-SB AN154744, POST-SB ST3174-031 (QTY. 4)
- 30 PRE-SB AN154756, POST-SB ST3174-041 (QTY. 6)
- 40 PRE-SB AN154774, POST-SB ST3174-056 (QTY. 3)
- 50 PRE-SB AN154780, POST-SB ST3174-061 (QTY. 5)
- 60 PRE-SB AN154720, POST-SB ST3174-011 (QTY. 18)



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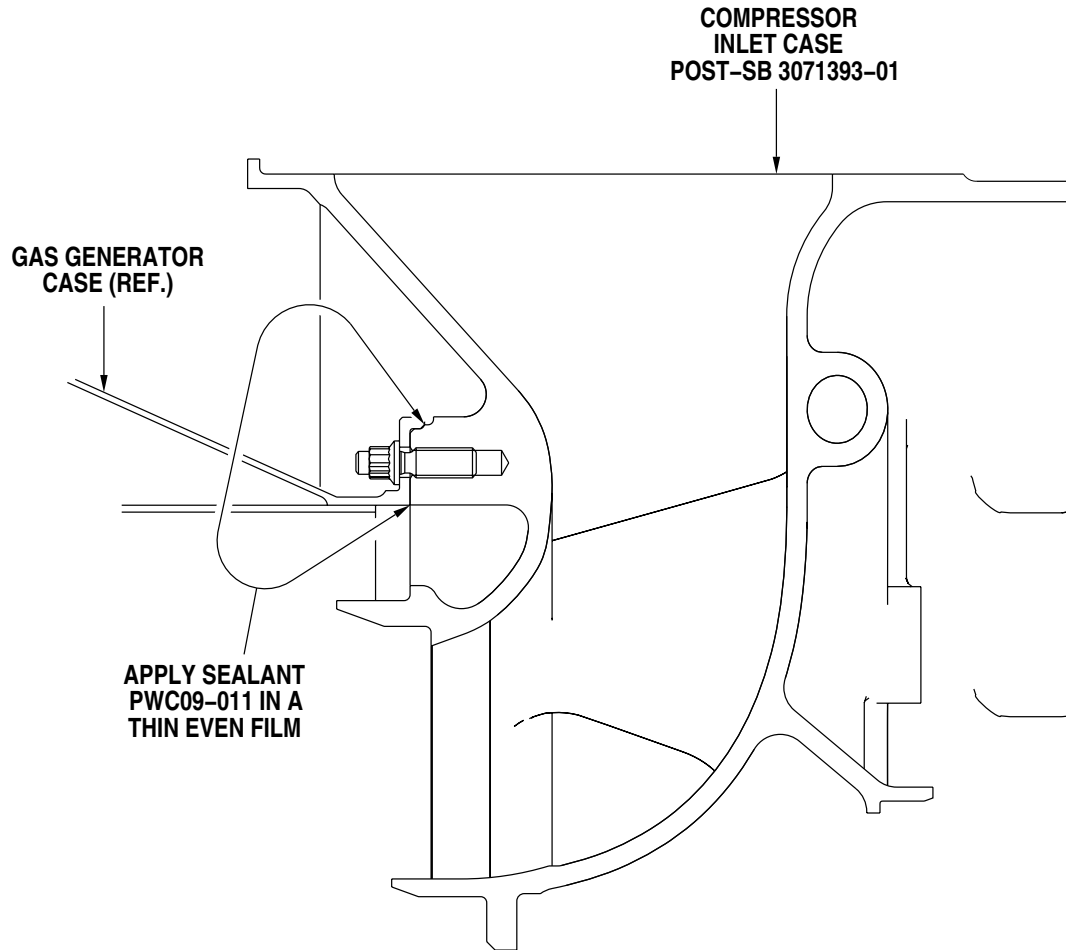
Compressor Inlet Case - Stud Replacement  
Figure 2



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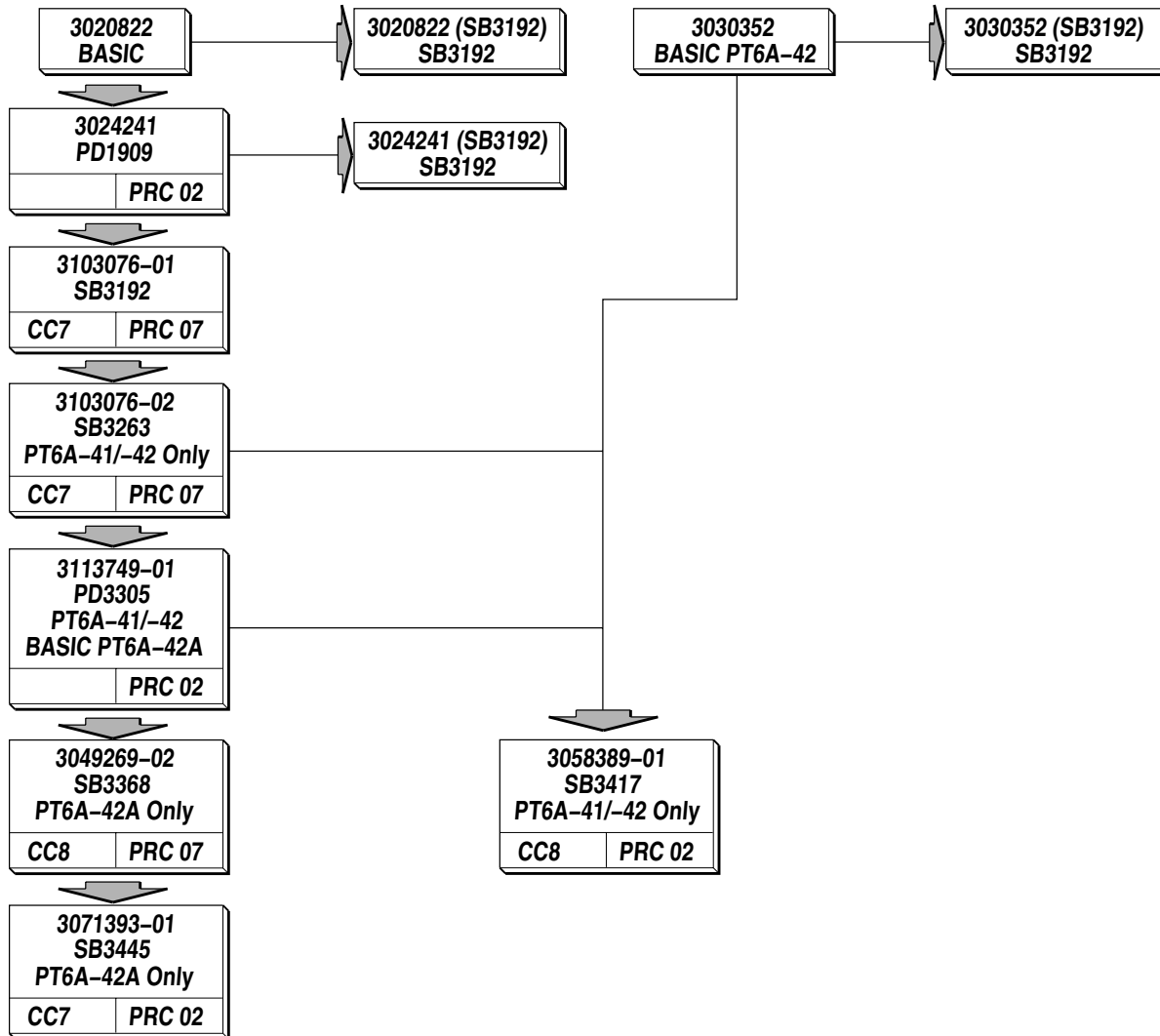
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Installation of Compressor Inlet Case Assembly  
Figure 3

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Compressor Inlet Case Assembly - Part Progression  
Figure 4