

P.T.M. International, Inc.



JT8D GEARBOX HOUSING SPLIT LINE INTEGRAL SEAL

P/N PT010031

COMPONENT MAINTENANCE MANUAL

ORIGINAL ISSUE: JAN 17/95

**72-61-01
TITLE PAGE
SEPT 25/00**

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RECORD OF REVISIONS

REV NO.	REV DATE	DATE FILED	BY	REV NO.	REV DATE	DATE FILED	BY
Orig	Jan 17/95						
1	May 28/97						
2	Aug 19/98						
3	Aug 25/99						
4	Sept 25/00						

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INTRODUCTION

This Component Maintenance Manual describes the JT8D Gearbox Housing Split Line Integral Seal and the applicable procedures for maintaining continued airworthiness. The technical staff at PTM International will be pleased to advise on any questions regarding maintenance of the unit.

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DESCRIPTION AND OPERATION

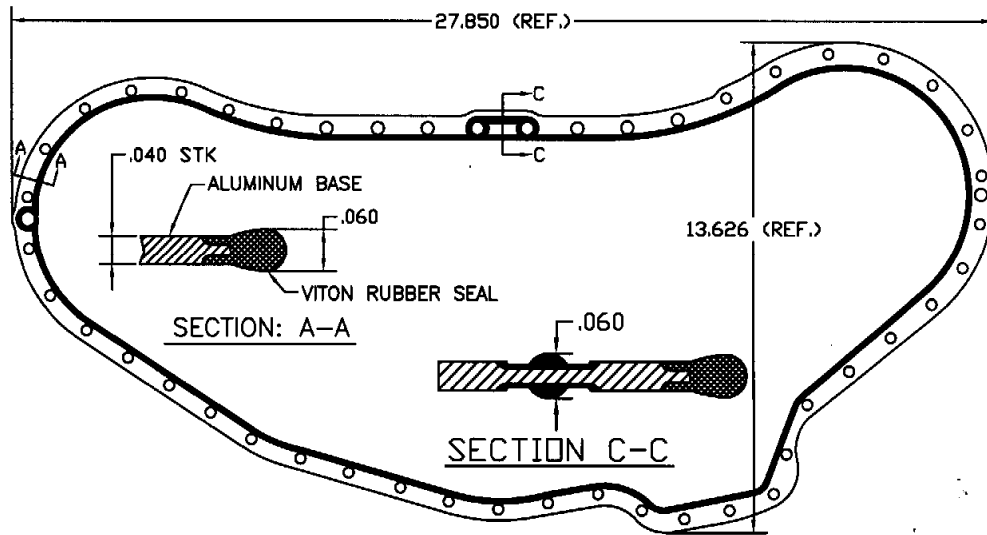
1. Description

- A. The integral seal consists of a .040 in. thick aluminum base with an integral O-ring bonded to the base that bulges to 0.060 in. thick in the free state.
- B. The seal contour is dimensioned to match the contour of the inner portion of the JT8D gearbox housing split-line flange faces.
- C. Seals produced to drawing revision "J" include provisions to assure leak-proof sealing on gearboxes subjected to Pratt & Whitney Service Bulletin 6097. Seals that are pre-revision "J" continue to be airworthy and are suitable for installation in gearboxes that have not been modified in accordance with Service Bulletin 6097.

2. Operation

- A. The seal replaces the OEM paper seal, P/N 537630, and the OEM aluminum/Viton® seal P/Ns 815827 and 815829.
- B. The seal is installed on the gearbox rear housing flange so that the studs that are installed in the flange protrude through the holes in the seal. When the cover is installed and the fasteners torqued, the 0.040 in. aluminum base provides for a controlled 0.020 in. compression of the seal against the flange surface. This provides an effective seal against leaks with a margin of safety in case of partial loss of fastener torque.

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Integral Seal
Figure 1

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TESTING

1. Procedure

- A. Testing of the Integral Seals as a component is not required. Note, however, that normal checking for gearbox oil leaks during engine test is still required.

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DISASSEMBLY

1. Procedure

- A. The Integral Seal is not subjected to disassembly.

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CLEANING

1. General:

WARNING: ADEQUATE VENTILATION AND PROTECTION SHALL BE PROVIDED FOR PERSONNEL EXPOSED TO VAPORS AND FUMES RESULTING FROM CLEANING OPERATIONS USING HYDROCARBON SOLVENTS OR OTHER CLEANING AGENTS. PRECAUTION SHALL BE EXERCISED WHENEVER NECESSARY TO PREVENT FIRE OR EXPLOSION HAZARDS PRODUCED BY FLAMMABLE FLUIDS.

2. Cleaning Agents

Stoddard Solvent mineral spirits. (Federal specifications P-D-680) or equivalent.

3. Cleaning Procedure

CAUTION: AVOID IMPOSING EXCESSIVE FORCE THAT COULD PULL THE RUBBER SEAL FROM THE BASE.

Thoroughly clean in Stoddard Solvent mineral spirits using non-abrasive brushes or rags.

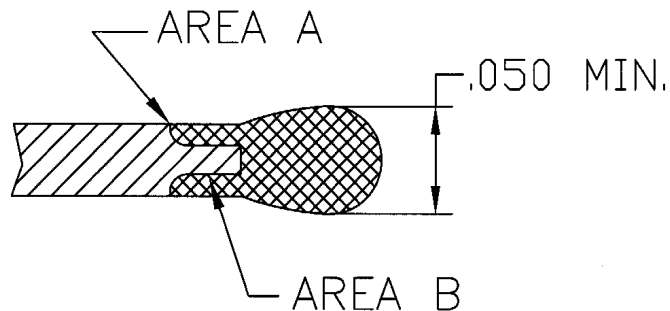
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CHECK

1. Check Procedure
 - A. Visually check the aluminum base for surface corrosion and damage. Slight surface corrosion and external damage may be treated as detailed in Repair No. 1. Seals with permanently bent aluminum bases should be discarded.
 - B. Inspect seal thickness for permanent deformation. Minimum Limit = 0.050 in.
 - C. Examine the rubber for cuts, scores, and similar damage. Replace seals exhibiting such damage
 - D. Examine the seal for disbonding of rubber from aluminum base. See Figure 2. Random short lengths (less than 1 inch) of separation of the rubber from the inside surfaces of the aluminum base are acceptable (Area A of Figure 2). Disbonding and separation of the rubber from the face of the step machined in the aluminum base is unacceptable (Area B of Figure 2). Replace seals exhibiting such separation.



**Disbonding Limits
Figure 2**

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REPAIR

1. Repair No. 1 - Repair of Minor Surface Corrosion or Wear
 - A. Materials
 - (1) Anodize touch up solution
 - B. Repair Procedure
 - (1) Polish out slight external damage with a smooth hone or grade 400 or finer emery cloth.
 - (2) Treat areas where anodize has been removed with anodize touch up per PWA SPOP 42.

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ASSEMBLY (INCLUDING STORAGE)

1. Assembly
 - A. No assembly procedures are applicable to the integral seals.
2. Storage
 - A. Enclose the unit in a Kraft paper envelope or equivalent. Store in a manner that will protect and retain the aluminum base in a flat condition and will avoid excessive compression of the rubber seal.

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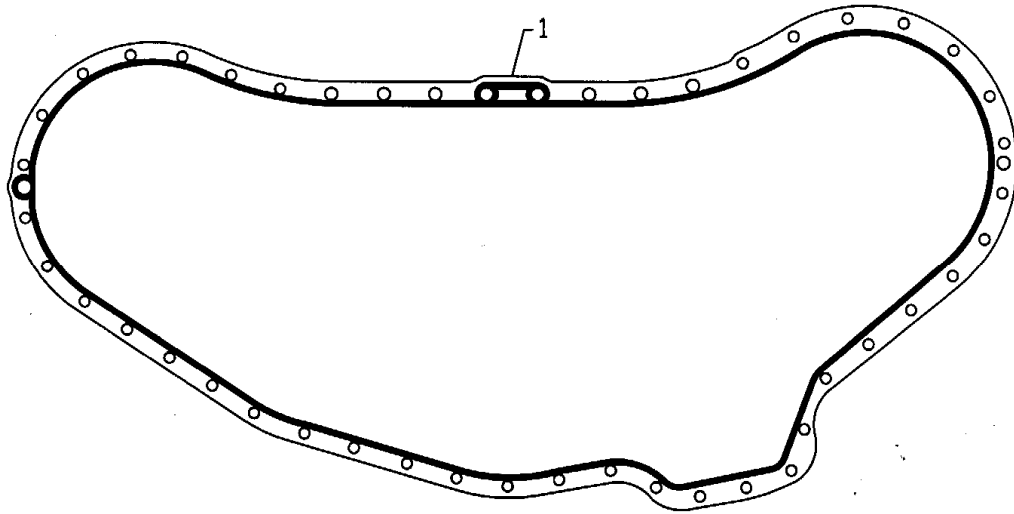
SPECIAL TOOLS, FIXTURES AND EQUIPMENT

1. No special tools and equipment are required for maintenance of the unit.

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Integral Seal
Figure 1 -IPL

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FIG ITEM	PART NUMBER	AIRLINE PART NO.	NOMENCLATURE	EFF CODE	UNIT PER ASSY
1			Integral Seal		
1	PT010031		Integral Seal		RF