



SERVICE BULLETIN

ENGINE - MAIN GEARBOX ASSEMBLY - PROVIDE AN IMPROVED FRONT DEOILER BALL BEARING AND A
NEW HOUSING - CATEGORY CODE 5 - MOD.ENG-72-0244

1. Planning InformationA. Effectivity

- (1) Aircraft: (a) Airbus A320, A321
- (2) Engine: (a) V2500-A1 Engines prior to Serial No.V0362
(b) V2527-A5 Engines prior to Serial No.V10204
(c) V2530-A5 Engines prior to Serial No.V10204
(d) V2533-A5 Engines prior to Serial No.V10204

NOTE: The Serial Number data shown is of a preliminary nature and is provided for advanced planning only. A future revision to this Service Bulletin will confirm final serial number effectivity.

B. Reason

(1) Condition

- (a) There have been five engine removals from service because of malfunction of the front deoiler bearing. The malfunction of the bearing manifested by: with scavenge filter clogging and significant oil loss in flight and or magnetic chip detector contamination.

The bearing, which were removed/or cause, were all from the same vendor SKF.

One bearing was rejected with 10,000 hours. The other bearings were rejected with approximately 4000 hours

(2) Background

- (a) Analytical data review and detailed inspection of bearings removed from service identified a possible distortion of the bearing outer race under operating conditions

(3) Objective

To introduce a new bearing housing and a new bearing with improved life.

(4) Substantiation

Analytical data and experience with improved M50 material over 100CR6 in other engine locations and on other engine models has demonstrated improved life

V2500-ENG-72-0244



(5) Effects of Bulletin on Workshop Procedures

Removal/Installation	Not affected
Disassembly/Assembly	Affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

C. Description

(1) The changes introduced by this Bulletin are as follows:

The material of the bearing cage is changed from bronze to steel and the material of the balls, inner and outer races is changed from 100CR6 to M50(AMS6491)

The flanges of the ball bearing outer race and bearing housing are modified to increase the number of the attaching points from 3 to 6

D. Approval

The part number changes and part modifications described in Section 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulation and are FAA-APPROVED for the Engine Model listed.

E. Compliance

Category Code 5

Accomplish when the engine is disassembled sufficiently to afford access to the affected subassembly (i.e. modules, accessories, components, build groups) and to all affected spare subassemblies.

F. Manpower

Estimated man-hours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In service:	
(2) At overhaul	Not applicable (Parts are accessible at overhaul)

V2500-ENG-72-0244



SERVICE BULLETIN

G. Material - Price and Availability

- (1) Modification Kit is not provided
- (2) See "Material information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Not affected

I. Weight and Balance

- | | |
|-------------------|---|
| (1) Weight change | Negligible |
| (2) Moment arm | No effect |
| (3) Datum | Engine front mount centerline
(Powerplant Station (P.P.S) 100) |

J. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

K. References

- (1) Internal Reference No.

EC95VF002

EC95VF002B

- (2) Other References

The V2500-Engine Manual (E-V2500-1IA) Chapter/section 72-00-60 Removal 2 and Installation 3.

The V2500-Engine Manual (E-V2500-1IA) Chapter/section 72-60-10 Assembly.

The V2500-Engine Manual (E-V2500-1IA) Chapter/section 72-60-29 Assembly/Disassembly.

L. Other Publications Affected

- (1) V2500 Engine Illustrated Parts Catalog, (S-V2500-1IA and S-V200-2IA)Chapter/Section 72-60-29.
- (2) V2500 Engine Manual (E-V2500-1IA) Chapter/section 72-60-29 Assembly, Cleaning, Inspection, Repair.

V2500-ENG-72-0244



2. Accomplishment Instructions

A. Rework instructions

None

B. Disassembly Instructions.

- (1) Remove the tubes and the electrical Harnesses from the deoiler casing by the approved procedure in Reference (1) Chapter/section 72-00-60, Removal-02
- (2) Remove the deoiler casing and the deoiler gear and impellor by the approved procedure in Reference (2) Chapter/section 72-60-10.
- (3) Disassemble the deoiler gear and impellor assembly by the approved procedure in Reference (3) Chapter/Section 72-60-29, Disassembly. It is not necessary to remove the rear bearing from the impellor shaft.

C. Assembly Instructions. See Figure 1

- (1) Install the new ball bearing in the new bearing housing by the approved procedure in Reference (3) Chapter/Section 72-60-29, Assembly .
- (2) Install the six nuts which attach the ball bearing outer race to the new bearing housing. Torque to 85 to 95 lbfin. (9,604 to 10,734 Nm).
- (3) Install the new bearing housing with the new bearing on the deoiler gear by the approved procedure in Reference (3) Chapter/Section 72-60-29, Assembly
- (4) Complete the assembly of the deoiler gear and impeller by the approved procedure in Reference (3) Chapter/Section 72-60-29, Assembly.
- (5) Install the deoiler gear and impellor assembly, and the deoiler casing to the gearbox by the approved procedure in Reference (2) Chapter/Section 72-60-10, Assembly.
- (6) Install the tubes and the electrical Harnesses to the deoiler casing by the approved procedure in Reference (1), Chapter/section 72-00-60, Installation-03

D. A Record of accomplishment is necessary.

V2500-ENG-72-0244



SERVICE BULLETIN

3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with this Bulletin

None

B. Parts affected by this Bulletin

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instruction Disposition
4T0085 (72-60-29)	1	-	.Bearing, Ball	4T0080 (01-250)	(A) (B) (S1)
4T0087 (72-60-29)	Ref	-	.Bearing, Ball	4T0081 (01-250)	(A) (B) (S1)
4T0088 (72-60-29)	Ref	-	.Bearing, Ball	4T0083 (01-250)	(A) (B) (S1)
4B0315 (72-60-29)	1	-	.Housing, A/O deoiler	4B0088 (01-390)	(A)(S1)(B)
MS51990 E105P (72-60-29)	6	-	..Ring, Lock	MS51990 E105P (01-410)	(C)(D)
MS51551 C205-9 (72-60-29)	6	-	..Stud	MS51551 C205-9 (01-410)	(C)(D)
4W0002 (72-60-29)	6	-	.Nut, Self Lock ing Dbl. Hex.	4W0002 (01-270)	(C)(D)

C. Instructions/Disposition Code Statements:

- (A) New parts will be available for sale end of 1996.
- (B) Old part will no longer be available for sale.
- (C) Parts are available for sale.
- (D) Parts coded (D) change only the quantity from 3 to 6
- (S1) Old and new parts coded (S1) are interchangeable in set only.

V2500-ENG-72-0244



International Aero Engines

SERVICE BULLETIN

NOTE: The estimated 1996 Unit Prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.

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V2500-ENG-72-0244

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Page 7

