



400 MAIN STREET, MAIL STOP 121-10
EAST HARTFORD, CT 06108, USA.
TELEPHONE:- 860 565 5515
FAX:- 860 565 0600

DATE: Mar.12/08

P.O. BOX 31, DERBY
TELEGRAMS - 'ROYCAR' DERBY
TELEX - 37645
TELEPHONE:- 44 (0) 1332 242424
FAX:- 44 (0) 1332 249936

V2500-A5/D5 SERIES PROPULSION SYSTEMS NON-MODIFICATION SERVICE BULLETIN

Printed in Great Britain

This document transmits Revision 1 to Service Bulletin V2500-ENG-72-0544 and Revision 1 to the Supplement

Document History

Service Bulletin Revision Status

Initial Issue Mar.26/07

Service Bulletin Revision 1

Remove	Incorporate	Reason for change
All pages of the Service Bulletin	Pages 1 to 7 of the Service Bulletin	To change Engine Serial Number V10652 to V10637.
All pages of the Supplement	Page 1 of the Supplement	To change Engine Serial Number V10652 to V10637.

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CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

If any have not been received please advise Customer Data Services, Rolls-Royce plc, Derby, England

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ENGINE – IN SHOP ACTION FOR ENGINES THAT HAVE A CERTAIN POPULATION OF PN 2A1170
NUMBER 3 BEARINGS INSTALLED– NON-MODIFICATION SERVICE BULLETIN

1. Planning Information

A. Effectivity Data

- (1) (For Airbus A319)

Engine Models Applicable

V2522-A5, V2524-A5, V2527M-A5

Engine Serial No. – See Appendix Table 1 for serial number applicability.

- (2) (For Airbus A320)

Engine Models Applicable

V2527-A5, V2527E-A5

Engine Serial No. – See Appendix Table 1 for serial number applicability.

- (3) (For Airbus A321)

Engine Models Applicable

V2530-A5, V2533-A5

Engine Serial No. – See Appendix Table 1 for serial number applicability.

- (4) (For Boeing MD-90)

Engine Models Applicable

V2525-D5, V2528-D5

Engine Serial No. – See Appendix Table 1 for serial number applicability.

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

To reduce the possibility of In Flight Shut Downs (IFSD) due to No. 3 bearing distress.

(1) Problem:

A population of No. 3 bearings is associated with a known bearing ball manufacturing issue. The specific bearing serial numbers with associated Engine serial numbers are listed in table 1.

(2) Background:

All Operators Wire (AOW) 1071 describes a field issue with a certain population of MRC No. 3 bearings, P/N 2A1170. Engineering risk review concluded that no fleet action was required, but recommended a reduced MCD inspection interval of 125 hours to reduce the IFSD rate of affected engines. This recommendation was implemented in Non-Modification Service Bulletin (NMSB) V2500-ENG-72-0525. Although removal of bearings from service is not a requirement from the risk analysis, IAE has decided to recommend removal of affected bearings.

(3) Objective:

Identify the suspect Engine serial numbers with Bearing serial numbers that replacement is recommended.

(4) Effects of Bulletin on:

(a) Removal/Installation:

Not applicable.

(b) Disassembly/Assembly:

Not applicable.

(c) Cleaning:

Not applicable.

(d) Inspection/Check:

Not applicable.

(e) Repair:

Not applicable.

(f) Testing:

Not applicable.

(5) Supplemental Information

None.

D. Description

Appendix 1 Table 1 lists a population of engines known to have had a certain population of part number 2A1170 No.3 bearings installed. This population of No.3 bearings is associated with a known bearing ball manufacturing issue. Between July 2004 and January 2007, a total of three in-flight shutdowns and ten unscheduled engine removals have been linked to this manufacturing issue.

This Non-Modification Service Bulletin recommends replacement of the P/N 2A1170 No. 3 bearing from affected engines with a new P/N 2A1170 No.3 bearing.

E. Compliance**Category 6**

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

F. Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.

The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model listed.

G. Manpower**(1) In Service**

Not Applicable.

(2) At Overhaul

Not Applicable.

H. Weight and Balance**(1) Weight Change**

None.

(2) Moment Arm

No Effect.

(3) Datum

Engine Front Mount Centerline (Power Plant Station (PPS) 100).

I. Electrical Load Data

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

J. Software Accomplishment Summary

Not Applicable.

K. References

- (1) IAE V2500 All Operators Wire (AOW) 1071.
- (2) IAE V2500 Service Bulletin V2500-ENG-72-0525 (Non-Modification Service Bulletin – Engine – Magnetic Chip Detector (MCD) Inspections For Engines With A Certain Population Of Engines With P/N 2A1170 Number 3 Bearings Installed).
- (3) V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA and S-V2500-7IB), Chapter/Section 72-32-24-01-100.
- (4) V2500 Engine Manual (E-V2500-1IA) or (E-V2500-3IA), Chapter/Section.
- (5) V2500 Standard Practices/Processes Manual (E-V2500-1IA) or (E-V2500-3IA).
- (6) Internal Reference No. – 07VC017.
- (7) ATA Locator – 72-32-24.

L. Other Publications Affected

None.

M. Interchangeability of Parts

Old and new parts are directly interchangeable.

N. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (No)

Revision to Table of Limits (No)

Inspection Procedures (No)

2. Material Information

A. Material – Price and Availability

Modification kit is not required.

For Price and availability of spares refer to the supplement of this Service Bulletin.

B. Industry Support Program

Not Applicable.

C. The material data that follows is for each engine.

72-32-24

For V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5, V2525-D5, V2528-D5 Engines:

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR – DISP
01-100	2A1170	1	Bearing, No. 3	-	2A1170	(2) (A)

D. Instructions/Disposition Code Statements:

Parts Modification Conditions

(2) The new part is a replacement part only and cannot be obtained by modification of the old part.

Spare Parts Availability

(A) The new part is available.

E. Tooling – Price and Availability

Special tools are not required to accomplish this Service Bulletin.

F. Reidentified Parts

Not Applicable.

G. Other Material Information Data

Not Applicable.

3. Accomplishment Instructions

A. Number 3 Bearing Replacement

- (1) Replacement of the Part No. 2A1170 No.3 Bearing with a new Part No. 2A1170 No.3 Bearing:

NOTE: Do not replace the No.3 Bearing with another part no. 2A1170 No.3 Bearing that is on the list included in the Appendix Table 1.

- (a) Replace the removed Part No. 2A1170 No.3 Bearing Assembly with a replacement part no. 2A1170 No.3 Bearing Assembly.
- (b) The removed Part No. 2A1170 No.3 Bearing must be scrapped locally. A photograph or digital image of the mutilated Bearing and a copy of the scrap tag must be provided to IAE Warranty. Contact IAE Service Representative for Warranty address.

(2) Recording Instructions

- (a) A record of accomplishment is required.

APPENDIX

Table 1: List of engines known to have part number 2A1170 bearings for which bearing replacement is recommended.

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R

ENGINE SERIAL NUMBER	BEARING SERIAL NUMBER
V10011	PCWKAH3886
V10021	PCWKAH7420
V10079	PCWKAH3885
V10097	PCWKAH3873
V10139	PCWKAH6837
V10332	PCWKAH7317
V10429	PCWKAH3686
V10540	PCWKAH7313
V10563	PCWKAH3868
V10613	PCWKAH7309
V10619	PCWKAH6880
V10628	PCWKAH7321
V10637	PCWKAH6848
V10659	PCWKAH6835
V10682	PCWKAH6823
V10738	PCWKAH6838
V10744	PCWKAH3917
V10766	PCWKAH7311
V10795	PCWKAH3887
V10818	PCWKAH6884
V10916	PCWKAH7471
V10918	PCWKAH7167
V10922	PCWKAH6878
V10951	PCWKAH6840
V10987	PCWKAH7177
V10989	PCWKAH7168
V11003	PCWKAH6856
V11024	PCWKAH7326
V11027	PCWKAH6866
V11060	PCWKAH6834
V11082	PCWKAH7315
V11084	PCWKAH6879
V11085	PCWKAH7329
V11093	PCWKAH6822
V11104	PCWKAH7332
V11109	PCWKAH7178
V11111	PCWKAH3923
V11116	PCWKAH6843
V11121	PCWKAH6836
V11123	PCWKAH7320
V11155	PCWKAH6855
V11162	PCWKAH6841
V11166	PCWKAH6854
V11181	PCWKAH3922
V11248	PCWKAH6851

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

ENGINE SERIAL NUMBER	BEARING SERIAL NUMBER
V11262	PCWKAH7336
V11290	PCWKAH3862
V11363	PCWKAH7474
V11514	PCWKAH3890
V11515	PCWKAH3891
V11517	PCWKAH3870
V11518	PCWKAH3889
V11519	PCWKAH3877
V11520	PCWKAH3861
V11521	PCWKAH3892
V11522	PCWKAH3871
V11523	PCWKAH3867
V11524	PCWKAH3880
V11525	PCWKAH3876
V11526	PCWKAH3878
V11527	PCWKAH3872
V11528	PCWKAH3869
V11529	PCWKAH3874
V11530	PCWKAH3896
V11531	PCWKAH3894
V11532	PCWKAH3883
V11533	PCWKAH3882
V11534	PCWKAH3895
V11535	PCWKAH3881
V11538	PCWKAH3893
V11540	PCWKAH3863
V11541	PCWKAH3888
V11543	PCWKAH3865
V11550	PCWKAH3875
V11552	PCWKAH3864
V11553	PCWKAH3925
V11554	PCWKAH3924
V11558	PCWKAH6824
V11565	PCWKAH3913
V11567	PCWKAH3884
V11570	PCWKAH3916
V11571	PCWKAH3927
V11573	PCWKAH3921
V11575	PCWKAH3926
V11577	PCWKAH6852
V11578	PCWKAH6842
V11580	PCWKAH6849
V11581	PCWKAH6863
V11584	PCWKAH6864
V11585	PCWKAH6865
V11593	PCWKAH6883
V11595	PCWKAH6882
V11608	PCWKAH6926
V11654	PCWKAH7155
V11666	PCWKAH7161

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ENGINE SERIAL NUMBER	BEARING SERIAL NUMBER
V11667	PCWKAH7172
V11669	PCWKAH6996
V11670	PCWKAH7159
V11671	PCWKAH7171
V11673	PCWKAH7179
V11676	PCWKAH7156
V11677	PCWKAH7152
V11678	PCWKAH7164
V11679	PCWKAH7173
V11681	PCWKAH7175
V11682	PCWKAH7163
V11690	PCWKAH7162
V11694	PCWKAH7157
V11744	PCWKAH7305
V11748	PCWKAH7310
V11749	PCWKAH7331
V11750	PCWKAH7312
V11752	PCWKAH7319
V11753	PCWKAH7328
V11755	PCWKAH7318
V11757	PCWKAH7327
V11759	PCWKAH7325
V11765	PCWKAH7314
V11767	PCWKAH7330
V11771	PCWKAH7307
V11795	PCWKAH7308
V11839	PCWKAH7478
V11842	PCWKAH7479
V11844	PCWKAH7480
V11865	PCWKAH7477
V20053	PCWKAH7316

ENGINE - IN SHOP ACTION FOR ENGINES THAT HAVE A CERTAIN POPULATION OF PN 2A1170
NUMBER 3 BEARINGS INSTALLED- NON-MODIFICATION SERVICE BULLETIN

Supplement

V2500 ALL

1. Modification Kit

A. There is no kit provided to do this Service Bulletin.

2. Material Cost

NOTE: The prices shown are for estimating purposes only and as such are given in good faith without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current Price Catalog for current prices.

A. Contact IAE for the price of new material.

B. There is no kit provided to do this Service Bulletin.

3. New Production Parts

New Production Part Number	Description	Unit Price US Dollars
2A1170	Bearing, No. 3	Contact IAE