P U B L I C A T I O N T R A N S M I T T A L

International Aero Engines

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

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

DATE: May.27/05

V2500 A1/A5/D5 SERIES PROPULSION SYSTEM SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin EV2500-70-0895 and the Initial Issue of the Supplement

Bulletin Initial Issue

Remove	Incorporate	Reason for change
	Page 1 and 2 of the Summary	Initial issue
	Pages 1 to 6 of the Service Bulletin	Initial issue
	Page 1 and 2 of Appendix 1	Initial issue

Supplement Initial Issue

Remove	Incorporate	Reason for change
	Page 1	Initial issue

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
If any have not been received please advise Publication Services, Rolls-Royce plc, Derby, England

LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin are as follows:

Page	Revision Number	Revision Date
Summary		
1		May 27/05
2		May 27/05
Bulletin		
1		May 27/05
2		May 27/05
3		May 27/05
4		May 27/05
5		May 27/05
6		May 27/05
Appendix 1		
1		May 27/05
2		May 27/05
Supplement		
1		May 27/05

International Aero Engines

SERVICE BULLETIN

INFORMATION - ENGINE - NUMBER 4 BEARING RETAINING NUT REDESIGN

SUMMARY

1. PLANNING

A. EFFECTIVITY

Engines V2500-A1 Serial Nos. V0001 through V0361.

Engines V2500-A5 Serial Nos. V10001 through V12153.

Engines V2500-D5 Serial Nos. V20001 through V20285.

B. CONCURRENT REQUIREMENTS

There are no concurrent requirements.

C. REASON/PROBLEM

Problem

There have been numerous occasions at production that the No. 4 bearing nut has generated thread like silver plate peeling. At each occasion the nut was replaced with one that provided clearance to prevent plate peeling.

Background

Engineering investigation determined the cause of the silver plate peeling was interference between the threads of the nut and the bearing support at the worst case tolerance conditions.

Objective

Design the No. 4 bearing nut to increase the clearance in the threads to prevent interference during assembly at all tolerance conditions.

D. DESCRIPTION

Provide a new redesigned number 4 Bearing Retaining Nut.

E. COMPLIANCE

Category 7

Accomplish when supply of superseded parts has been depleted.

F. MANPOWER

(1)In Service

Not applicable.

(2)At Overhaul

Not applicable.

(3)Total Necessary Man-Hours

Not applicable.

2. MATERIAL INFORMATION

Parts Prices

A. The estimated price of new material to do this Service Bulletin using new replacement parts is $1,500.00.

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

International Aero Engines

SERVICE BULLETIN

INFORMATION - ENGINE - NUMBER 4 BEARING RETAINING NUT REDESIGN

Printed in Great Britain

1. Planning Information

A. Effectivity

(1) Airbus A319

Engine Models

(a) V2522-A5, V2524-A5, V2527M-A5 Engine Serial Nos. V10001 thru V12153.

(2) Airbus A320

Engine Models

(a) V2500-A1 Engine Serial Nos. V0001 thru V0361.

(b) V2527-A5, V2527E-A5 Engine Serial Nos. V10001 thru V12153.

(3) Airbus A321

Engine Models

(a) V2530-A5, V2533-A5 Engine Serial Nos. V10001 thru V12153.

(4) Boeing MD-90

Engine Models

(a) V2525-D5, V2528-D5 Engine Serial Nos. V20001 thru V20285.

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

(1) Problem

There have been numerous occasions at production that the No. 4 bearing nut has generated thread like silver plate peeling. At each occasion the nut was replaced with one that provided clearance to prevent plate peeling.

(2) Background

Engineering investigation determined the cause of the silver plate peeling was interference between the threads of the nut and the bearing support at the worst case tolerance conditions.

(3) Objective

Design the No. 4 bearing nut to increase the clearance in the threads to prevent interference during assembly at all tolerance conditions.

(4) Substantiation

Analytical stress analysis of the nut and bearing support thread assembly has been completed. It has shown the stress level within the thread materials to be within acceptable limits.

Two nut/support combinations with worse case thread clearance were tested, both were torque at the Bill of Material (BOM) torque and at 2x BOM torque. Test results were acceptable. There was no evidence of thread deformation or silver plate distress.

(5) Effect of Bulletin on:

(a) Removal/Installation

Not affected.

(b) Disassembly/Assembly

Not affected.

(c) Cleaning

Not affected.

(d) Inspection/Check

Not affected.

(e) Repair

Not affected

(f) Testing

Not affected.

(6) Supplemental Information

None.

D. Description

Provide a new redesigned number 4 Bearing Retaining Nut.

E. Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

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 Centreline (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) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, 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, S-V2500-7IB), Chapter/Section 72-42-32 Figure Item 020.

(2) Internal Reference No. - 01VB001.

(3) ATA Locator - 72-42-32.

L. Other Publications Affected

(1) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, 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, S-V2500-7IB), Chapter/Section 72-42-32 Figure Item 020.

(2) V2500 Engine Manuals (E-V2500-1IA and E-V2500-3IA), Chapter/Section 72-42-32, Cleaning, Inspection and Repair, to add the new part.

M. Interchangeability of Parts

Old and new parts are directly interchangeable

N. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (Yes)

Added Data (No)

Revision to Table of Limits (No)

Inspection Procedures (No)

O. General Information

The Material Information section of this Service Bulletin provides the latest information concerning the availability of the affected parts.

2. Material Information

A. Industry Support Program

Not applicable.

B. The Material Data That Follows Is For Each Engine

72-42-32

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

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01-020	2A3956	1	.Nut, Bearing Retaining	-	2A0064	(2)(A)(I)

C. Instructions/ Disposition Code Statements:

Parts Modification Conditions

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

Spare Parts Availability

(A) The new part is available.

Cleaning, Inspection and Repair Information

(I) The cleaning, inspection and repair requirements are the same for the old and new part. The applicable engine manuals will be revised.

D. Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

E. Reidentified Parts

Not applicable.

F. Other Material Information Data

Not applicable.

3. Accomplishment Instructions

Not applicable.

APPENDIX 1

Parts Progression To Show the Changed Part in Relation to Other Parts

MODIFICATIONS	PART NUMBER CHANGE
BASELINE	2A0064
V2500-ENG-70-0895	2A3956

pw0b514717

FAMILY TREE - NUMBER 4 BEARING RETAINING NUT CATALOG SEQUENCE NUMBER 72-42-32 FIG 01 ITEM 020
Chart A

International Aero Engines

SERVICE BULLETIN

INFORMATION - ENGINE - NUMBER 4 BEARING RETAINING NUT REDESIGN

SUPPLEMENT - PRICES AND AVAILABILITY

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 Catalogue for current prices.

   A. The estimated price of new material to do this Service Bulletin using new replacement parts is $1,500.00.

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

3. New Production Parts:

New Production Part No.	Description	Unit Price US Dollars
2A3956	.Nut, Bearing Retaining	1,500.00