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V2500-A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

Printed in Great Britain

This document transmits the Initial Issue of Service Bulletin EV2500-72-0444 and the Initial Issue of the Supplement

Bulletin Initial Issue

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Supplement Initial Issue

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LIST OF EFFECTIVE PAGES

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Printed in Great Britain



ENGINE – ACTUATING MECHANISM HP COMPRESSOR VARIABLE VANES – INTRODUCTION OF A STAGE 4
AND 5 CONNECTOR BRACKET LOCATION DOWELS WITH REDUCED LENGTH – REWORK

1. Planning Information

A. Effectivity

- (1) Airbus A319
V2522-A5, V2524-A5, V2527M-A5 Engines
- (2) Airbus A320
V2527-A5, V2527E-A5 Engines
- (3) Airbus A321
V2530-A5, V2533-A5 Engines
- (4) Boeing – Longbeach Division MD-90
V2525-D5, V2528-D5 Engines

B. Concurrent Requirements

This Service Bulletin should only be fitted to engines which do not embody IAE Service Bulletins ENG-72-0385 or ENG-72-0416 (See 1.N. References).

C. Reason

(1) Problem

Cracking of the Stage 4 and 5 VSV control rod brackets may occur. The problem has been attributed to the shank length of the locating dowel being too long. This causes fretting between the actuator bracket and the dowel, which in turn leads to fretting between the bracket and unison ring which results in high cycle fatigue.

(2) Evidence

The problem has been observed on engines in service.

(3) Substantiation

The changes introduced by this Service Bulletin have been the subject of extensive engineering analysis.



(4) Objective

Incorporation of this Service Bulletin (Modification) is designed to maintain engine reliability.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

Affected (existing Repair Schemes will be updated to add the new Part Number).

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

- (1) This Service Bulletin introduces changes to the Stage 4 and 5 Connector Bracket Location Dowels:

The changes introduced are:

- (a) A revised dowel is introduced, similar to the existing item except for a reduction in the maximum dowel shank length such that a minimum clearance of 0,1 mm. is maintained between the bottom of the dowel and the unison ring boss.

- (2) Existing Location Dowels may be reworked. See Figure 1.



E. Compliance

Category Code 6

Accomplish when the sub assembly (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

The part number changes and/or part modifications described in sections 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA Approved for the engine models listed.

G. Manpower

In service

Not applicable.

At overhaul

Not affected.

NOTE: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material Price and Availability

Modification kit not required; parts supplied as single line items.

For prices and availability of future spares see Supplement to this Bulletin.

I. Tooling Price and Availability

Special tools are not required.

J. Industry Support Information

None.

K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.



(3) Datum

Engine Front Mount Centreline (Power Plant Station – PPS 100).

L. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

M. Software Accomplishment Summary

Not applicable.

N. References

(1) IAE V2500 Service Bulletin – ENG-72-0385

Engine – Actuating Mechanism HP Compressor Variable Vanes – Introduction of revised Bridge Piece Assemblies and Unison Ring Assemblies with increased Dowel Location.

(2) IAE V2500 Service Bulletin – ENG-72-0416

Engine – Actuating Mechanism HP Compressor Variable Vanes – Introduction of revised Bridge Piece Assemblies and Unison Ring Assemblies with increased Dowel Location (rework).

(3) Internal Reference No. – 02VR015.

(4) ATA Locator – 72-41-34.

O. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-34 will be revised.

(2) Engine Manual, Chapter/Section 72-41-30, Assembly.

(3) Engine Manual, Chapter/Section 72-41-34, Cleaning and Inspection.

P. Interchangeability of Parts

Not affected.



2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

All Engines

72-41-34

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04366	6A8208	2	.Dowel,hollow securing	-	UP10817	(S1)(1D)
05366	6A8208	2	.Dowel,hollow securing	-	UP10817	(S1)(1D)

C. New production parts:

None.

D. Instructions disposition codes:

(S1) Old and new parts are freely and fully interchangeable.

(1D) Old parts may be reworked and reidentified to the new part number.



3. Accomplishment Instructions

A. Rework Instructions

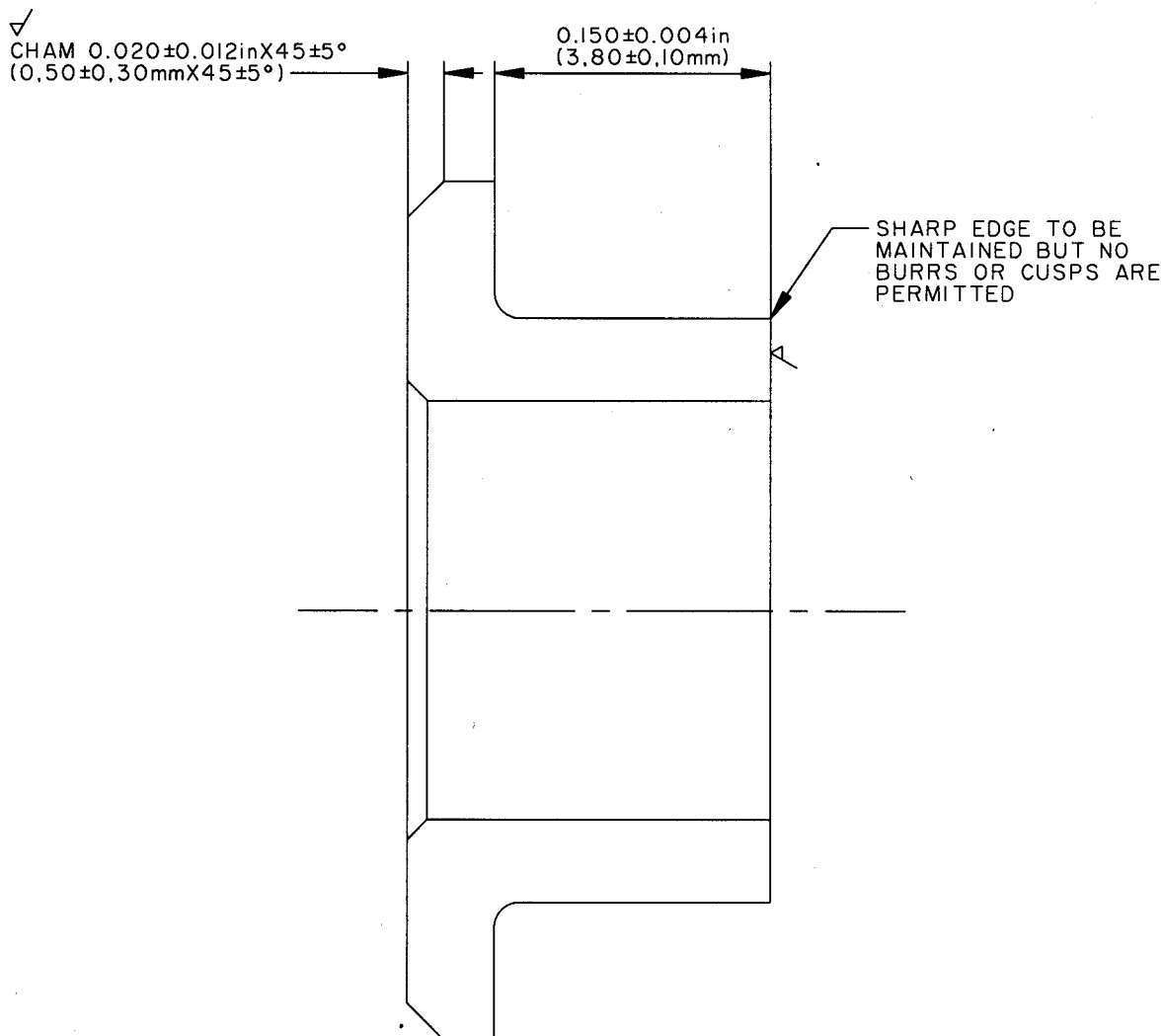
Refer to Figure 1 for new machining dimensions of the Location Dowel.

B. Assembly Instructions

The Location Dowels introduced by this Service Bulletin are freely and fully interchangeable with the existing. Remove and install in accordance with current overhaul procedures or maintenance practices (Engine Manual, Chapter/Section 72-41-00, Disassembly and Assembly).

C. Recording Instructions

A record of accomplishment is necessary.



REWORK OF DOWEL

dem0001407

MACHINE WHERE SHOWN \checkmark
MACHINED SURFACE FINISH TO BE 125 MICROINCHES (3.2 MICROMETRES)
REMOVE THE SHARP EDGES $0.012 \pm 0.008 \text{ in}$ ($0.30 \pm 0.20 \text{ mm}$).

Rework of Dowel
Figure 1



ENGINE - ACTUATING MECHANISM HP COMPRESSOR VARIABLE VANES - INTRODUCTION OF A STAGE 4
AND 5 CONNECTOR BRACKET LOCATION DOWELS WITH REDUCED LENGTH - REWORK

SUPPLEMENT - PRICES AND AVAILABILITY

The prices if 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.

1. Modification Kit:

Not applicable.

2. New Production or Rework parts

Part No.	Desc.	Unit Price
		US Dollars
6A8208	Dowel	Price supplied on request

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

