



ENGINE - HP COMPRESSOR - STAGE 9 ROTOR BLADES WITH MODIFIED PLATFORM PROFILE -
CATEGORY CODE 7 - MOD.ENG-72-0174

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engines prior to Serial No.V0348

B. Concurrent Requirements

None

C. Reason

(1) Condition

Stage 9 HP compressor rotor blade platforms have a resonant vibratory condition which may be induced by the stage 8 stator vanes.

(2) Background

SBE-V2500-ENG-72-0109 Introduced cut back of the trailing edge corner at the rear side of the platform.

This Service Bulletin introduces blades having a modified platform profile which eliminates the need for the platform cut back except for the locking blades.

(3) Objective

The changes incorporated in this Service Bulletin are designed to increase the reliability of the stage 9 HP compressor rotor blades.

(4) Substantiation

Stress modelling and mechanical rig testing were employed to measure frequencies and stress levels. This confirmed that the platform resonant frequency is outwith the engine operating range, except for the LH locking blade. This blade, therefore, requires the retention of the cut back platform.

(5) Effect of Bulletin on Workshop Procedures:

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

(6) Supplemental Information

None.

D. Description

This Service Bulletin introduces stage 9 HP compressor rotor blades with the platform thickness tapered off in two steps from the dovetail to the trailing edge. This change eliminates the need to cut back the rear trailing edge platform corner. Accordingly, the modified blades feature a full platform. The exceptions to this are the LH and RH locking blades. The LH locking blade retains the rear cut-back introduced by SBE-V2500-ENG-72-0109. The RH locking blade retains the front cut-back introduced by SBE-V2500-ENG-72-0172.

The partial shot-peening currently applied to the underside of the rear platform of all blades is extended to the trailing edge.

An angled cut-out on the LH locking blade sealing wing is introduced to eliminate a cusp situated between the dovetail rear profile and rear corner of the locking slot.

E. Approval

The part number changes and/or part modifications described in Section 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 Model listed.

F. Compliance

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Accomplish when supply of superseded parts has been depleted.

G. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At Overhaul	Not affected

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H. Material - Price and Availability

- (1) Modification kit not required.
- (2) See "Material Information" section for prices and availability of future spares.

I. Tooling - Price and Availability

Special tools are not required.

J. Weight and Balance

- (1) Weight change Plus 0.1 lb (0,061 kg)
- (2) Moment arm 22.1 in. (561 mm) rearward of datum
- (3) Datum Engine front mount centreline
(Powerplant Station - PPS 100)

K. Electrical Load Data

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

L. References

- (1) Internal Reference No.

EC91VR018

EC91VR018A

- (2) Other references

Service Bulletin V2500-ENG-72-0109 (Engine - HP compressor - Stage 9 compressor rotor blades with cut back platform).

Service Bulletin V2500-ENG-72-0172 (Engine - HP compressor blades - Stages 9 to 12 rotor blades with platform corner cropped).

M. Other Publications Affected

- (1) V2500 Illustrated Parts Catalog, 72-41-15
- (2) V2500 Engine Manual, 72-41-15 Cleaning and Inspection/Check
- (3) V2500 Engine Manual, 72-41-15 Repair VRS 6015, VRS 6071 and VRS 6152, to add the new parts.

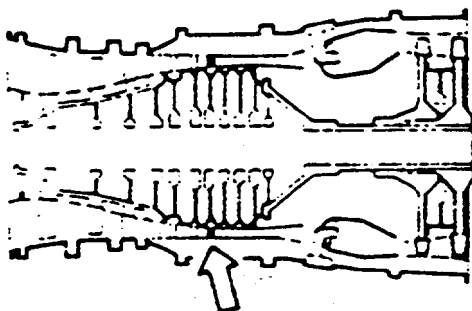
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M. Other Publications Affected

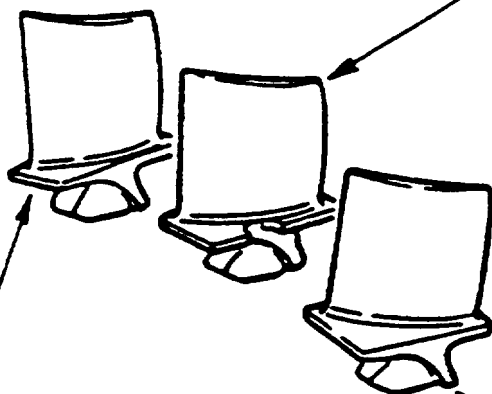
- (1) V2500 Engine Illustrated Parts Catalog, 72-41-15
- (2) V2500 Engine Manual, 72-41-15 Cleaning and Inspection/Check
- (3) V2500 Engine Manual, 72-41-15 Repair VRS 6015, VRS 6071 and VRS 6152, to add the new parts.
- (4) V2500 Engine Manual (E-V2500-1IA), 72-41-10, Assembly-03 Config-1.

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MODULE 40

REMOVE 6A5638 BLADE AND
INSTALL 6A5637 BLADE



REMOVE 6A4365C01 AND
6A4365C02 BLADES AND
INSTALL 6A4419C01 AND
6A4419C02 BLADES

REMOVE 6A4366 BLADE AND
INSTALL 6A4420 BLADE

E1149

Location of stage 9 compressor blade
Fig.1

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2. Accomplishment Instructions

A. Rework Instructions

Not applicable

B. Assembly Instructions

- (1) The new stage 9 HP compressor rotor blades introduced by this Service Bulletin are interchangeable with in-use stage 9 HP compressor rotor blades.
- (2) Assemble new 6A4420, 6A5637, 6A4419 C01, 6A4419 C01 and 6A4419 C02 stage 9 HP compressor rotor blades by use of approved procedures, Engine Manual, 72-41-10 Assembly.

C. Recording Instructions

- (1) A record of accomplishment is necessary.

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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.)	Instructions Disposition
6A4420 (72-41-15)	2		Blade, LH locking - HP compressor stage 9	6A4366 (02-470)	(A)(B)(S1)
6A5637 (72-41-15)	2		Blade, RH locking - HP compressor stage 9	6A5638 (02-485)	(A)(B)(S1)
6A4419 (72-41-15)	62		Blade - HP compressor Stage 9 (02-500)	6A4365 C01	(A)(B)(S1)
6A4419 C01 (72-41-15)	27 Max		Blade - HP compressor stage 9	6A4365 C01 (02-515)	(A)(B)(S1) (S2)
6A4419 C02 (72-41-15)	27 Max		Blade - HP compressor stage 9	6A4365 C02 (02-517)	(A)(B)(S1) (S2)

C. Instructions/Disposition Code Statements:

(A) New part currently available.

(B) Old part is no longer available.

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

(S2) Alternative parts.

NOTE: The estimated 1994 unit prices 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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