V2500 International Aero Engines

SERVICE BULLETIN

ENGINE - LP COMPRESSOR - INCORPORATION OF HIGH STRENGTH BOLTS FOR ANNULUS FILLER ATTACHMENT

MODEL APPLICATION

V2500-A1

BULLETIN INDEX LOCATOR

72-31-00

Compliance Category Code	Internal Reference No.
4	EC99VJ014

ENGINE - LP COMPRESSOR - INCORPORATION OF HIGH STRENGTH BOLTS FOR ANNULUS FILLER ATTACHEMT

1. Planning Information

A. Effectivity

(1) Aircraft:

(a) Airbus A320

(2) Engine:

(a) V2500-A1 Engines prior to Serial Number V0362

B. Concurrent Requirements

None.

C. Reason

(1) Condition

Several instances of annulus filler front trunnion fracture have occurred on A1 engines.

(2) Background

In order to identify and remove fractured fillers from service, Service Bulletin V2500-ENG-72-0356 has been issued to instruct inspection of all high life V2500 A1 engine annulus fillers. As a follow up, and to improve retention capability of the annulus filler attachment bolts, this Service Bulletin V2500-ENG-72-0362 has been issued.

(3) Objective

To improve retention capability of the annulus filler attachment bolts by introducing high strength bolts.

To reduce burden of inspection requirements introduced by the Service Bulletin V2500-ENG-72-0356.

(4) Substantiation

Analytically substantiated based on the bolt LCF rig test.

(5) Effects of Bulletin on workshop procedure:

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

The changes introduced by this Service Bulletin are as follows;

The material of the bolt which join the front blade retaining and the annulus fillers is changed from steel to nickel alloy. When the annulus filler trunnion fractures the filler will be retained by the attachment bolt. The LCF life of bolts made nickel alloy after the trunnion fracture are more than 900 Cycles.

E. Approval

The Part Number changes and/or part modifications are given in Section 2 and 3 of this Service Bulletin. They obey the applicable Federal Aviation Regulation and are FAA-APPROVED for the engine model listed.

F. Compliance

Category Code 4

Accomplish at the first visit of an engine or module to a maintenance base capable of compliance with the accomplishment instructions regardless of the planned maintenance action or the reason for engine removal.

G. Manpower

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

Venue	Estimated Man-hours
(1) In service	0 Hour 30 Minutes
(2) In shop	No additional time is necessary to do this Service Bulletin

NOTE: It is possible to get access to the parts affected by this Service Bulletin at overhaul.

H. Material - Price and Availability

(1) Modification kit is not required.

(2) The bolts required to accomplish this Service Bulletin are available from IAE Spares Free Of Charge.

To obtain the bolts, customers should submit a Free of Charge Purchase Order to IAE Spares for the required quantity of Bolts (Part Number 5A1845) All Purchase Orders must quote IAE internal tracking number CAS573UI

The Purchase Order must be forwarded to -

IAE International Aero Engines AG
400 Main Street, M/S121-10
East Hartford, CT06108
USA

Attn:IAE Spares Division

Timely embodiment of the High Strength Bolts as specified in V2500-ENG-72-0362 highly recommended, and therefore incorporation must be completed by 31st December 2001 to take advantage of the Free of Change offer.

I. Tooling - Price and Availability

Special tool are not required to accomplish this Bulletin.

J. Weight and Balance

(1)	Weight change	.. ..	None
(2)	Moment arm	.. ..	No effect
(3)	Datum	.. ..	Engine front mount centerline (Power Plant Station (P.P.S.) 100)

K. Electrical Load Data

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

L. References

(1) IAE Service Bulletin ENG-72-0356 ENGINE - LP COMPRESSOR- INSPECTION CHECK OF INSTALLED ANNULUS FILLERS (NON-MODIFICATION)

(2) V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-31-00.

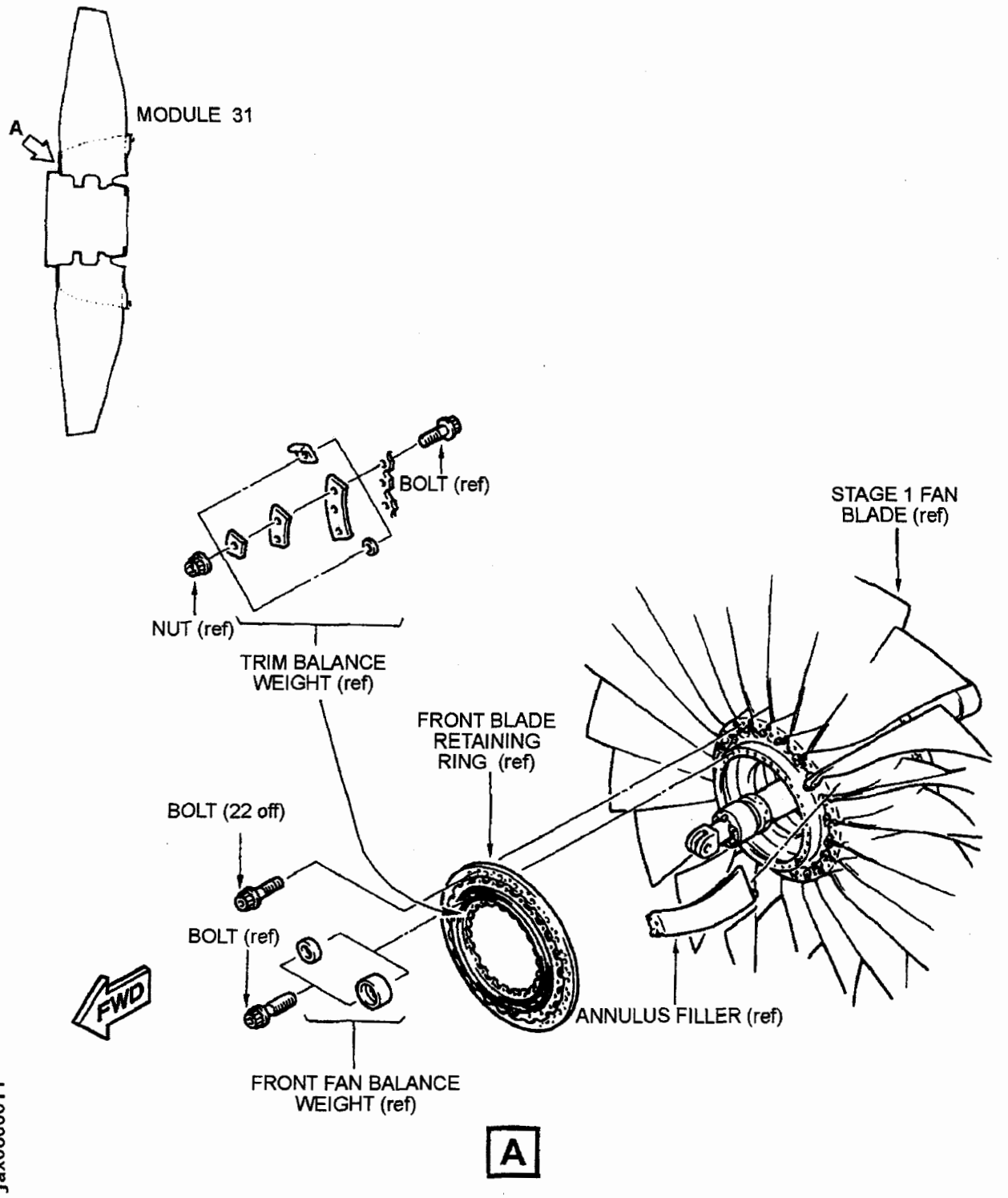
(3) V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-31-00 Disassembly and Assembly.

(4) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 72-31-11 Removal/Installation.

M. Other Publications Affected

(1) V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-31-00.

(2) V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-31-00, Cleaning and Inspection.



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Location of the bolts that joint the front blade retaining ring and the annulus filler
Figure 1

2. Accomplishment Instructions

NOTE: Do part 1 for accomplishment in service, do Part 2 for accomplishment in shop.

PART 1 : In Service

A. Job Set-up Instructions

(1) Remove the existing bolts, (AS21014, 22 off) which secure the annulus fillers to the front blade retaining ring. For the correct procedures, refer to the Aircraft Maintenance Manual (AMM), Chapter/Section 72-31-11, Removal/Installation, Task 72-31-11-000-010.

B. Rework Instructions

None.

C. Job Close-up Instructions

(1) Install the 22 annulus fillers with the new bolts, (5A1845, 22 off). For the correct procedures, refer to the A319/A320/A321 Aircraft Maintenance Manual (AMM), Chapter/Section 72-31-11, Removal/Installation, Task 72-31-11-000-010.

D. Record Instructions

A record of accomplishment is necessary.

PART 2 : In Shop

A. Rework Instructions

None.

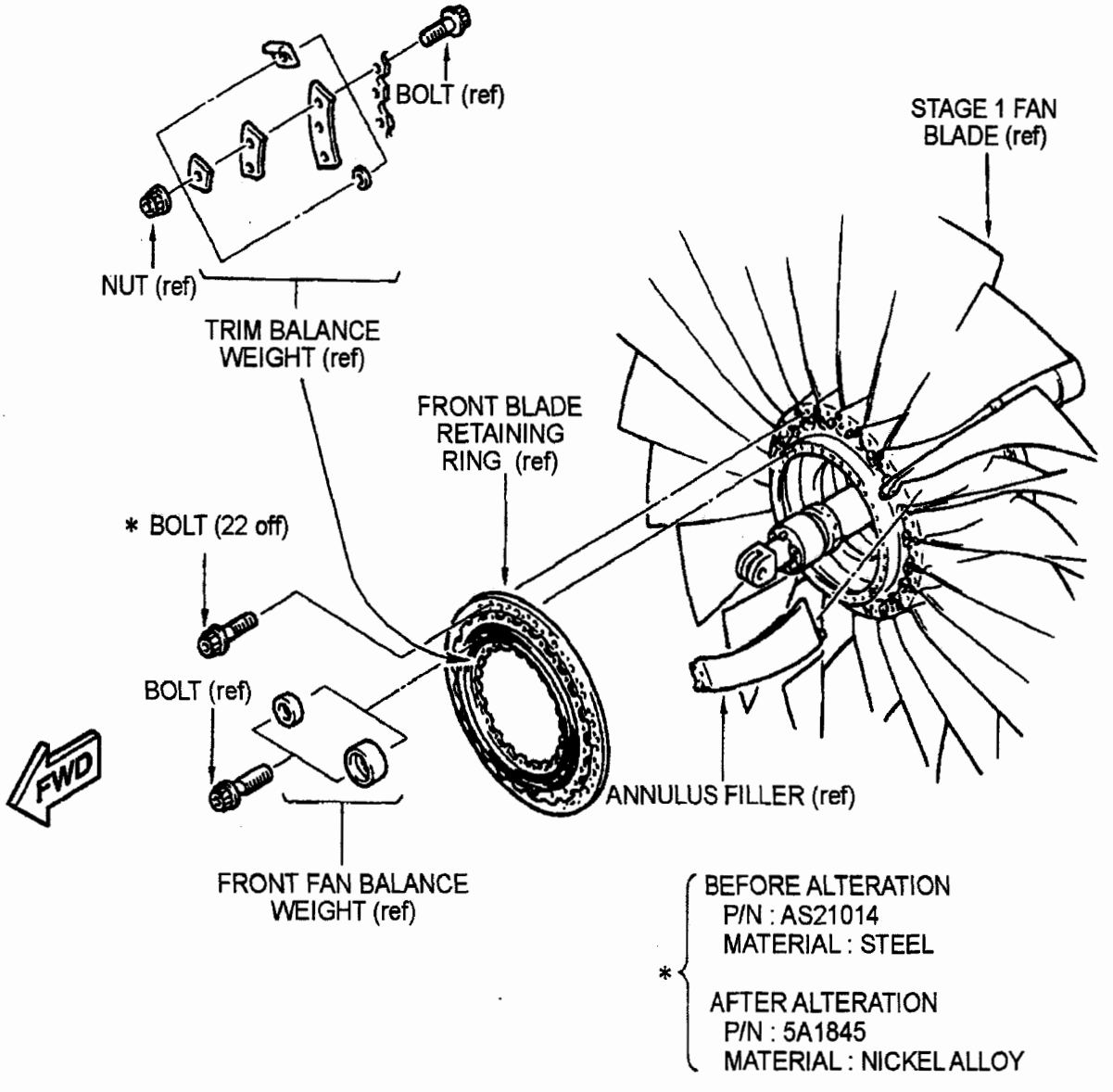
B. Assembly Instructions

(1) Remove the existing bolts, (AS21014, 22 off) which secure the annulus fillers to the front blade retaining ring. For the correct procedures, refer to the Engine Manual (EM), Chapter/Section, 72-31-00, Disassembly.

(2) Install the front blade retaining ring to the annulus fillers with the new bolts, (5A1845, 22 off). For the correct procedures, refer to the Engine Manual (EM), Chapter/Section, 72-31-00, Assembly.

C. Record Instructions

A record of accomplishment is necessary.



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Replacement of the bolts which join the front blade retaining ring and the annulus filler
Figure 2

3. Material Information

Applicability: For each V2500-A1 Engine to incorporate this Bulletin.

A. Kit associated with this Bulletin:

None.

B. Part affected by this Bulletin:

New Part No. (ATA No.)	Qty	Est'd Unit Price($)	Keyword	Old Part No. (IPC No.)	Instruction/ Disposition
5A1845 (72-31-00)	22		.Bolt	AS21014 (01-140)	(A)(B)(1D) (S1)

NOTE: The unit prices, if shown, are an estimate and they are given for the purposes of planning only. For information about actual prices, refer to the IAE Price Catalog or contact IAE's Spare arts Sales Department.

C. Instruction/Disposition Code:

(A) New part is available.
(B) Old part will no longer be available.
(1D) Old part can be used on other application.
(S1) Old and New parts are freely and fully interchangeable. But it is strongly recommended to replace old part with new part in a set of 22.