International Aero Engines

SERVICE BULLETIN

ENGINE - HP COMPRESSOR - DELETION OF THE HEAT SHIELD AT THE OUTLET GUIDE VANE INNER CASE LOCATION - CATEGORY CODE 6 - MOD.ENG-72-0143

1. Planning Information

A. Effectivity

(1) Aircraft : Airbus A320

(2) Engine : V2500-A1 Engines prior to Serial No. V0315 and Engines V0316, V0318, V0320, V0322, V0324, V0326 and V0328.

B. Concurrent Requirements

None

C. Reason

(1) Condition

Refer to "Background"

(2) Background

The outlet guide vane case on the HP compressor module is secured to the diffuser case by 30 bihex bolts. To minimise possible disturbance of the gas flow caused by the protruding bolt heads a shield is located over the heads. This shield was originally considered to be necessary to ensure that generation of 'windage' heat into the cavity behind the stage 12 rotor disc did not occur.

(3) Objective

To dispense with an unnecessary component and reduce engine weight.

(4) Substantiation

Development testing of V2500-A5 engines to the existing standard and with the heat shield deleted demonstrated that for a given value of HP compressor exit temperature both standards experienced equivalent stage 12 disc rim temperatures.

V2500-A5 engines do not have the shield fitted and A1 engines operate at lower pressures and temperatures.

(5) Effect of Bulletin on Workshop Procedures:

Removal/Installation	Not affected
Disassembly/Assembly	Affected (see Supplemental Information)
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

The Disassembly/Assembly will be revised to add the new configuration of this Service Bulletin.

D. Description

(1) The changes introduced by this Service Bulletin are as follows:

(a) The heat shield at the outlet guide vane case inner location is deleted.

(b) The 30 bihex head bolts securing the shield to the diffuser case are replaced with lower profile plain hex. head bolts whose projection is less than half that of the existing bolts.

E. Approval

The part number changes and/or part modification 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

Category Code 6

Accomplish when the sub-assembly (i.e. modues, accessories, components, build groups) is disassembled sufficiently to afford access to the affected parts and to all affected spare parts.

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

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

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	Minus 3.0 lb (1,361 kg)
(2)	Momemt arm	29.0 in (737 mm) rearward of datum
(3)	Datum	Engine front mount centerline (Powerplant Station (PPS) 100)

K. Electrical Load Data

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

L. References

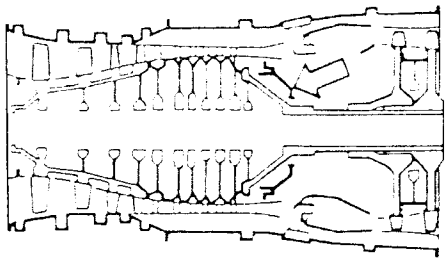
(1) Internal Reference No.

EC92VR033

M. Other Publications Affected

(1) V2500 Illustrated Parts Catalogue, 72-42-50.

(2) V2500 Engine Manual, 72-42-00 Assembly



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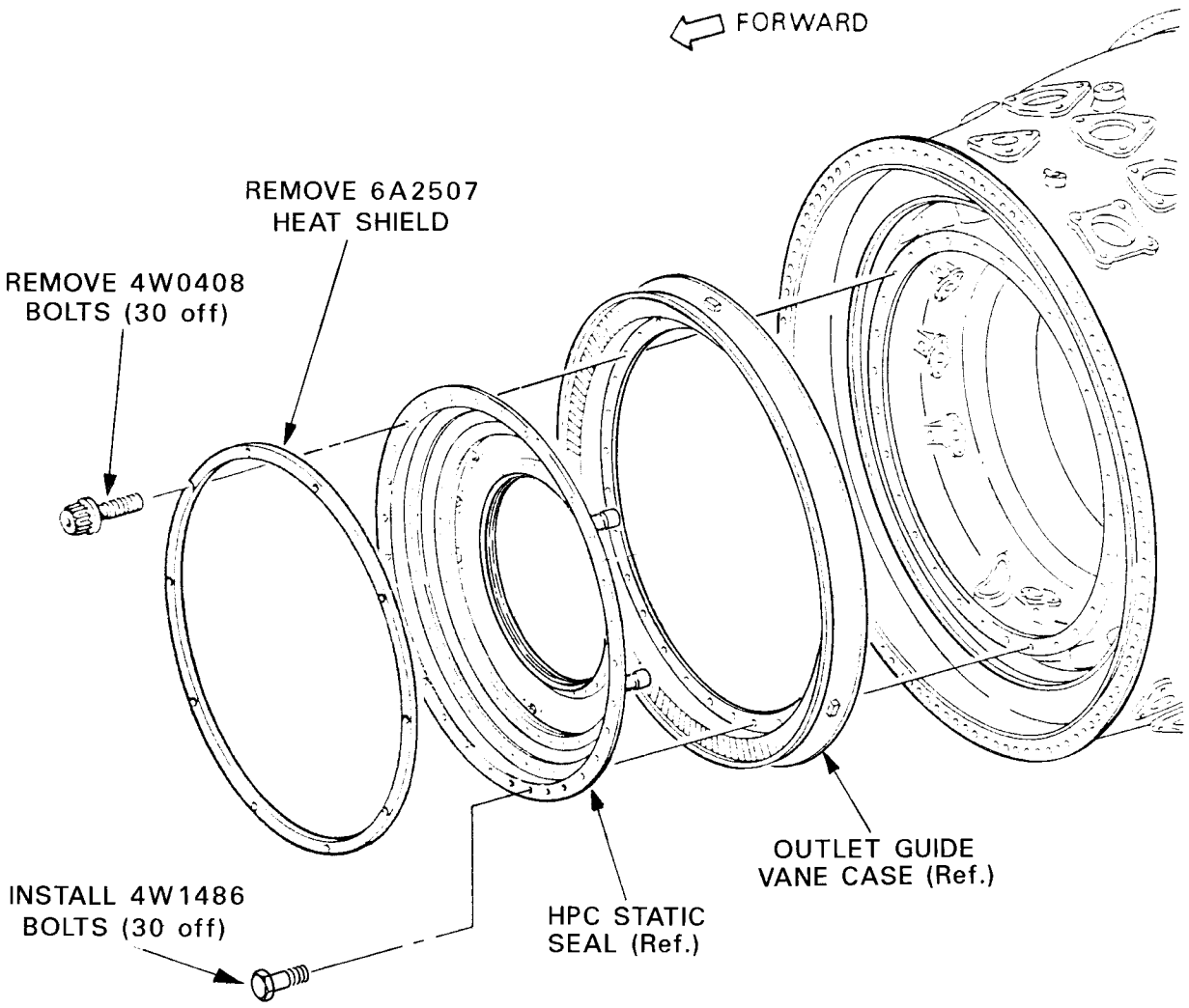
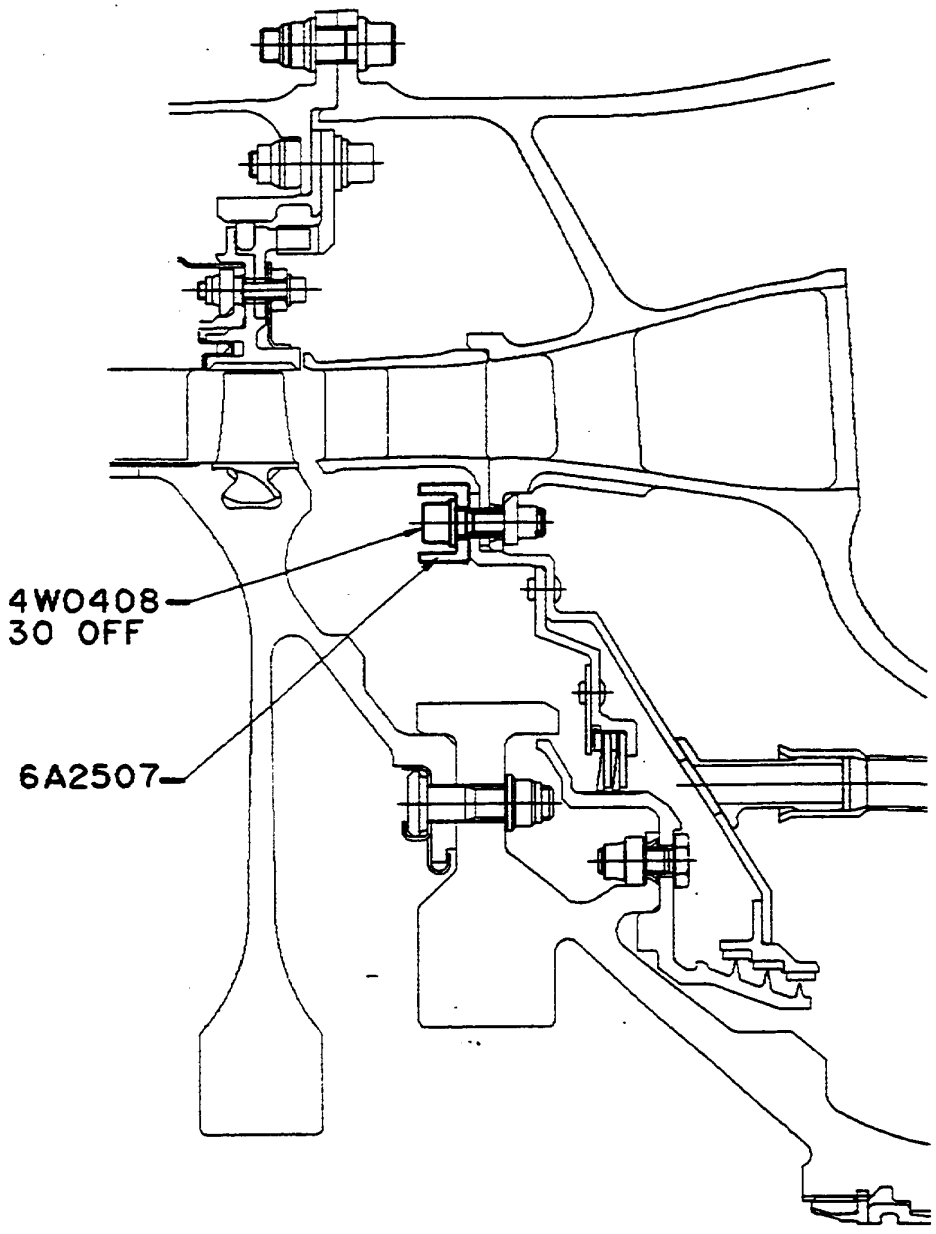


Location of heat shield
Fig.1



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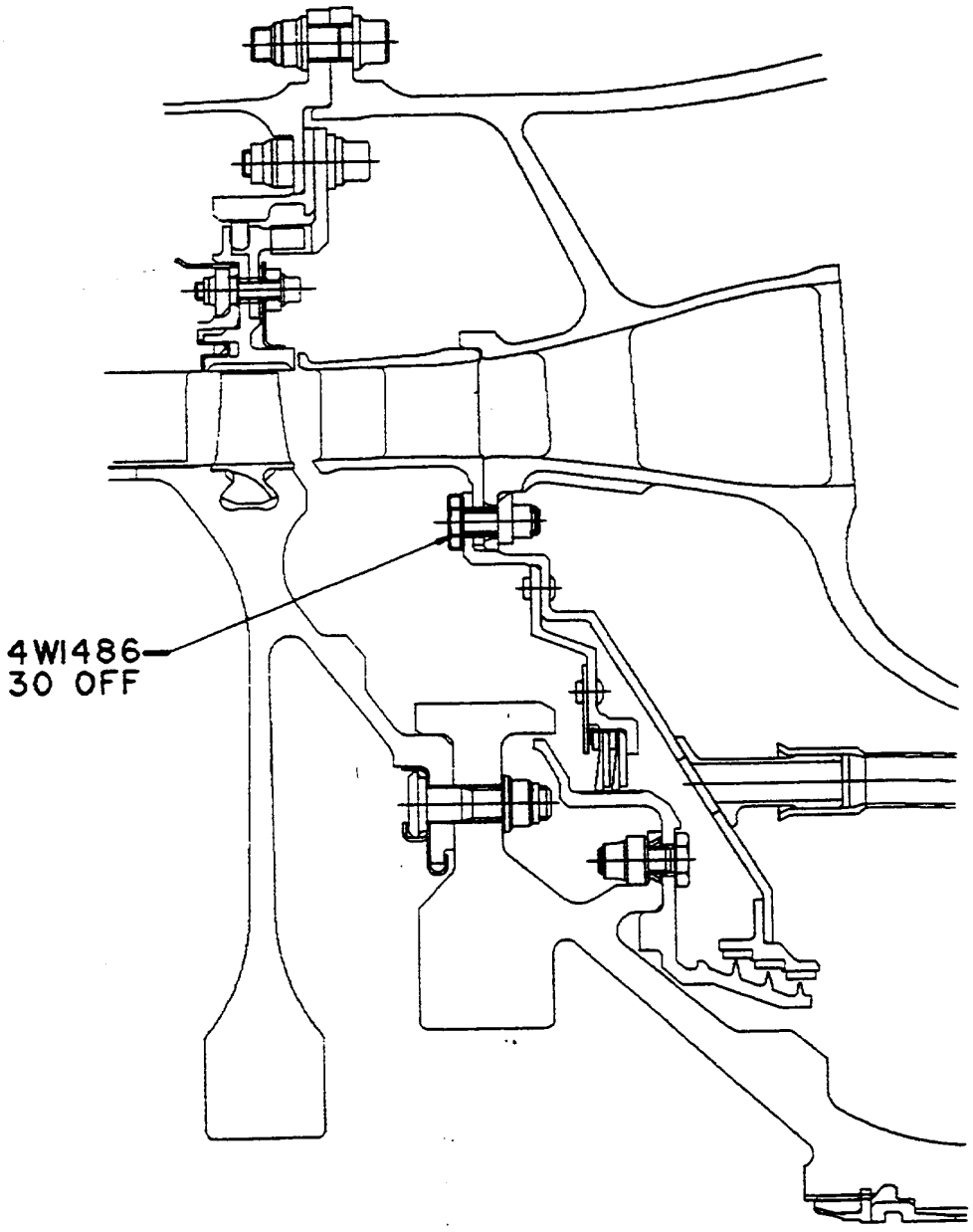
Before alteration
Fig.2



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After alteration
Fig.3

2. Accomplishment Instructions

A. Rework Instructions

(1) There are no rework instructions necessary to accomplish this Service Bulletin.

B. Assembly Instructions

(1) Assemble the new 4W1486 retaining bolts by use of approved procedures, Engine Manual, 72-42-00, Assembly.

C. Recording Instructions

(1) A record of accomplishment is necessary.

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
- (72-42-50)	1		Heat shield	6A2507 (01-096)	(B)(S1)
4W1486 (72-42-50)	30	3.37	Bolt, hex.head	4W0408 (01-102)	(S1)(A)(C)

C. Instructions/Disposition Code Statements:

(A) New part is currently available.
(B) Old part will no longer be available.
(C) Old parts may be used up in other applications.
(S1) New parts coded (S1) must replace old parts coded (S1) as a COMPLETE SET per engine.

NOTE: The estimated 1994 unit prices shown 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.