

ENGINE – ENGINE HP TURBINE ROTOR AND STATOR ASSEMBLY – REMOVAL OF THE ORIFICE PLATES  
AND RELATED HARDWARE FROM THE HPT CASE ASSEMBLY – CATEGORY CODE 3 – MOD.ENG-72-0058

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engines, Serial No.V0083 and V0085

B. Reason

(1) Condition

During the Flight Test Program the Turbine showed indications of deterioration before the usual time.

The deterioration was caused by an air supply to the HP Turbine which was not sufficient.

(2) Background

Engine Test Programs showed that additional air cooling to the HP Turbine is necessary to prevent deterioration of the Turbine.

(3) Objective

To provide more cooling air to the HP Turbine.

(4) Substantiation

Experimental engine testing and engineering evaluation.

(5) Effects of Bulletin on Workshop Procedures:

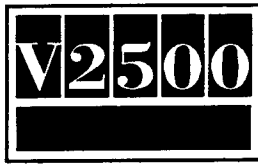
Removal/Installation	Affected (See Supplemental Information)
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Testing	Not affected

(6) Supplemental Information:

After incorporation of this Service Bulletin it will not be necessary to remove or install the orifice plates.

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**C. Description**

- (1) Deterioration of Turbine, before the usual time, is decreased by removal of the orifice plates at both ends of the Turbine Cooling Air Tubes.

**D. 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 Model listed.

**E. Compliance**

Category Code 3.

Accomplish within 24 hours of receipt of this Service Bulletin.

**F. Manpower**

Estimated Manhours to incorporate the full intent of this Bulletin.

Venue	Estimated Manhours
(1) In Service	Not Applicable
(2) At Overhaul (NOTE: The parts affected by this Service Bulletin are accessible at Overhaul.)	
(a) To accomplish the removal of the orifice plates	1 Hours, 42 Minutes
Total:	1 Hours, 42 Minutes

**G. Material Price and Availability**

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

**H. Tooling – Price and Availability**

Special tools are not required.

**I. Weight and Balance**

- |                   |           |
|-------------------|-----------|
| (1) Weight change | None      |
| (2) Moment arm    | No effect |

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(3) Datum

Engine front mount centreline  
(Power Plant Station (PPS) 100)

J. Electrical Load Data

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

K. References

(1) Internal Reference No.

88VA229

(2) Other References

V2500 Engine Manual.

The V2500 Standard Practices Manual.

L. Other Publications Affected

(1) The V2500 Engine Manual, Chapter/Section 72-00-50, Removal-01 and Installation-07 to revise procedures.





## 2. Accomplishment Instructions

### A. Rework instructions

- (1) There are no rework instructions necessary for this Service Bulletin.

### B. Assembly Instructions

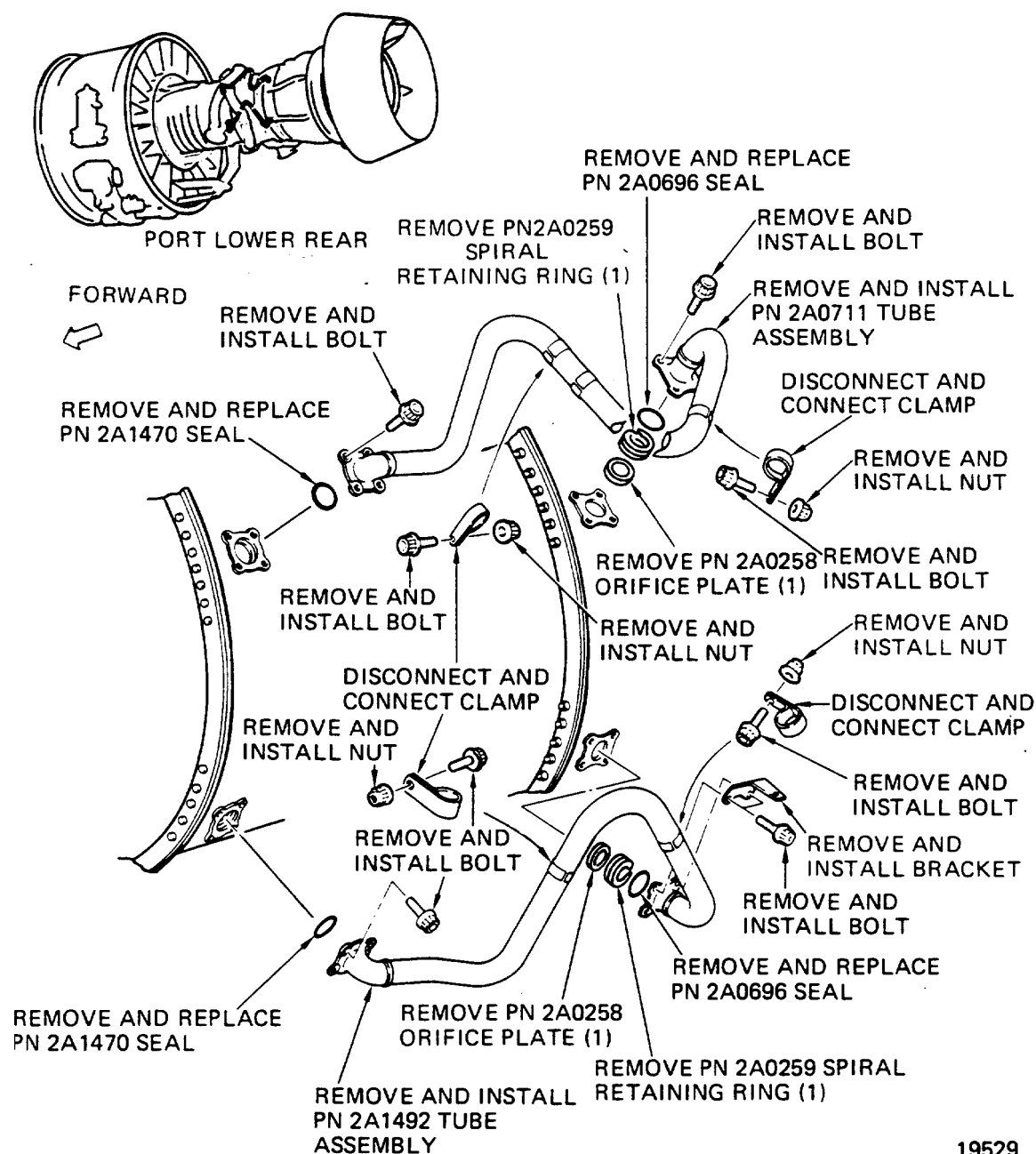
- (1) Remove the Turbine Cooling Air Tubes by the approved procedure in Reference (1) Chapter/Section 72-00-50, Removal-01. Refer to Figure 1.
- (2) Remove the Spiral Retaining Rings and the Orifice Plates from the Turbine Case Assembly as follows:
  - (a) Remove the 2A0259 Spiral Retaining Ring from the groove in the Case Boss (four locations). Refer to Figure 1.
  - (b) Remove the 2A0258 Orifice Plate from the Case Boss (four locations). Refer to Figure 1.
- (3) Install the Turbine Cooling Air Tubes by the approved procedure in Reference (1), Chapter/Section 72-00-50, Installation-07. Refer to Figure 1.
- (4) Make sure that the New Part Number 2A1600A is shown on the Turbine Exhaust Case Assembly.

NOTE: If it is necessary to add the letter 'A' to the part number, mark by the approved procedure in Reference (2), Chapter/Section 70-09-00, Marking of Parts.

### C. Recording Instructions

- (1) A record of accomplishment is necessary.





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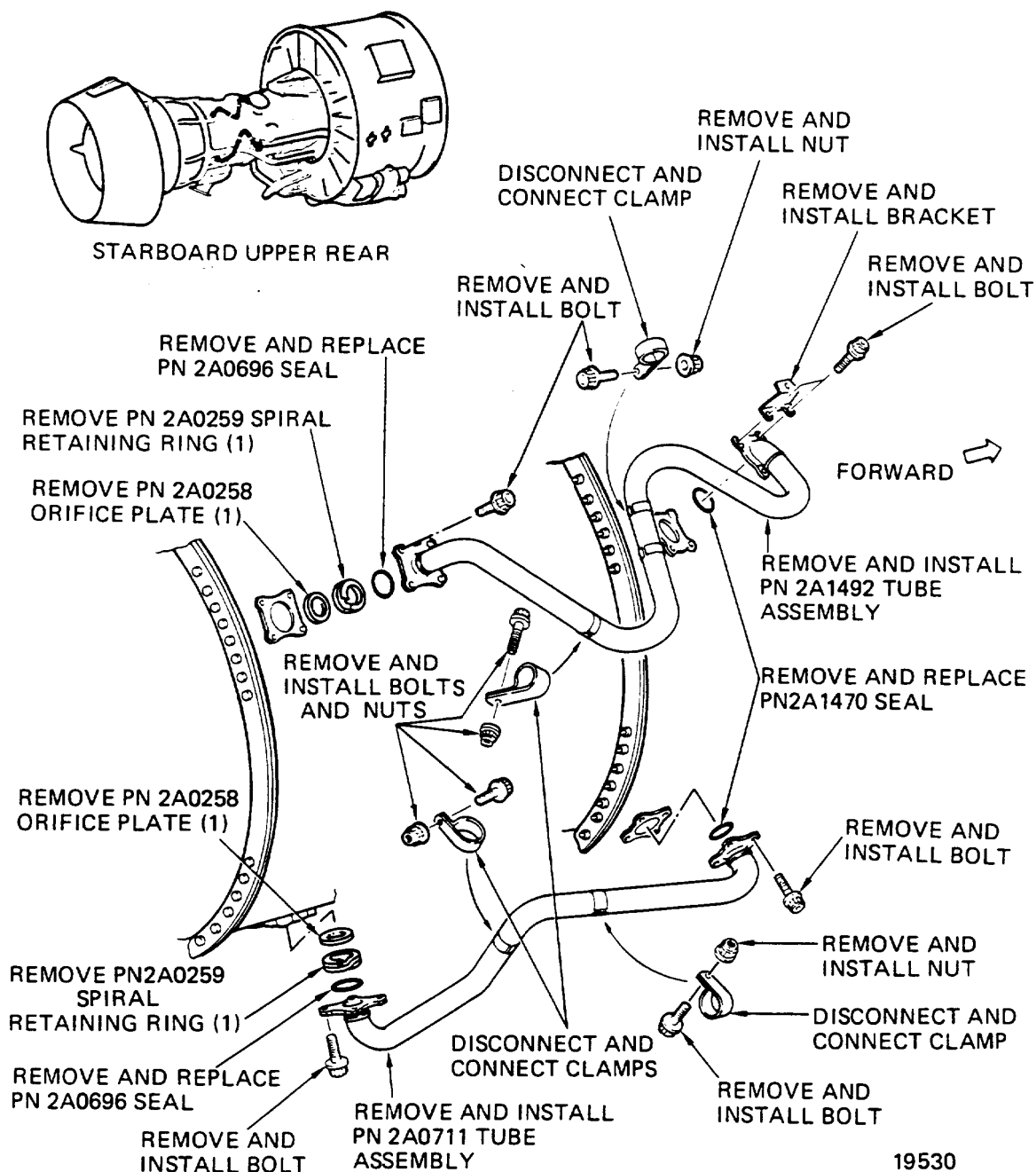
Removal of Orifice Plate  
Fig.1 (Sheet 1 of 2)

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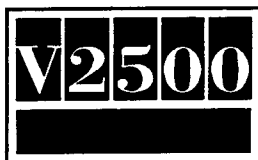
## SERVICE BULLETIN



Removal of Orifice Plate  
Fig.1 (Sheet 2 of 2)

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# SERVICE BULLETIN

## 3. Material Information

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
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Applicability: For each V2500 Engine to incorporate this Bulletin.

### A. Kits associated with this Bulletin:

None

### B. Parts affected by this Bulletin:

2A1600 (72-45-21)	1	Case - Turbine, Assembly	- (01-010)	(1D)(A)(B)
- (72-45-21)	4	Plate - Orifice	2A0258 (01-082)	(B)
- (72-45-21)	4	Ring - Retaining, Spiral	2A0259 (01-084)	(B)

### C. Instruction/Disposition Code Statements

- (1D) Old Part can be reworked and re-identified to the New Part Number.
- (A) New Part Currently available.
- (B) Old Part will no longer be available.

NOTE: The expendable parts necessary to do this job are 2A1470 Seal (4 necessary) and 2A0696 Seal (4 necessary).

NOTE: The estimated 1989 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Contact IAE's Spare Parts Sales Department for information concerning firm prices.

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