International Aero Engines

SERVICE BULLETIN

ENGINE - AIR - REVISED HPT ACC MANIFOLD SUPPORT BRACKET - CATEGORY CODE 8 - MOD.ENG-75-0026

1. Planning Information

A. Effectivity

(1) Aircraft: Airbus A320

(2) Engine: V2500-A1 Engines Prior to Serial V0227 except V0225

B. Reason

(1) Condition

Cracking has occured on the side support pin of some Turbine Cooling Manifolds.

(2) Background

New Pin and Support are provided to increase strength of the side support pin of Turbine Cooling Manifold. New Support has an increased thickness and a full circular shape joint instead of existing a semicircular shape. Also new Pin has an increased length. jointing of the pin and support is improved by the aforesaid changes.

(3) Objective

To improve strength of side support pin on the Turbine Cooling Manifold.

(4) Subbstantiation

The changes introduced by this Bulletin were analytically substantiated.

(5) Effects of Bulletin on the following shop functions:

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

(6) Supplemental Information

(a) The Post-Service Bulletin configuration requires different procedure of Pin Replacement Repair, VRS1530, to IAE V2500 Engine Manual, 75-24-48.

C. Description

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

(a) 2A1569 Turbine Cooling Manifold supercedes 2A1540 Turbine Cooling Manifold and 2A3665 Turbine Colling Manifold supercedes 2A0202 Turbine Cooling Manifold. Following composing parts of the Turbine Cooling Manifold are changed.

(i) 2A1564 Hollow Pin supercedes 2A0241 Hollow Pin.

(ii) 2A1563 TCC Manifold Support supercedes 2A0238 TCC Manifold Support.

(2) 2A1540 Turbine Cooling Manifold can be modified and re-identified to 2A1569 Turbine Cooling Manifold.

(3) 2A0202 Turbine Cooling Manifold can be modified and re-identified to 2A3665 Turbine Cooling Manifold.

D. 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.

E. Compliance

Category Code 8

Accomplish based upon experience with the prior configuration.

F. Manpower

Estimated Manhours to incororate the full intent of this Bulletin:

Venue	Est'd Manhours
(1) In service	Not applicable

(2) At overhaul (Note: The parts affected by this Service Bulletin are accessible at overhaul)

(a) To rework Turbine Cooling Manifold ..... 60 minutes

G. Material - Price and Availability

(1) Modification Kit is 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

(3) Datum .....Engine front mount centerline (Powerplant Section (P.P.S.) 100)

J. Electrical Load Data

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

K. References

(1) Internal Reference No.

90VJ048

92VJ083

(2) Other References

IAE V2500 Engine Illustrated Part Catalog, 75-24-48.

IAE V2500 Standard Practices/Processes Manual, 70-09-00 Marking of Parts, 70-23-05 Penetrant Inspection and 70-31-02 Argonarc Welding Repairs.

IAE V2500 Component Maintenance Manual, 75-24-48 Cleaning and Inspection/Check.

L. Other Publications Affected

(1) IAE V2500 Engine Illustrated Parts Catalog, 75-24-48.

(2) IAE V2500 Powerplant Illustrated Parts Catalog, 75-24-48.

2. Accomplishment Instructions

A. Rework Instructions

(1) Do a modification of 2A1540 and/or 2A0202 Turbine Cooling Manifold (See Reference (1), 75-24-48, Fig/Item No. 02-500) and identify as follows:

NOTE: All 2A1540 and 2A0202 Turbine Cooling Manifold must be examined in accordance with Reference (3), 75-24-48, Inspection/Check before application of this modification.

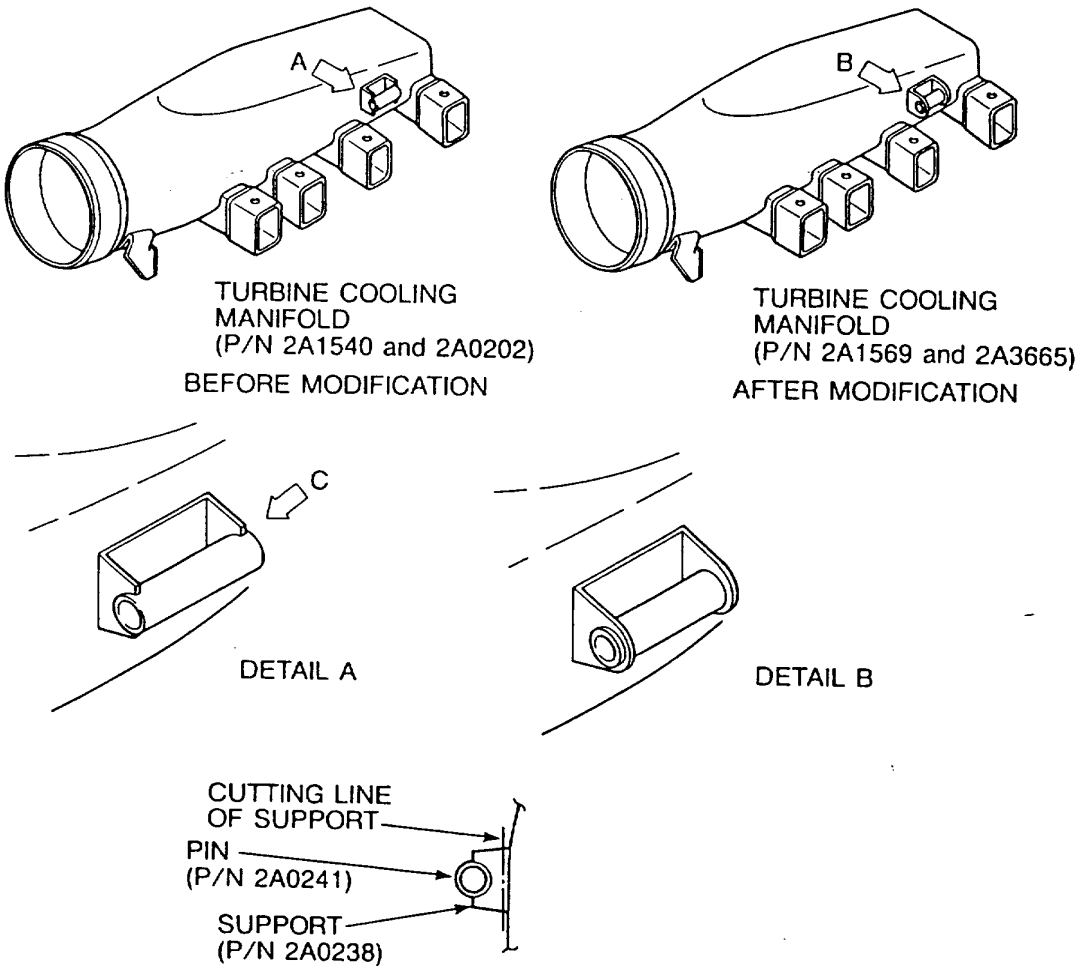
NOTE: Pins and Supports on both sides of 2A1540 and/or 2A0202 Turbine Cooling Manifold must be changed to new configuration at once.

Procedure	Supplementary Information
(a) Cut out the support at 2 points, each point is as close as the manifold	Refer to Figure 1 requirements Use a wire cutter
(b) Remove the residual support from the manifold body, keeping the original thickness of the manifold body	Use a hand held pneumatic grinder Refer to Figure 1 requirements
(c) Remove the all oxides, hydrocarbon, grit and scale from the surface to be welded and adjacent area by local cleaning	Refer to Reference (3), 75-24-48, Cleaning. Use CoMat 01-031 acetone and CoMat 02-099 lint free cloth
(d) Weld the Pin to the Support by tungsten inert gas (TIG) weld	Refer to Reference (2), 70-31-02 Argonarc Wekding Repairs-01 and -08, and Figure 1 requirements. Use a tungsten inert gas (TIG) system. Use CoMat 03-204 welding filler wire.
(e) Weld the Support to the manifold by tungsten inert gas (TIG) weld	Refer to Reference (2), 70-31-02 Argonarc Welding Repairs-01 and -08, and Figure 1 requirements. Use a tungsten inert gas (TIG) system. Use CoMat 03-204 welding filler wire.
(f) In contact area, remove excess weld and dress flush with adjacent area	Use a hand held pneumatic grinder

(g)	Examine the repaired area by local application fluorescent penetrant inspection	Refer to Reference (2), 70-23-05 Local Application of Fluorescent Penetrant Inspection
(h)	Visually examine the repaired area	Use a 8X magnifying grass. Refer to Reference (3), 75-24-48 Inspection/Check
(i)	Re-identfy modified Turbine Cooling Manifold by the vibration peen method	Old Part No. 2A1540 2A0202 — New Part No. 2A1569 2A3665 — Refer to Figure 1 requirements and Reference (2), 70-09-00, Marking of Parts

B. Recording Instructions

(1) A record of accomplishment is necessary.



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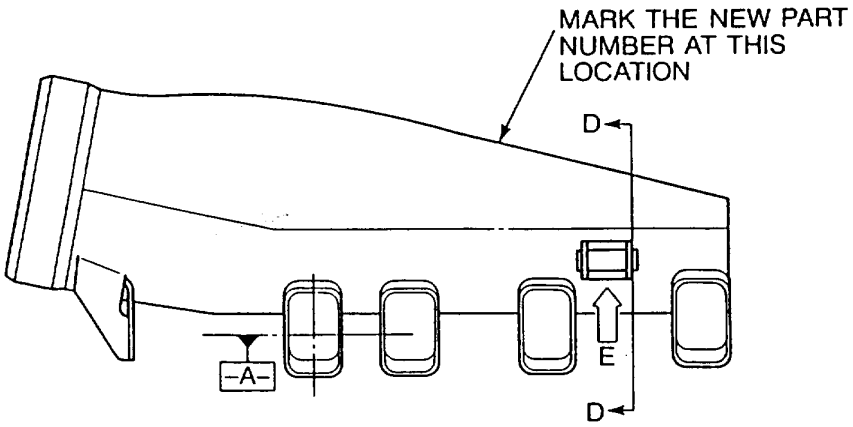
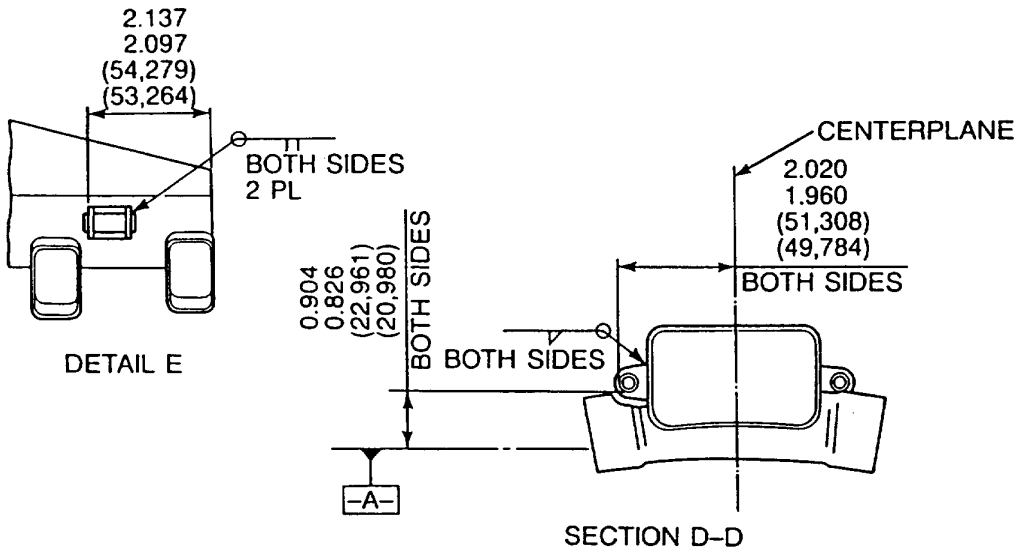
Sheets) Modification of 2A1450 and 2A0202 Turbine Cooling Manifold
Fig.1 (Sheet 1 of 3



NOTE : MARK NEW PART NUMBER NEAR BY OLD PART NUMBER PER SPM TASK 70-09-00



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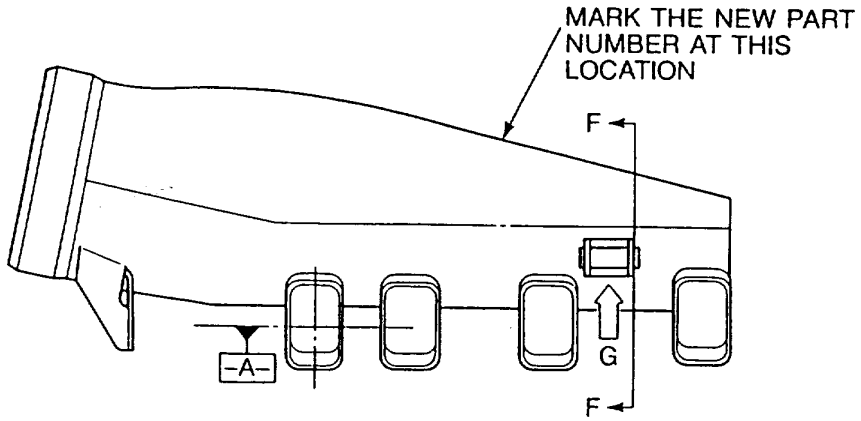
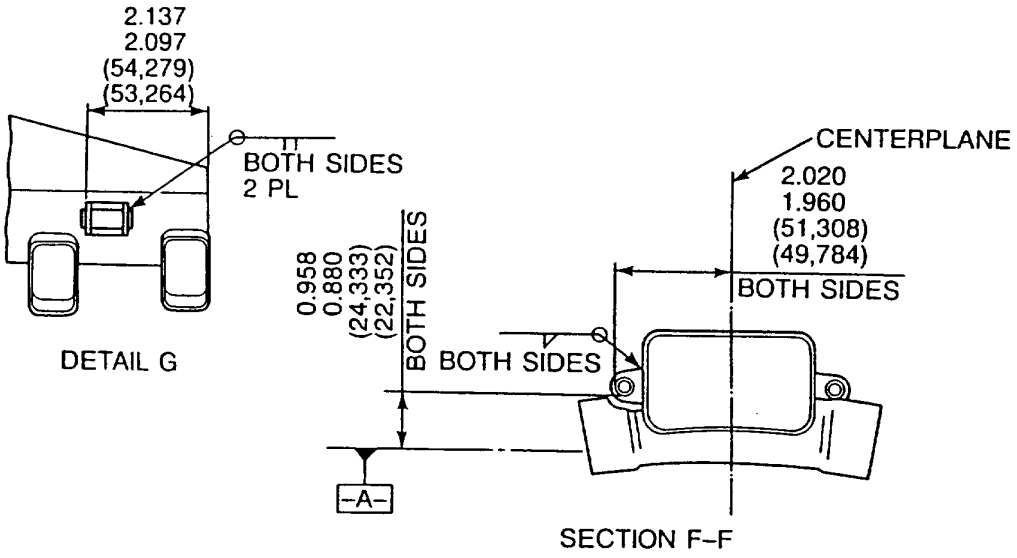
Sheets) Modification of 2A1540 and 2A0202 Turbine Cooling Manifold
Fig.1 (Sheet 2 of 3

THIS ILLUSTRATION APPLIES TO PART NUMBER 2A0202



NOTE : MARK NEW PART NUMBER NEAR BY OLD PART NUMBER PER SPM TASK 70-09-00



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Sheets) Modification of 2A1540 and 2A0202 Turbine Cooling Manifold
Fig.1 (Sheet 3 of 3

3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with the 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
2A3665 (75-24-48)	1		.Manifold, A/O Turbine Colling	2A0202 (02-500)	(S1)(1D)(A) (B)
2A1569 (75-24-48)	1		.Manifold, A/O Turbine Cooling	2A1540 (02-500)	(S1)(1D)(A) (B)
2A1564 (75-24-48)	2		..Pin, Hollow	2A0241 (02-530)	(S2)(C)
2A1563 (75-24-48)	2		..Support, TCC Manifold	2A0238 (02-535)	(S2)(B)

C. Instruction/Disposition Code Statements:

(A) New part is currently available for sale.
(B) Old part will no longer be available for sale.
(C) Old part will continue to be available for sale.
(S1) New and Old parts are freely and fully interchangeable, both physically and functionally.
(S2) New parts must be used as a set for higher level assembly. Mixing of old and new parts is not permissible. New and Old parts are not interchangeable.
(1D) Old part number can be reworked and re-identified as a new part number.

D. Consumables required to incorporate this bulletin:

CoMat 01-031 acetone
CoMat 02-099 lint free cloth
CoMat 03-204 welding filler wire

NOTE: The estimated 1993 unit prices shown are provided for planning purposes only and do not constitute a frim quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.