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## V2500-A1/A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

Printed in Great Britain

This document transmits Revision 4 to Service Bulletin EV2500-72-0166 and Revision 4 to the Supplement

### Document History

Service Bulletin Revision Status  
Initial Issue Sep.15/94  
Revision 1 Jun.20/95  
Revision 2 Aug.30/98  
Revision 3 Nov.8/05

Supplement Revision Status  
Initial Issue Sep.15/94  
Revision 1 Jun.20/95  
Revision 2 Aug.30/98  
Revision 3 Nov.8/05

### Bulletin Revision 4

Remove	Incorporate	Reason for change
All pages of the Summary	Page 1 and 2 of the Summary	To correct the Material Information and to do some minor changes.
All pages of the Service Bulletin	Pages 1 to 26 of the Service Bulletin	To correct the Material Information and to do some minor changes.
All pages of Appendix 1	Pages 1 to 3 of Appendix 1	To correct the Material Information and to do some minor changes.

### Supplement Revision 4

Remove	Incorporate	Reason for change
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# V2500-ENG-72-0166

Transmittal - Page 1 of 3

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All pages

Page 1

To correct the Material  
Information and to do some  
minor changes.

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V2500-ENG-72-0166  
Transmittal - Page 2

## LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin following incorporation of Revision 4 to the Bulletin and Revision 4 to the Supplement are as follows:

<u>Page</u>	<u>Revision Number</u>	<u>Revision Date</u>
Summary		
R 1	4	Aug.24/06
R 2	4	Aug.24/06
Bulletin		
R 1	4	Aug.24/06
R 2	4	Aug.24/06
R 3	4	Aug.24/06
R 4	4	Aug.24/06
R 5	4	Aug.24/06
R 6	4	Aug.24/06
R 7	4	Aug.24/06
R 8	4	Aug.24/06
R 9	4	Aug.24/06
R 10	4	Aug.24/06
R 11	4	Aug.24/06
R 12	4	Aug.24/06
R 13	4	Aug.24/06
R 14	4	Aug.24/06
R 15	4	Aug.24/06
R 16	4	Aug.24/06
R 17	4	Aug.24/06
R 18	4	Aug.24/06
R 19	4	Aug.24/06
R 20	4	Aug.24/06
R 21	4	Aug.24/06
R 22	4	Aug.24/06
R 23	4	Aug.24/06
R 24	4	Aug.24/06
R 25	4	Aug.24/06
R 26	4	Aug.24/06
Appendix 1		
R 1	4	Aug.24/06
R 2	4	Aug.24/06
R 3	4	Aug.24/06
Supplement		
R 1	4	Aug.24/06



ENGINE – DIFFUSER CASE ASSEMBLY – REMOVE THE STAGE 1 HP TURBINE COOLING AIR PRESSURE  
SENSING TUBES

## SUMMARY

### 1. PLANNING

#### A. EFFECTIVITY

Engine V2500-A1 Serial Numbers before V0324.

Engine V2500-A5 Serial Numbers before V10023 for Part 1

Engine V2500-A5 Serial Numbers before V10067 for Part 2

Engine V2500-D5 Serial Numbers before V20007 for Parts 1 and 2

#### B. CONCURRENT REQUIREMENTS

There are no concurrent requirements.

#### C. REASON/PROBLEM

Problem: The Turbine Cooling Air Pressure Sensing Tubes initially used during engine operation are not used now.

Evidence: The Turbine Cooling Air Pressure Sensing Tubes, which will be removed, are no longer necessary.

Objective:

To remove hardware that is not necessary and reduce weight.

#### D. DESCRIPTION

Part 1 (Installation of modified Diffuser Case Assemblies)

Part 2 (Follow-on spares replacement with Diffuser Case Assemblies that do not have integral bosses)

#### E. COMPLIANCE

Category 6

Accomplish when the subassembly (i.e. modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.



F. MANPOWER

(1) In Service

Not Applicable

(2) At Overhaul

R To do the modification and identify the Diffuser Case Assembly as the new part number

30 Minutes

R Total Necessary Man-hours

R 30 Minutes

2. MATERIAL INFORMATION

Part Prices

A. The estimated 1994 price of new material is \$211.15 to do this Service Bulletin when the part modification procedure is used.

ENGINE – DIFFUSER CASE ASSEMBLY – REMOVE THE STAGE 1 HP TURBINE COOLING AIR PRESSURE  
SENSING TUBES

1. Planning Information

A. Effectivity Data

- (1) For Airbus A320 and A321
  - (a) Engine Models Applicable For Part 1  
V2500-A1  
Engine Serial Nos.V0001 thru V0341  
V2527-A5, V2530-A5  
Engine Serial Nos.V10001 thru V10022
  - (b) Engine Models Applicable For Part 2  
V2527-A5, V2530-A5  
Engine Serial Nos.V10001 thru V10067
- (2) For Boeing MD-90
  - (a) Engine Models Applicable For Parts 1 and 2  
V2525-D5, V2528-D5  
Engine Serial Nos.V20001 thru V20006

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

- (1) Problem: The Turbine Cooling Air Pressure Sensing Tubes initially used during engine operation are not used now.
- (2) Evidence: The Turbine Cooling Air Pressure Sensing Tubes, which will be removed, are no longer necessary.
- (3) Objective: To remove hardware that is not necessary and reduce weight.
- (4) Substantiation: The removal of testing requirements that used the Turbine Cooling Air Pressure Sensing Tubes was satisfactorily tested analytically.

## (5) Effects of Bulletin on:

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****Part 1 (Installation of modified Diffuser Case Assemblies)**

(1) When you install the Diffuser Case Assembly, the Turbine Cooling Duct Airframe Sensing Tube Assembly is not installed again. Refer to Figure 1.

(2) Install the covers and gaskets to close the inner and outer bosses.

**Part 2 (Follow-on spares replacement with Diffuser Case Assemblies that do not have integral bosses)**

(1) A Diffuser Case Assembly, which does not have turbine cooling air pressure sensing tube bosses, is provided for any follow-on spares replacement requirements. Refer to Figure 1.

**E. Compliance****Category 6**

Accomplish when the subassembly (i.e. modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.

**F. Approval Data**

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.



The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model listed.

#### G. Manpower

(1) In Service

Not Applicable.

(2) At Overhaul

To do the modification and identify the Diffuser Case Assembly as the new part number.

30 Minutes

Total

30 Minutes

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

#### H. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No Effect.

(3) Datum

Engine Front Mount Centerline (Power Plant Station (PPS) 100)

#### I. Electrical Load Data

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

#### J. Software Accomplishment Summary

Not Applicable.

**K. References**

- R (1) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA,  
R S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB,  
R S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section  
R 72-40-00.
- R (2) V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-40-00.
- R (3) V2500 Engine Manual (E-V2500-3IA), Chapter/Section 72-40-00.
- R (4) V2500 Standard Practices/Processes Manual (E-V2500-1IA), Chapter/Section  
R 72-40-00.
- R (5) V2500 Standard Practices/Processes Manual (E-V2500-3IA), Chapter/Section  
R 72-40-00.
- R (6) Internal Reference No. - 92VA206, 92VA206A.
- R (7) ATA Locators - 72-42-11 and 72-42-20.

**L. Other Publications Affected**

- R (1) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA,  
R S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB,  
R S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section  
R 72-42-11 and 72-42-20 to add the new parts.
- R (2) V2500 Engine Manuals (E-V2500-1IA and E-V2500-3IA), Chapter/Section  
R 72-42-11 and 72-42-20 Cleaning, Inspection and Repair, to add the new  
R part.
- R (3) Repair Schemes VRS3020, VRS3025, VRS3026, VRS3028, VRS3030, VRS3031,  
R VRS3033, VRS3035, VRS3038, VRS3039, VRS3041, VRS3046, VRS3052, VRS3056,  
R VRS3058, VRS3059, VRS3060, and VRS3061, to add the new parts.

**M. Interchangeability of Parts**

Old and new parts are directly interchangeable.

**N. Information in the Appendix**

Alternate Accomplishment Instructions (No)

Progression Charts (Yes)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

## 2. Material Information

### A. Industry Support Program

Not Applicable.

### B. The material data that follows is for each engine.

72-42-11

Part 1; Installation of Modified Diffuser Case Assemblies for V2500-A1 Engine Serial Numbers V0001 through V0341: Assemblies.

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010	2A2883-01	1	.. Case, Diffuser Assembly	-	2A0051	(S1) (1D) (A)

72-42-20

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
04-001		2	..Seal Ring Metal	-	2A0364	(S1) (E)
04-040		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0358-01	(S1) (A)
04-160		1	..Sleeve - Sealing Three Hole	-	2A0363	(S1)
04-180		1	..Plate - Retaining Three Hole	-	2A0350	(S1) (E)
04-220		1	..Nut - Coupling	-	AS15701	(S1) (E)
04-240		1	..Wire - Thurst	-	2A0834	(S1) (E)
04-260		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0357-01	(S1) (A)
04-320		1	..Union - Tube Double End	-	AS27467	(S1) (E)
04-340		1	..Nut Assembly - Pipe Closure	-	AS15825	(S1) (A)
04-040	2A2895	1	..Cover - Sensing Tube, Outer	-		(S1) (C)
04-260	2A2894	1	..Cover - Sensing Tube, Inner	-		(S1) (C)
R 04-360	AN123521	1	..Rivet	-		(S1) (B)

C. The material data that follows is for each engine.

72-42-11

Part 1; Installation of Modified Diffuser Case Assemblies for V2500-A5 Engine Serial Numbers V10001 through V10022 and V2500-D5 Engine Serial Numbers V20001 through V20006:

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010	2A2885-01	1	.. Case, Diffuser Assembly	-	2A2581-01	(S2) (1D) (A)

72-42-20

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
04-001		2	..Seal Ring Metal	-	2A0364	(S2) (E)
04-040		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0358-01	(S2) (A)
04-160		1	..Sleeve - Sealing Three Hole	-	2A0363	(S2) (E)
04-180		1	..Plate - Retaining Three Hole	-	2A0350	(S2) (E)
04-220		1	..Nut - Coupling	-	AS15701	(S2) (E)
04-240		1	..Wire - Thurst	-	2A0834	(S2) (E)
04-260		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0357-01	(S2) (A)
04-320		1	..Union - Tube Double End	-	AS27467	(S2) (E)
04-340		1	..Nut Assembly - Pipe Closure	-	AS15825	(S2) (A)
04-040	2A2895	1	..Cover - Sensing Tube, Outer	-		(S2) (C)
04-260	2A2894	1	..Cover - Sensing Tube, Inner	-		(S2) (C)
04-360	AN123521	1	..Rivet	-		(S2) (B)

D. The material data that follows is for each engine.

72-42-11

Part 1; Installation of Modified Diffuser Case Assemblies for V2500-A1 Engine  
Serial Numbers V0342 through V0361: Assemblies.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
R	01-010	2A2896-01	1	.. Case, Diffuser Assembly	-	2A0051	(S3) (A) (C)

72-42-20

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
	04-001		2	..Seal Ring Metal	-	2A0364	(S3) (E)
	04-040		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0358-01	(S3) (A)
	04-160		1	..Sleeve - Sealing Three Hole	-	2A0363	(S3) (E)
	04-180		1	..Plate - Retaining Three Hole	-	2A0350	(S3) (E)
	04-220		1	..Nut - Coupling	-	AS15701	(S3) (E)
	04-240		1	..Wire - Thurst	-	2A0834	(S3) (E)
	04-260		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0357-01	(S3) (A)
	04-320		1	..Union - Tube Double End	-	AS27467	(S3) (E)
	04-340		1	..Nut Assembly - Pipe Closure	-	AS15825	(S3) (A)
	04-040	2A2895	1	..Cover - Sensing Tube, Outer	-		(S3) (C)
	04-260	2A2894	1	..Cover - Sensing Tube, Inner	-		(S3) (C)

E. The material data that follows is for each engine.

72-42-11

Part 1; Installation of Modified Diffuser Case Assemblies for V2500-A5 Engine  
Serial Numbers V10023 through V10066:

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010	2A2897-01	1	.. Case, Diffuser Assembly	-	2A2581-01	(S4) (A) (C)

72-42-20

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
04-001		2	..Seal Ring Metal	-	2A0364	(S4) (E)
04-040		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0358-01	(S4) (A)
04-160		1	..Sleeve - Sealing Three Hole	-	2A0363	(S4) (E)
04-180		1	..Plate - Retaining Three Hole	-	2A0350	(S4) (E)
04-220		1	..Nut - Coupling	-	AS15701	(S4) (E)
04-240		1	..Wire - Thurst	-	2A0834	(S4) (E)
04-260		1	..Tube, Sensing, Turbine Cooling Duct, Airframe, Assembly	-	2A0357-01	(S4) (A)
04-320		1	..Union - Tube Double End	-	AS27467	(S4) (E)
04-340		1	..Nut Assembly - Pipe Closure	-	AS15825	(S4) (A)
04-040	2A2895	1	..Cover - Sensing Tube, Outer	-		(S4) (C)
04-260	2A2894	1	..Cover - Sensing Tube, Inner	-		(S4) (C)

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F. The material data that follows is for each engine.

72-42-11

Part 2; Follow-on spares replacement with Diffuser Case Assemblies without integral bosses for V2500-A5 Engine Serial Numbers before V10067:

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A2891-01	1	.. Case, Diffuser Assembly	-	2A2897-01	(S5) (A)

72-42-20

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
04-020			1	..Gasket	-	2A0391	(S5) (E)
04-040			1	..Cover - Sensing Tube, Outer	-	2A2895	(S5) (F)
04-060			2	..Bolt	-	MS9575-06	(S5) (E)
04-140			1	..Gasket	-	2A1036	(S5) (E)
04-200			3	..Bolt	-	MS9575-09	(S5) (E)
04-260			1	..Cover - Sensing Tube, Outer	-	2A2894	(S5) (F)

G. The material data that follows is for each engine.

72-42-11

Part 2; Follow-on spares replacement with Diffuser Case Assemblies without integral bosses for V2500-D5 Engine Serial Numbers before V20007:

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A2891-01	1	.. Case, Diffuser Assembly	-	2A2897-01	(S6) (G)

72-42-20

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
04-020			1	..Gasket	-	2A0391	(S6) (E)
04-040			1	..Cover - Sensing Tube, Outer	-	2A2895	(S6) (F)
04-060			2	..Bolt	-	MS9575-06	(S6) (E)
04-140			1	..Gasket	-	2A1036	(S6) (E)
04-200			3	..Bolt	-	MS9575-09	(S6) (E)
04-260			1	..Cover - Sensing Tube, Outer	-	2A2894	(S6) (F)

	FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
R	04-360		1	..Rivet	-	AN123521	(F)

#### H. Instructions/Disposition Code Statements:

##### Parts Modification Conditions

- (S1) New parts coded (S1) must replace old parts coded (S1) in a Complete Set per engine.
- (S2) New parts coded (S2) must replace old parts coded (S2) in a Complete Set per engine.
- (S3) New parts coded (S3) must replace old parts coded (S3) in a Complete Set per engine.
- (S4) New parts coded (S4) must replace old parts coded (S4) in a Complete Set per engine.
- (S5) New parts coded (S5) must replace old parts coded (S5) in a Complete Set per engine.
- (S6) New parts coded (S6) must replace old parts coded (S6) in a Complete Set per engine.
- (1D) The new part can be obtained by modification of the old part as specified in the Accomplishment Instructions.

##### Spare Parts Availability

- (A) The old part is no longer available.
- (B) The new part is supplied to do the modification.
- (C) The new part is currently available.
- (E) The old part will be retained for lesser units.
- (F) The old part is not necessary with this configuration.

##### Cleaning, Inspection and Repair Information

- (I) The cleaning, inspection and repair requirements are the same for the old and new part. The applicable engine manuals will be revised.

#### I. Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

#### J. Reidentified Parts

Reidentified Parts New PN	Data Keyword	Old PN
2A2883-01	Diffuser Case Assembly	2A0051
2A2885-01	Diffuser Case Assembly	2A2581-01



K. Other Material Information Data

Consumable Necessary to Incorporate this Service Bulletin

CoMat 02-141

CoMat 10-77

Lockwire

Approved Engine Oils

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### 3. Accomplishment Instructions

#### A. 'A' Rework Instructions

- (1) Do a modification to the 2A0051 or the 2A2581-01 Diffuser Case Assembly (See References (2) and (3) Chapter/Section 72-42-11, Figure No. 01-010) and identify as follows:
  - (a) Remove the rivets that hold the Gang Channel Assembly. Refer to Figure 2.
  - (b) Remove the Gang Channel Nut Assembly. Refer to Figure 2.
  - (c) Close the hole at the specified location with the rivet shown. Refer to Figure 2. See Reference (4), Control No./ TASK No. 70-39-03-390-501.

NOTE: Put the new rivet hole at a location that is in 0.010 inch (0,254 mm) diameter of the hole that is there now.
  - (d) Position the Angle Gang Nut Assembly so that the rivet holes align with the holes in the case flange.
    - (i) Do not install the rivets at this time.
  - (e) Do a check of the clearance between the upset head of the rivet and the slot in the Gang Nut Assembly. Refer to Figure 2.
    - (i) If there is sufficient clearance install the rivets by step F.
    - (ii) If there is not sufficient clearance hand grind the slot to the dimensions given. Refer to Figure 2.
  - (f) Install the Gang Channel Nut Assembly on the Diffuser Case Assembly flange with the rivets shown. Refer to Figure 2. See References (4) Control No./TASK No. 70-39-03-390-501.
  - (g) Mark the new part number adjacent to the old part number. Use the vibration peen method. See Reidentified Parts Data for part numbers. Also see Reference (4), Control No./TASK No. 70-09-00-400-501. Refer to Figure 2.

B. 'B' Assembly Instructions (Part 1 - Installation of Modified Diffuser Case Assemblies)

(1) For V2500-A1 Engines before Engine No. V0342 and V2500-A5 Engines before Engine No. V10023 proceed as follows:

(a) When you assemble the Diffuser Case Assembly and fittings by the procedure given in Reference (2), Chapter/Section 72-42-10, Assembly, do not install the Turbine Cooling Duct Airframe Sensing Tube Assembly. Refer to Figure 3.

(b) Install the 2A2894 Sensing Tube Inner Cover by Figure 3 and as follows:

- (i) Install the cover on the boss at the location shown in the diffuser case inner diameter.
- (ii) Make sure that the bolt holes in the cover are in line with the bolt holes in the Diffuser Case Assembly.
- (iii) Lubricate the MS9575-06 Bolts (2 off) with CoMat 10-077 Approved Engine Oils.
- (iv) Install the MS9575-06 Bolts (2 off) in to the two bolt holes.
- (v) Tighten the bolts with your hand.
- (vi) Torque the bolts to between 65 to 85 lbfin (7,344 to 9,604 nm).
- (vii) Safety the bolts with CoMat 02-141 Lockwire.

(c) Install the 2A2895 Sensing Tube Outer Cover by Figure 3 and as follows:

- (i) Install the cover on the boss at the location shown on the diffuser case outer diameter.
- (ii) Make sure that the bolt holes in the cover are in line with the bolt holes in the Diffuser Case Assembly.
- (iii) Lubricate the MS9575-09 Bolts (3 off) with CoMat 10-077 Approved Engine Oils.
- (iv) Install the MS9575-09 Bolts (3 off) in to the three bolt holes.
- (v) Tighten the bolts with your hand.
- (vi) Torque the bolts to between 65 to 85 lbfin (7,344 to 9,604 nm).
- (vii) Safety the bolts with CoMat 02-141 Lockwire.



(2) For V2500-D5 Engines before Engine No. V20007 proceed as follows:

(a) When you assemble the Diffuser Case Assembly and fittings by the procedure given in Reference (3), Chapter/Section 72-42-10, Assembly, do not install the Turbine Cooling Duct Airframe Sensing Tube Assembly. Refer to Figure 3.

(b) Install the 2A2894 Sensing Tube Inner Cover by Figure 3 and as follows:

(i) Install the cover on the boss at the location shown in the diffuser case inner diameter.

(ii) Make sure that the bolt holes in the cover are in line with the bolt holes in the Diffuser Case Assembly.

(iii) Lubricate the MS9575-06 Bolts (2 off) with CoMat 10-077 Approved Engine Oils.

(iv) Install the MS9575-06 Bolts (2 off) in to the two bolt holes.

(v) Tighten the bolts with your hand.

R (vi) Torque the bolts to between 65 to 85 lbfin (7,344 to 9,604 nm).

(vii) Safety the bolts with CoMat 02-141 Lockwire.

(c) Install the 2A2895 Sensing Tube Outer Cover by Figure 3 and as follows:

(i) Install the cover on the boss at the location shown on the diffuser case outer diameter.

(ii) Make sure that the bolt holes in the cover are in line with the bolt holes in the Diffuser Case Assembly.

(iii) Lubricate the MS9575-09 Bolts (3 off) with CoMat 10-077 Approved Engine Oils.

(iv) Install the MS9575-09 Bolts (3 off) in to the three bolt holes.

(v) Tighten the bolts with your hand.

R (vi) Torque the bolts to between 65 to 85 lbfin (7,344 to 9,604 nm).

(vii) Safety the bolts with CoMat 02-141 Lockwire.

(3) Recording Instructions

(a) A record of accomplishment is required.

C. 'C' Assembly Instructions (Part 2 - Follow-on spares replacement with Diffuser Case Assemblies that do not have integral bosses)

**NOTE:** The procedure which follow are recommended only when it becomes necessary to replace a Diffuser Case Assembly.

(1) For V2500-A5 Engine Serial Nos. before V10023:

(a) When it is necessary you can replace the 2A2897-01 Diffuser Case Assembly with the 2A2891-01 Diffuser Case Assembly.

(i) Install the Diffuser Case Assembly and fittings by the procedure given in Reference (2), Chapter/Section 72-42-10, Assembly. Refer to Figure 4.

(ii) The parts which follow will not be installed with the new configuration:

Part Number	Description
2A2894	Inner Sensing Tube Cover (1 Off)
2A2895	Outer Sensing Tube Cover (1 Off)
MS9575-09	Bolt (3 Off)
2A1036	Gasket (1 Off)
2A0391	Gasket (1 Off)
MS9575-06	Bolt (2 Off)

(2) For V2500-A5 Engine Serial Nos. before V10067:

(a) When it is necessary you can replace the 2A2581-01 Diffuser Case Assembly with the 2A2897-01 Diffuser Case Assembly.

(i) Install the Diffuser Case Assembly and fittings by the procedure given in Reference (2), Chapter/Section 72-42-10, Assembly. Refer to Figure 4.

(ii) The parts which follow will not be installed with the new configuration:

Part Number	Description
2A0357-01	Turbine Cooling Duct Airframe Sensing Tube Assembly (1 Off)
2A0358-01	Turbine Cooling Duct Airframe Sensing Tube Assembly (1 Off)
2A0350	Plate (1 Off)
2A0363	Sleeve (1 Off)
AS15701	Nut (1 Off)

Part Number	Description
AS27467	Tube (1 Off)
2A0364	Seal (2 Off)
AS15825	Nut Assembly (1 Off)

(3) For V2500-D5 Engine Serial Nos. before V20007 proceed as follows:

- (a) When it is necessary you can replace the 2A2897-01 Diffuser Case Assembly with the 2A2891-01 Diffuser Case Assembly.
- (i) Install the Diffuser Case Assembly and fittings by the procedure given in Reference (3), Chapter/Section 72-42-10, Assembly. Refer to Figure 4.
- (ii) The parts which follow will not be installed with the new configuration:

Part Number	Description
2A2894	Inner Sensing Tube Cover (1 Off)
2A2895	Outer Sensing Tube Cover (1 Off)
MS9575-09	Bolt (3 Off)
2A1036	Gasket (1 Off)
2A0391	Gasket (1 Off)
MS9575-06	Bolt (2 Off)

R (4) For V2500-D5 Engine Serial Nos. before V20007:

- (a) When it is necessary you can replace the 2A2581-01 Diffuser Case Assembly with the 2A2897-01 Diffuser Case Assembly.
- (i) Install the Diffuser Case Assembly and fittings by the procedure given in Reference (3), Chapter/Section 72-42-10, Assembly. Refer to Figure 4.
- (ii) The parts which follow will not be installed with the new configuration:

Part Number	Description
2A0357-01	Turbine Cooling Duct Airframe Sensing Tube Assembly (1 Off)
2A0358-01	Turbine Cooling Duct Airframe Sensing Tube Assembly (1 Off)
2A0350	Plate (1 Off)
2A0363	Sleeve (1 Off)
AS15701	Nut (1 Off)
AS27467	Tube (1 Off)

# V2500-ENG-72-0166

## Part Number

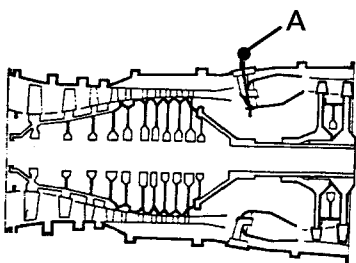
2A0364  
AS15825

## Description

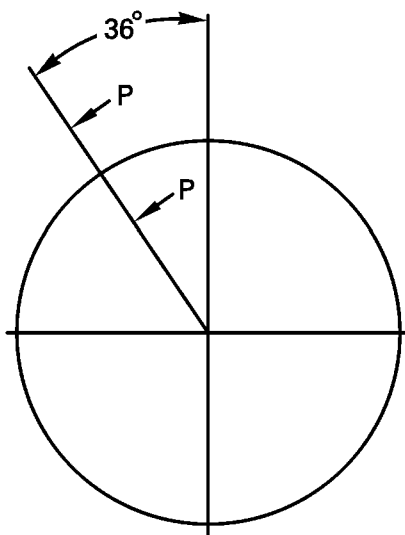
Seal (2 Off)  
Nut Assembly (1 Off)

## (5) Recording Instructions

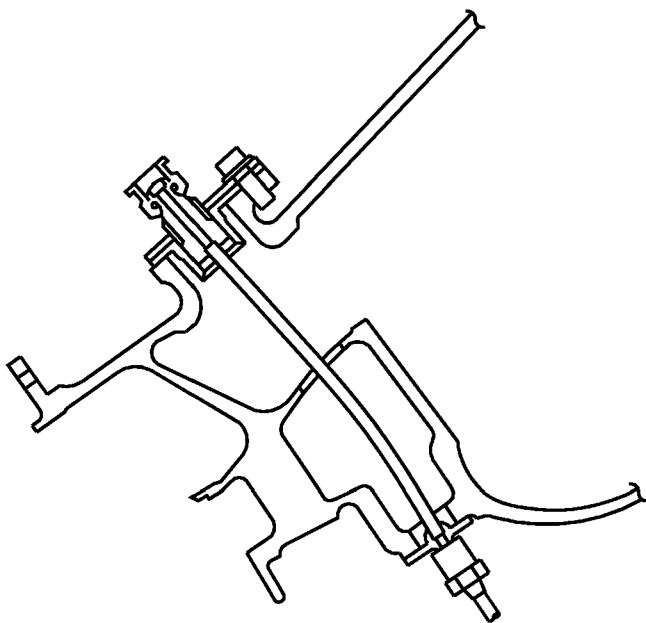
- (a) A record of accomplishment is required.



MODULE 40



SCHEMATIC VIEW TO SHOW  
THE CHANGE AT **A** WHEN  
YOU LOOK FROM THE FRONT



SECTION P - P  
BEFORE

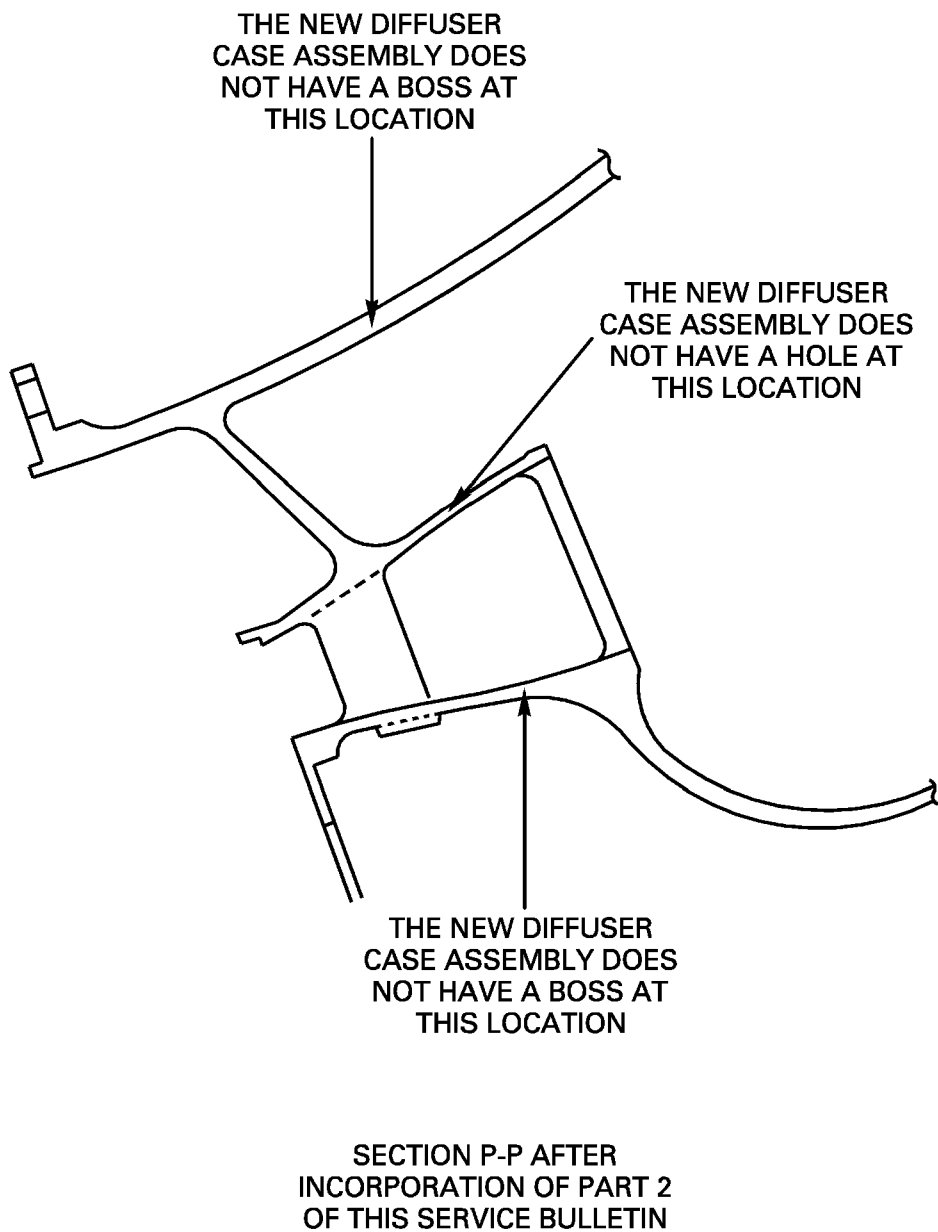
BEFORE AND AFTER VIEWS OF CONFIGURATION CHANGES THAT AFFECT THE DIFFUSER CASE  
ASSEMBLY

Figure 1 (Sheet 1 of 3)

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de000e2087

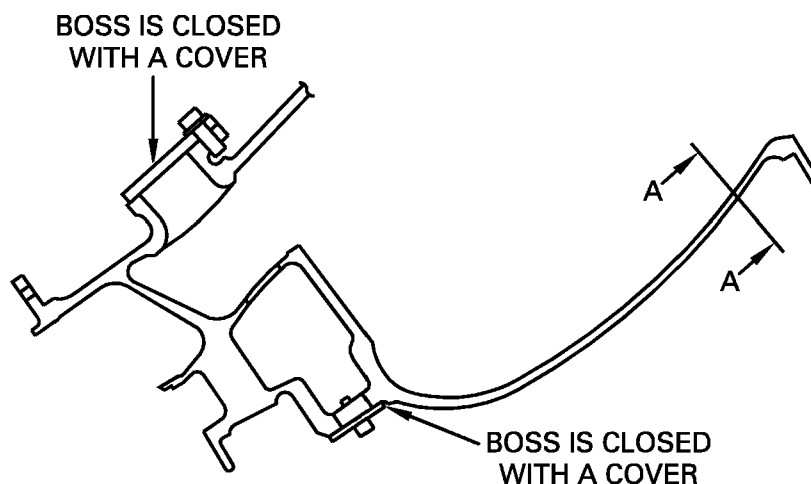




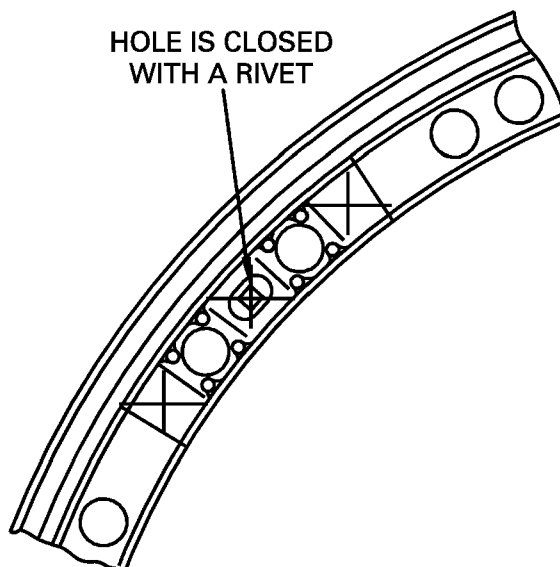
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BEFORE AND AFTER VIEWS OF CONFIGURATION CHANGES THAT AFFECT THE DIFFUSER CASE ASSEMBLY

Figure 1 (Sheet 2 of 3)



SECTION P - P  
AFTER INCORPORATION OF PART 1  
OF THIS SERVICE BULLETIN



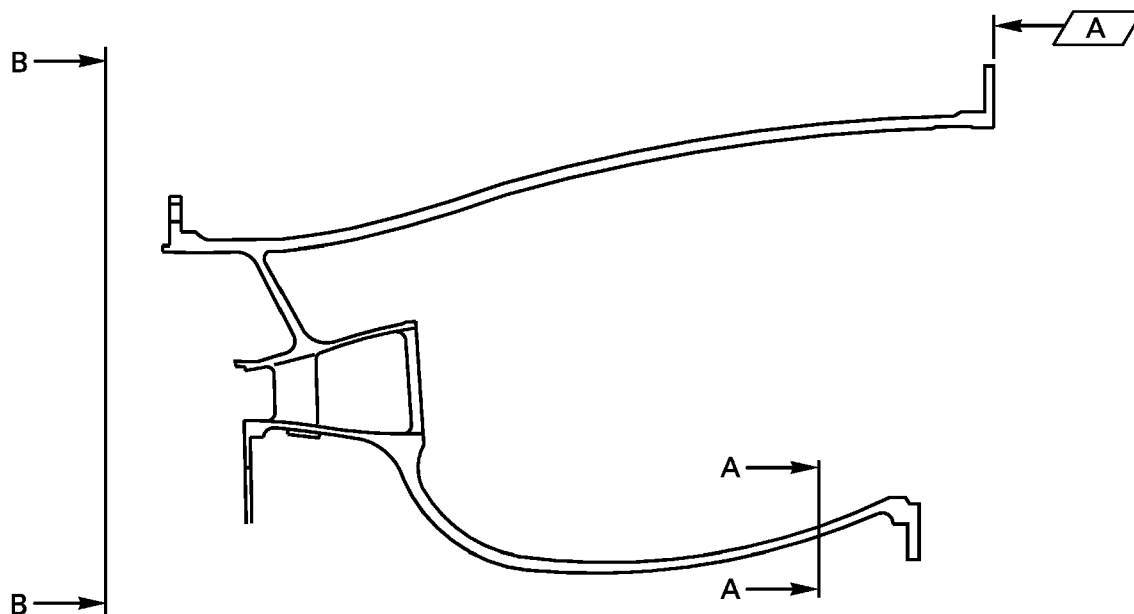
SECTION A - A  
AFTER INCORPORATION OF PART 1  
OF THIS SERVICE BULLETIN

BEFORE AND AFTER VIEWS OF CONFIGURATION CHANGES THAT AFFECT THE DIFFUSER CASE ASSEMBLY

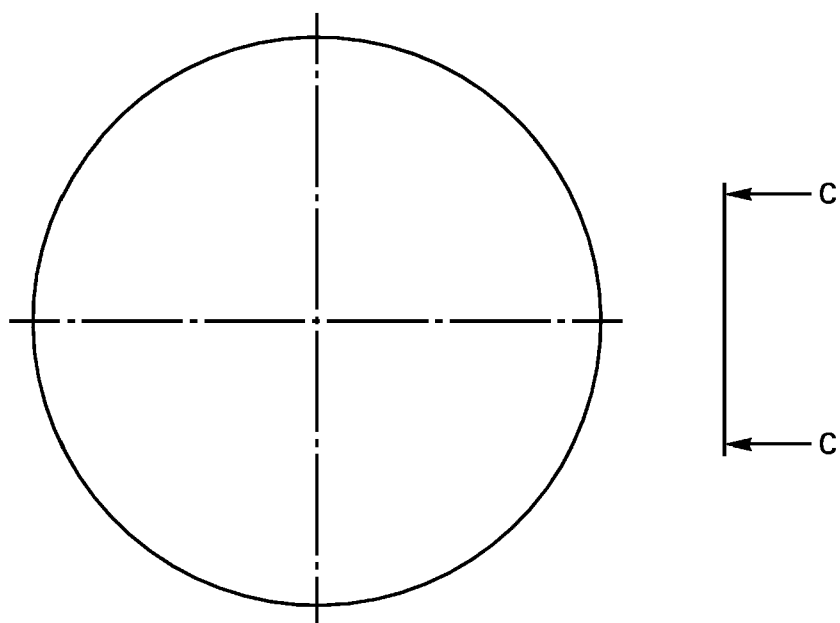
Figure 1 (Sheet 3 of 3)

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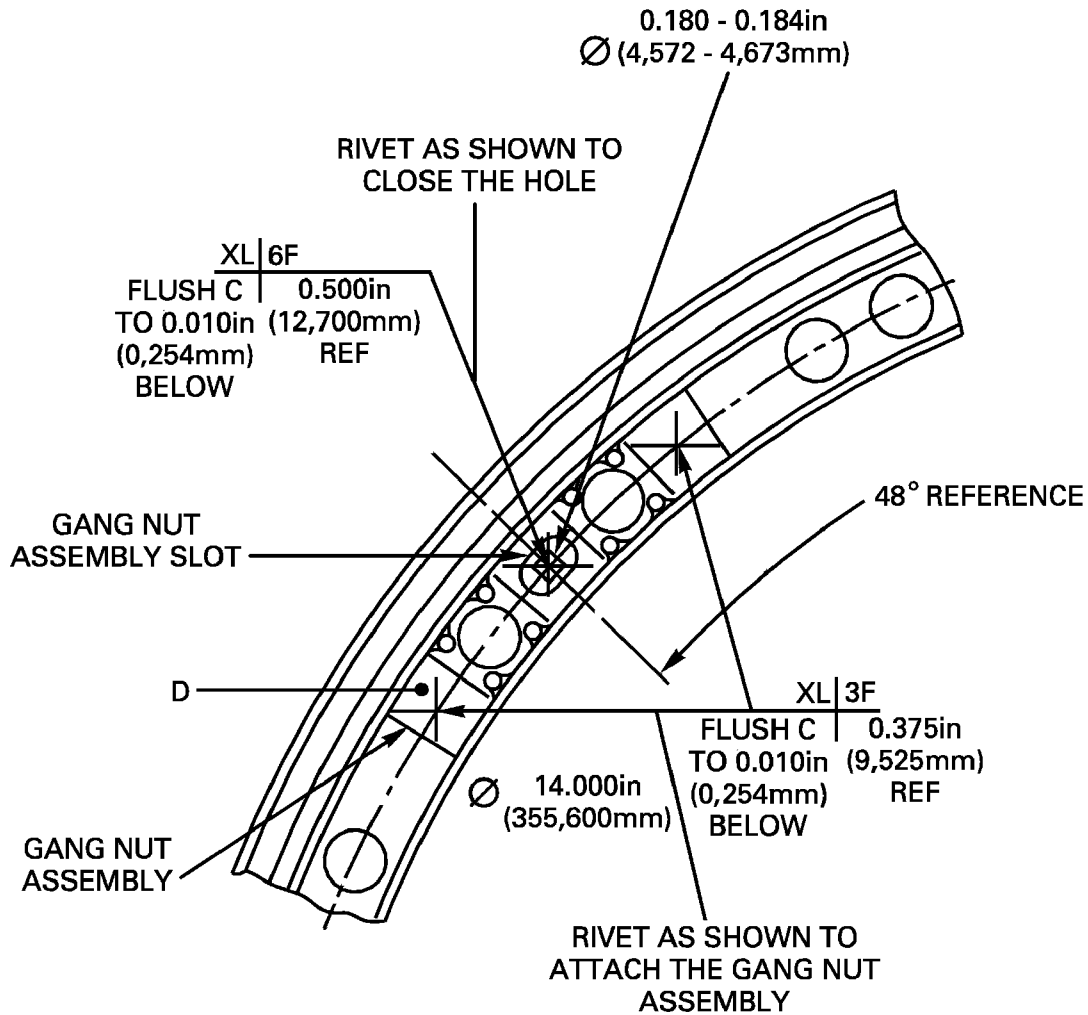


CROSS-SECTION VIEW  
OF DIFFUSER CASE ASSEMBLY



SCHEMATIC VIEW B-B

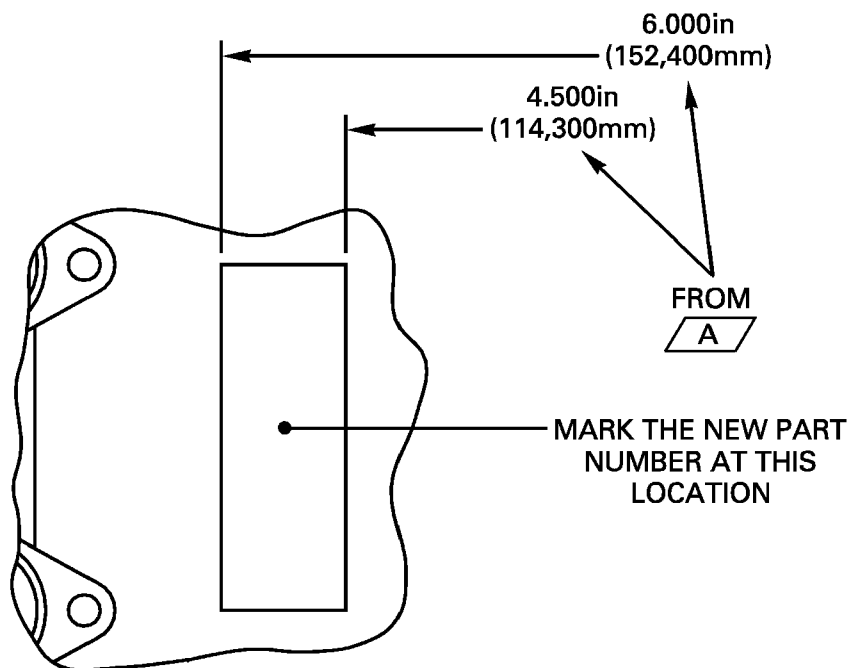
MODIFICATION OF THE DIFFUSER CASE ASSEMBLY  
Figure 2 (Sheet 1 of 3)



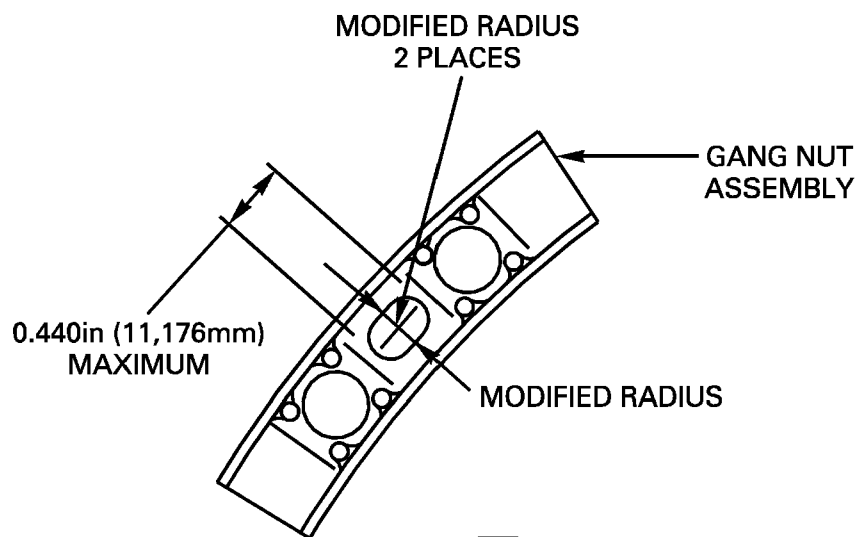
SECTION A-A

MODIFICATION OF THE DIFFUSER CASE ASSEMBLY  
Figure 2 (Sheet 2 of 3)

de000e2119



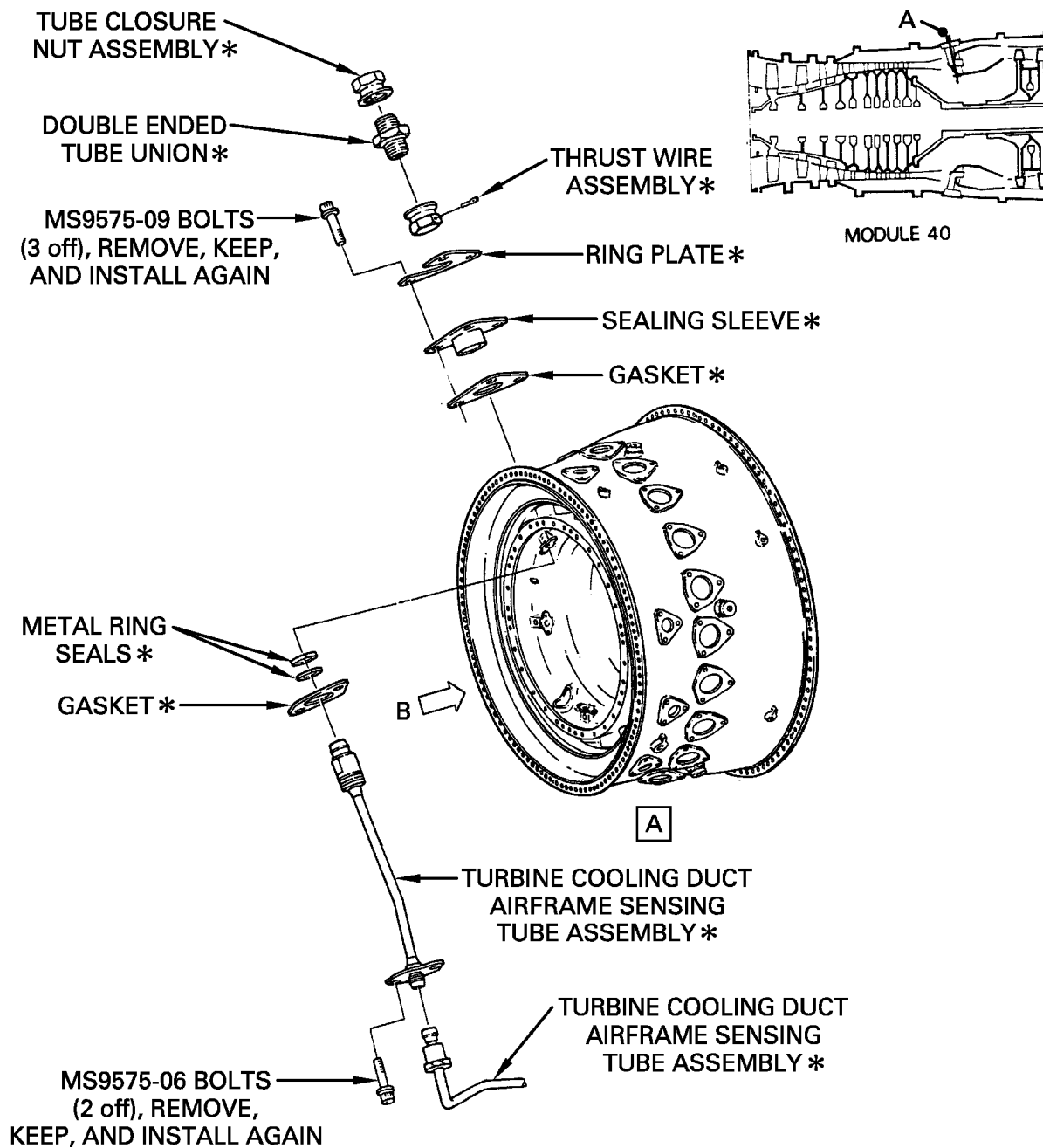
VIEW C-C



VIEW D

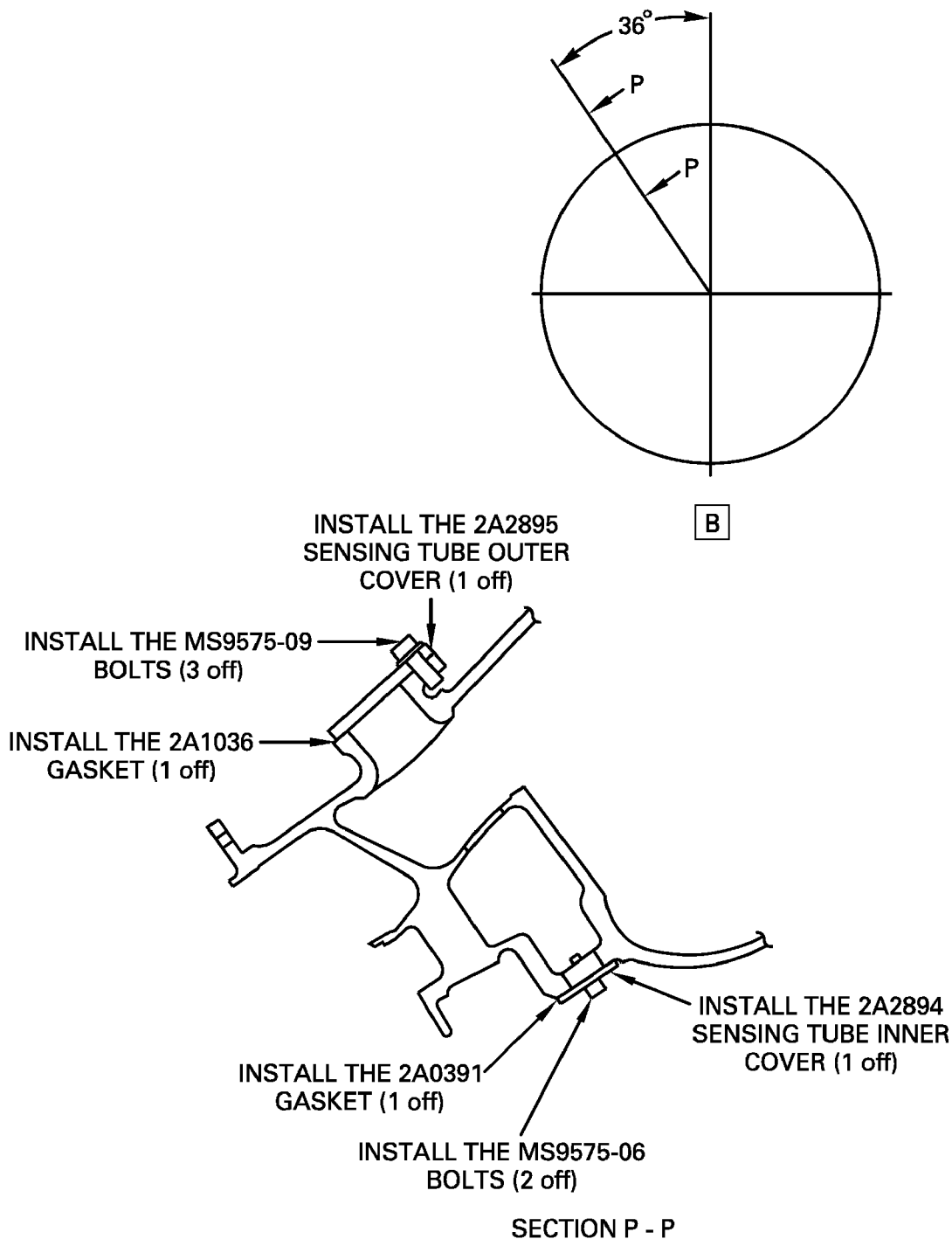
SHOWING GANG NUT ASSEMBLY ONLY

MODIFICATION OF THE DIFFUSER CASE ASSEMBLY  
Figure 2 (Sheet 3 of 3)



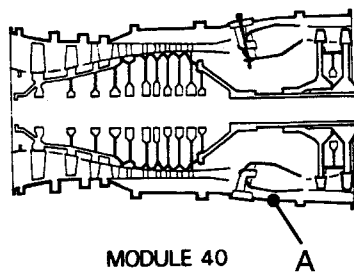
\* THESE PARTS ARE REMOVED AND WILL NOT BE INSTALLED AGAIN WITH THE NEW CONFIGURATION

LOCATION OF THE TURBINE COOLING DUCT AIRFRAME SENSING TUBE ASSEMBLY  
Figure 3 (Sheet 1 of 2)



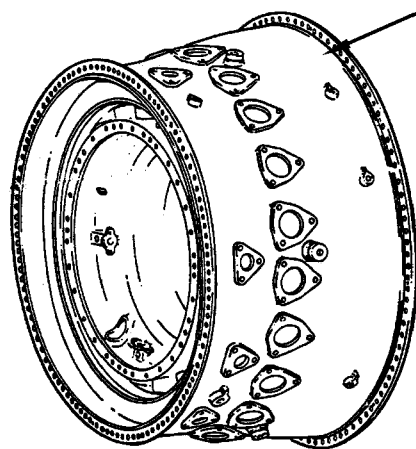
de000e2046

LOCATION OF THE TURBINE COOLING DUCT AIRFRAME SENSING TUBE ASSEMBLY  
Figure 3 (Sheet 2 of 2)



MODULE 40

A



A

FOR THE V2500 - A5 AND  
THE V2500 - D5 ENGINE MODELS  
INSTALL THE 2A2891 - 01 DIFFUSER  
CASE ASSEMBLY

FOR THE V2500 - A1  
ENGINE MODEL INSTALL  
THE 2A2889 - 01 DIFFUSER  
CASE ASSEMBLY

de0000e2088

REPLACEMENT OF THE DIFFUSER CASE ASSEMBLY – PART 2 (WITH A CASE ASSEMBLY THAT DOES NOT HAVE BOSSES FOR THE TURBINE COOLING AIR SENSING TUBE)

Figure 4



APPENDIX 1Parts Progression To Show the Changed Part in Relation to Other Parts

## Added Data

Number values shown in parentheses adjacent to U.S. values are International System of units (SI) equivalents.

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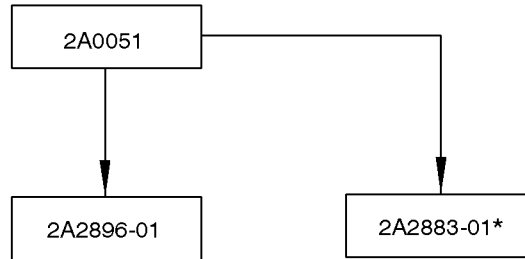
MODIFICATION

PART NUMBER CHANGE

V2500-A1

BASE LINE

V2500-ENG-72-0166 PART 1  
ENGINE - DIFFUSER CASE  
ASSEMBLY - REMOVE THE  
STAGE 1 HPTURBINE COOLING  
AIR PRESSURE TUBE



\*NOTE: THEIR IS NO PROCEDURE TO DO A MODIFICATION TO THIS PART  
AND CHANGE IT TO THE NEW CONFIGURATION

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pw0b515197

FAMILY TREE - DIFFUSER CASE ASSEMBLY REF. CATALOG SEQUENCE NO. 72-42-11 FIG. 01,  
ITEM 010  
Chart A

Sep.15/94  
R Aug.24/06

**V2500-ENG-72-0166**  
Appendix 1 - Page 2

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

MODIFICATION

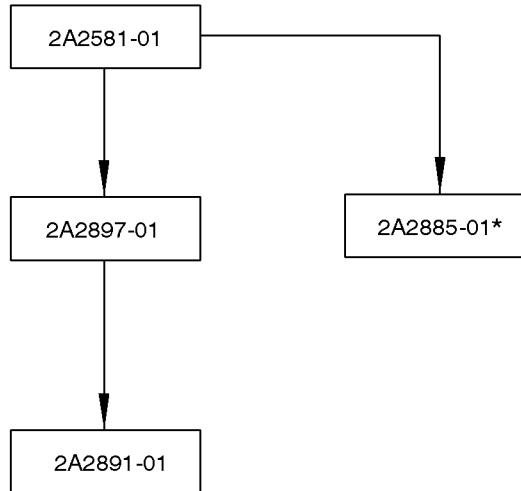
PART NUMBER CHANGE

V2500-A5 AND V2500-D5

BASE LINE

V2500-ENG-72-0166 PART 1  
ENGINE - DIFFUSER CASE  
ASSEMBLY - REMOVE THE  
STAGE 1 HPTURBINE COOLING  
AIR PRESSURE TUBE

V2500-ENG-72-0166 PART 2  
ENGINE DIFFUSER CASE  
ASSEMBLY - INSTALL A NEW  
DIFFUSER CASE ASSEMBLY THAT  
DORS NOT HAVE BOSSES FOR  
THE STAGE 1 HP TURBINE  
COOLING AIR PRESSURE TUBE



\*NOTE: THEIR IS NO PROCEDURE TO DO A MODIFICATION TO THIS PART  
AND CHANGE IT TO THE NEW CONFIGURATION

pw0b515198

FAMILY TREE - DIFFUSER CASE ASSEMBLY REF. CATALOG SEQUENCE NO. 72-42-11 FIG. 01,  
ITEM 010  
Chart B

Sep.15/94  
R Aug.24/06

**V2500-ENG-72-0166**  
Appendix 1 - Page 3

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).



ENGINE – DIFFUSER CASE ASSEMBLY – REMOVE THE STAGE 1 HP TURBINE COOLING AIR PRESSURE SENSING TUBES

Supplement

V2500 ALL

1. Modification Kit

A. There is no kit provided to do this Service Bulletin.

2. Material Cost

NOTE: The 1994 prices shown are for estimating purposes only and as such are given in good faith without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current Price Catalog for current prices.

A. The estimated price of new material is \$211.15 to do this Service Bulletin when the part modification procedure is used.

B. There is no kit provided to do this Service Bulletin.

3. New Production Parts

	New Production Part Number	Description	Unit Price US Dollars
R	AN123521	Rivet	1.15
	2A2894	Cover – Sensing Tube	102.00
		Inner	
	2A2895	Cover – Sensing Tube	108.00
		Outer	

