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DATE: May 2/11

V2500-A1/A5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

This document transmits the Revision 2 of Service Bulletin V2500-ENG-72-0590.

Document History

Service Bulletin Revision Status

Initial Issue Apr. 9/09.

Revision 1 May. 5/10

Service Bulletin Revision 2

Remove	Incorporate	Reason for change
All Pages of the Service Bulletin.	Pages 1 to 19 of the Service Bulletin.	To revise the effectivity. To revise the accomplishment instruction. To revise the material information.
All Pages of the Appendix.	Pages 1 to 3 of the Appendix.	To update references.

V2500-ENG-72-0590
Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
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All Pages of the
Supplement.

Page 1 of the
Supplement.

To update the prices.

V2500-ENG-72-0590
Transmittal - Page 2

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ENGINE – CASE ASSEMBLY, TURBINE EXHAUST – REPLACEMENT OR MODIFICATION TO INCREASE N1
MARGIN AND IMPROVE PERFORMANCE DURING TAKE OFF

1. Planning Information

A. Effectivity

(1) Airbus A319

(a) V2522-A5, V2524-A5, V2527M-A5 (A5 Standard and A5 SelectOne™ Retrofit Standard)

R Engines from Serial No. V10001 thru V13190 and V15001.

(b) V2522-A5, V2524-A5, V2527M-A5 (A5 SelectOne™ Production Standard)

R Engines from Serial No. V15002 thru V15262.

(2) Airbus A320

(a) V2500-A1

R Engines from Serial No. V0001 thru V0361.

(b) V2527-A5, V2527E-A5 (A5 Standard and A5 SelectOne™ Retrofit Standard)

R Engines from Serial No. V10001 thru V13190 and V15001.

(c) V2527-A5, V2527E-A5 (A5 SelectOne™ Production Standard)

R Engines from Serial No. V15002 thru V15262.

(3) Airbus A321

(a) V2530-A5, V2533-A5 (A5 Standard and A5 SelectOne™ Retrofit Standard)

R Engines from Serial No. V10001 thru V13190 and V15001.

(b) V2530-A5, V2533-A5 (A5 SelectOne™ Production Standard)

R Engines from Serial No. V15002 thru V15262.

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

- R
- (1) Condition: A limited number of SelectOne™ engines did not pass-off at 33,000 thrust rating due to a Turbine Exhaust Case (TEC) P4.9 measurement that was less than required to meet the N1 pass-off limit at maximum take-off conditions. These engines were passed off at 30,000 thrust and meet all requirements for revenue service at 30,000 thrust rating and lower.
 - (2) Background: Variations in the position of the vent holes relative to the aft end of the pressure kiel taps in the TEC struts lead to a lower P4.9 pressure measurement. This results in a lower measured Engine Pressure Ratio (EPR) at a given thrust, therefore leading to over thrusting at the required EPR setting.
 - (3) Objective: Modify the TEC to reposition the aft end of the pressure kiel taps to get pressure recovery characteristics consistent with current EPR classifications, therefore eliminating the over thrust condition. This design improves the P4.9 measurement system by making it less susceptible to manufacturing variability.
 - (4) Effects of Bulletin on:
 - (a) Removal/Installation: Not Affected.
 - (b) Disassembly/Assembly: Not Affected.
 - (c) Cleaning: Add part numbers to Reference 8, Engine Manual Chapter/Section 72-50-53, Cleaning-00 and Cleaning-02.
 - (d) Inspection/Check: Add part numbers to Reference 8, Engine Manual Chapter/Section 72-50-53, Inspection/Check-00 and Inspection/Check-02.
 - (e) Repair: Add part numbers to Reference 8, Engine Manual Chapter/Section 72-50-53, Repair -045, -046, -050, -052, -053, -054, -055, -056, -057, -058, -059, -060, -061, -063, -064, -069, -070, -073, -075, -077, -078, and -080.
 - (f) Testing: Not Affected.
 - (5) Supplemental Information
None.

D. Description

Replace or do a modification of the turbine exhaust case assembly.

E. Compliance

Category 8

Accomplish based upon experience with the prior configuration.

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 models 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

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

R (a) By replacement of TEC only: 1.5 hours

R (b) By modification of the existing TEC: 40 hours

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

- (1) IAE V2500 Service Bulletin V2500-ENG-70-0245 (Engine - To Announce The Availability Of A New Turbine Exhaust Case Assembly).
- (2) IAE V2500 Service Bulletin V2500-ENG-72-0192 (Engine - Turbine Exhaust Case Assembly And Fittings - Remove The Turbine Exhaust Case Fairing).
- (3) IAE V2500 Service Bulletin V2500-ENG-72-0480 (Engine - LP Turbine Module - To Announce The Availability Of A New Turbine Exhaust Case With Increased Thickness).
- (4) IAE V2500 Service Bulletin V2500-ENG-70-0783 (Engine - Turbine Exhaust Case Group - To Announce The Availability Of A New Turbine Exhaust Case Assembly).
- (5) IAE V2500 Service Bulletin V2500-ENG-72-0063 (Engine - LP Turbine Rotor And Stator Assembly - Introduce New Tube Assemblies Required For Modified Turbine Exhaust Case - Category Code 8 - Mod.Eng-72-0063).
- (6) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 72-50-53, Figure 21.
- (7) V2500 Engine Illustrated Parts Catalogs (S-V2500-2SA, S-V2500-2SB, S-V2500-5SA, S-V2500-5SB, S-V2500-6SA, S-V2500-6SB, S-V2500-7SA, and S-V2500-7SB).
- (8) V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-50-53.
- (9) V2500 Standard Practices/Processes Manual (E-V2500-1IA), Chapter/Section 70-31-13, Chapter/Section 70-37-12, Chapter/Section 70-23-05, Chapter/Section 70-09-00.

- R
- (10) Internal Reference No. - EC 08VA092, 08VA092F, 08VA092Q and 08VA092J.
 - (11) ATA Locator - 72-50-53.
 - (12) Airbus Aircraft Modification No. 150190.

L. Other Publications Affected

- (1) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 72-52-53, Figure 21.

- (2) V2500 Engine Illustrated Parts Catalogs (S-V2500-2SA, S-V2500-2SB, S-V2500-5SA, S-V2500-5SB, S-V2500-6SA, S-V2500-6SB, S-V2500-7SA, and S-V2500-7SB).
- (3) V2500 Engine Manuals (E-V2500-1IA), Chapter/Section 72-52-53 Cleaning, Inspection and Repair, to add the new part.

M. Interchangeability of Parts

Old and new turbine exhaust case assembly is directly interchangeable, however the details must be used in sets.

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. Material – Price and Availability

Modification kit is not required.

For Price and availability of spares refer to the supplement of this Service Bulletin.

B. Industry Support Program

Not Applicable.

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

For V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5, V2522-A5 (SelectOne™), V2524-A5 (SelectOne™), V2527-A5 (SelectOne™), V2527E-A5 (SelectOne™), V2527M-A5 (SelectOne™), V2530-A5 (SelectOne™), V2533-A5 (SelectOne™) Engines:

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR – DISP
		72-50-50					
	01-001 F	2A4261	1	GROUP – EXHAUST CASE, TURBINE	–	2A9500	(1)(A)(N)
		72-50-53					
R	21-300 E	2A4263-01	1	.CASE – ASSY OF, TURBINE EXHAUST	–	2A3455-01	(1)(G)(I)(E)
		2A4257	24	..TAP – PRESSURE KIEL OR	–	2A2158	(2)(B)(N)(NL)
		72-50-50					
	01-001 F	2A4260	1	GROUP – EXHAUST CASE, TURBINE	–	2A9500	(1)(A)(N)
		72-50-53					
	21-300 E	2A4258-01	1	.CASE – ASSY OF, TURBINE EXHAUST	–	2A3455-01	(1)(I)(E)(G)
		2A4257	24	..TAP – PRESSURE KIEL OR	–	2A2158	(2)(B)(N)(NL)
		72-50-50					
R	01-001 F	2A8500-005	1	GROUP – EXHAUST CASE, TURBINE	–	2A9500	(1)(A)(N)(M)

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
		72-50-53					
R	21-300 E	2A3183-101	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3455-01	(1)(M)(I)(E)(A)
		2A4257	24	..TAP - PRESSURE KIEL OR	-	2A2158	(2)(B)(N)(NL)
		72-50-50					
	01-001 E	2A4261	1	GROUP - EXHAUST CASE, TURBINE	-	2A8500	(1)(A)(N)
		72-50-53					
R	21-300 D	2A4263-01	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3183-01	(1)(G)(E)(I)
		2A4257	24	..TAP - PRESSURE KIEL OR	-	2A2158	(2)(B)(N)(NL)
		72-50-50					
	01-001 E	2A4260	1	GROUP - EXHAUST CASE, TURBINE	-	2A8500	(1)(A)(N)
		72-50-53					
R	21-300 D	2A4258-01	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3183-01	(1)(E)(I)(G)
		2A4257	24	..TAP - PRESSURE KIEL OR	-	2A2158	(2)(B)(N)(NL)
		72-50-50					
	01-001 E	2A8500-005	1	GROUP - EXHAUST CASE, TURBINE	-	2A8500	(1)(A)(N)(M)
		72-50-53					
R	21-300 D	2A3183-101	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3183-01	(1)(M)(E)(I)(A)
		2A4257	24	..TAP - PRESSURE KIEL OR	-	2A2158	(2)(B)(N)(NL)
		72-50-50					
	01-001 D	2A4261	1	GROUP - EXHAUST CASE, TURBINE	-	2A4700	(1)(A)(N)

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
		72-50-53					
R	21-300 B	2A4263-01	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3111-01	(1)(E)(I)(G)
		2A4257	24	..TAP - PRESSURE KIEL OR	-	2A2158	(2)(B)(N)(NL)
		72-50-50					
	01-001 D	2A4260	1	GROUP - EXHAUST CASE, TURBINE	-	2A4700	(1)(A)(N)
		72-50-53					
R	21-300 B	2A4258-01	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3111-01	(1)(E)(I)(G)
		2A4257	24	..TAP - PRESSURE KIEL OR	-	2A2158	(2)(B)(N)(NL)
		72-50-50					
R	01-001 D	2A8500-005	1	GROUP - EXHAUST CASE, TURBINE	-	2A4700	(1)(A)(N)(M)
		72-50-53					
R	21-300 B	2A3183-101	1	.CASE - ASSY OF, TURBINE EXHAUST	-	2A3111-01	(1)(E)(I)(A)(M)
		2A4257	24	..TAP - PRESSURE KIEL	-	2A2158	(2)(B)(N)(NL)

D. Instructions/Disposition Code Statements:

Parts Modification Conditions

- (1) The new part can be obtained by modification of the old part as specified in the Accomplishment Instructions.
- (2) The new part is a replacement part only, and cannot be obtained by modification of the old part.

Spare Parts Availability

- | | |
|---|---|
| R | (A) The new part is not available for sale. |
| R | (B) The new part is available. |
| | (E) The old part is no longer available for sale. |
| | (G) The new part will be supplied on a full manufacturing lead time quotation basis only. |
| | (M) It is possible to get the new part only by modification. |
| | (N) The old part is not available for sale. |
| | (NL) The old part is not listed in the IPC. |

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.

E. Tooling – Price and Availability

Special tools are not required to accomplish this Service Bulletin.

F. Reidentified Parts

Reidentified Parts Data

New PN	Keyword	Old PN
2A4261	GROUP – EXHAUST CASE, TURBINE	2A9500
2A4263-01	CASE – ASSY OF, TURBINE EXHAUST	2A3455-01
2A4260	GROUP – EXHAUST CASE, TURBINE	2A9500
2A4258-01	CASE – ASSY OF, TURBINE EXHAUST	2A3455-01
2A8500-005	GROUP – EXHAUST CASE, TURBINE	2A9500
2A3183-101	CASE – ASSY OF, TURBINE EXHAUST	2A3455-01
2A4261	GROUP – EXHAUST CASE, TURBINE	2A8500
2A4263-01	CASE – ASSY OF, TURBINE EXHAUST	2A3183-01
2A4260	GROUP – EXHAUST CASE, TURBINE	2A8500
2A4258-01	CASE – ASSY OF, TURBINE EXHAUST	2A3183-01
2A8500-005	GROUP – EXHAUST CASE, TURBINE	2A8500
2A3183-101	CASE – ASSY OF, TURBINE EXHAUST	2A3183-01
2A4261	GROUP – EXHAUST CASE, TURBINE	2A4700
2A4263-01	CASE – ASSY OF, TURBINE EXHAUST	2A3111-01
2A4260	GROUP – EXHAUST CASE, TURBINE	2A4700
2A4258-01	CASE – ASSY OF, TURBINE EXHAUST	2A3111-01
2A8500-005	GROUP – EXHAUST CASE, TURBINE	2A4700
2A3183-101	CASE – ASSY OF, TURBINE EXHAUST	2A3111-01

Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590

Page 9

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G. Other Material Information Data

Not Applicable.

3. Accomplishment Instructions

NOTE: Engines may incorporate the intent of this bulletin by either replacement or modification of the TEC. Although all A1 and A5 and SelectOne™ models are included due to TEC part number applicability, not all engines will benefit significantly from incorporation of this new configuration. The V2533-A5 and V2533-A5 SelectOne™ models are most susceptible to the inaccuracy of the EPR measurement. For more information contact IAE.

Replacement Instructions

- R (1) Replace the turbine exhaust case assembly as given in the Table 1 below. See Figure 1, Sheet 1.
- R (2) Identify the turbine exhaust case group and turbine exhaust case assembly as given in Table 1 below. Mark the new part number as specified in Reference 9, Standard Practices Manual, Chapter/Section 70-09-00, vibro-peen method. Mark the part number in the same location of existing part number and maintain the same serial number. See Figure 1, Sheet 2 for the location of marking.

Table 1:

New PN	Keyword	Old PN
2A4261	Group - Exhaust Case, Turbine	2A9500
2A4263-01	Case - Assy Of, Turbine Exhaust	2A3455-01
2A4260	Group - Exhaust Case, Turbine	2A9500
2A4258-01	Case - Assy Of, Turbine Exhaust	2A3455-01
2A8500-005	Group - Exhaust Case, Turbine	2A9500
2A3183-101	Case - Assy Of, Turbine Exhaust	2A3455-01
2A4261	Group - Exhaust Case, Turbine	2A8500
2A4263-01	Case - Assy Of, Turbine Exhaust	2A3183-01
2A4260	Group - Exhaust Case, Turbine	2A8500
2A4258-01	Case - Assy Of, Turbine Exhaust	2A3183-01
2A8500-005	Group - Exhaust Case, Turbine	2A8500
2A3183-101	Case - Assy Of, Turbine Exhaust	2A3183-01



New PN	Keyword	Old PN
2A4261	Group - Exhaust Case, Turbine	2A4700
2A4263-01	Case - Assy Of, Turbine Exhaust	2A3111-01
2A4260	Group - Exhaust Case, Turbine	2A4700
2A4258-01	Case - Assy Of, Turbine Exhaust	2A3111-01
2A8500-005	Group - Exhaust Case, Turbine	2A4700
2A3183-101	Case - Assy Of, Turbine Exhaust	2A3111-01

Modification Instructions

- (1) Do a modification of the Turbine Exhaust Case Assembly, PN 2A3455-01 or PN 2A3183-01 as follows. See Figure 1.

- R (a) Mask the bearing compartment, the bearing tube Inside Diameter (ID)
R holes at Struts 5 and 9, the ID holes at Struts 1 - 13 and Struts 3,
R 6, 8 and 11 at Location B in Figure 1, Sheet 2 to prevent
R contamination from machining operations. Use mechanical covers and
R tape. See Reference 9, Standard Practices Manual, TASK
R 70-38-24-300-503, Mask the Parts 03.
- R (b) Machine to remove material from 24 pressure kiel taps to 0.000 - 0.020
R in. (0,00 - 0,51 mm) above the strut leading edge on Struts 4, 7 and
R 10 at Location C in Figure 1, Sheet 2. Do not remove strut parent
R material.
- R (c) Drill the 24 pressure kiel taps for a 10-32 tap. Drill to a maximum
R depth of 0.400 in. (10,160 mm).
- R (d) Tap the 24 pressure kiel taps using a 10-32 tap. Tap to a maximum
R depth of 0.400 in. (10,160 mm).
- R (e) Partially remove the 24 pressure kiel taps by machining a 0.238 in.
R (6,045 mm) diameter hole to 0.280 in. (7,112 mm) maximum depth at each
R pressure kiel tap location. Locate the center of the 0.238 in. (6,045
R mm) diameter hole using the center line of the existing 0.2175 in.
R (5,524 mm) diameter hole. See Figure 1, Sheet 5.
- R (f) Remove what remains of the 24 pressure kiel taps using a 10-32 slide
R hammer. Recommended hammer weight is approximately 5.0 lbs (2,27 kg).
- R (g) Locally clean affected areas. See Reference 9, Standard Practices
R Manual, TASK 70-11-26-300-503, Solvent Cleaning 03.

- R (h) Machine Diameter B to extend the length from Dimension S, 0.200 in.
R (5,080 mm) to Dimension T, 0.247 – 0.253 in. (6,274 – 6,426 mm) at 24
R locations. A 0.002 in. (0,051 mm) step is permitted between lengths
R Dimension S and Dimension T. See Figure 1, Sheet 4.
- R (i) Break all edges/corners 0.003 – 0.015 in. (0,08 – 0,38 mm), except as
R shown in Figure 1, Sheet 5.
- R (j) Remove tape and mechanical covers, and remove any residue that remains
R by solvent wiping. See Reference 9, Standard Practices Manual, TASK
R 70-38-24-300-503, Mask the Parts 03 and TASK 70-11-26-300-503, Solvent
R Cleaning 03.
- R (k) Clean the TEC by the procedure in Reference 9, Standard Practices
R Manual, TASK 70-11-03-300-503, Aqueous Degrease 03. Thoroughly flush
R all cavities, strut openings, and the bearing compartment.
- R (l) Do an inspection of the pressure kiel tap holes and strut cavities to
R ensure they are free from machining chips and coolant
- R (i) Select a borescope with a light source. The borescope can be
R flexible or rigid, must not exceed 0.300 in. (7,620 mm)
R diameter, and must measure 8.000 in. (203,200 mm) minimum in
R length.
- R (ii) Insert the borescope through the external bosses on the case at
R Location C (three locations) in Figure 1, Sheet 2.
- R (iii) If you find machining chips or coolant, then clean the TEC
R again by the procedure in Reference 9, Standard Practices
R Manual, TASK 70-11-03-300-503, Aqueous Degrease 03. Thoroughly
R flush all cavities, strut openings and the bearing compartment.
- R **CAUTION:** ATTACH A GROUNDING CLAMP TO STRUT BEING WELDED TO PREVENT ARCING
R ACROSS BEARING FEATURES.
- R (m) Assemble and weld the 24 new Pressure Kiel Taps, PN 2A4257 into the
R struts 4, 7 and 10 (Location C). Use the Gas Tungsten Arc Weld (GTAW)
R procedure and Welding Wire, COMAT 03-378, except theoretical throat
R requirement is waived, actual throat must be 0.020 inch (0,508 mm)
R minimum. Refer to Reference 9, Standard Practices Manual,
R Chapter/Section 70-31-13. See Figure 1, Sheets 3 and 4.
- (n) Locally heat treat the 24 pressure kiel tap weldments as specified in
Reference 9, Standard Practices Manual, Chapter/Section 70-37-12. It
is not permitted to do a furnace heat treatment.
- (o) Do an inspection of the 24 pressure kiel tap weldments as specified in
Reference 9, Standard Practices Manual, Chapter/Section 70-23-05. Use
COMAT 06-065. No crack indications are permitted.

R

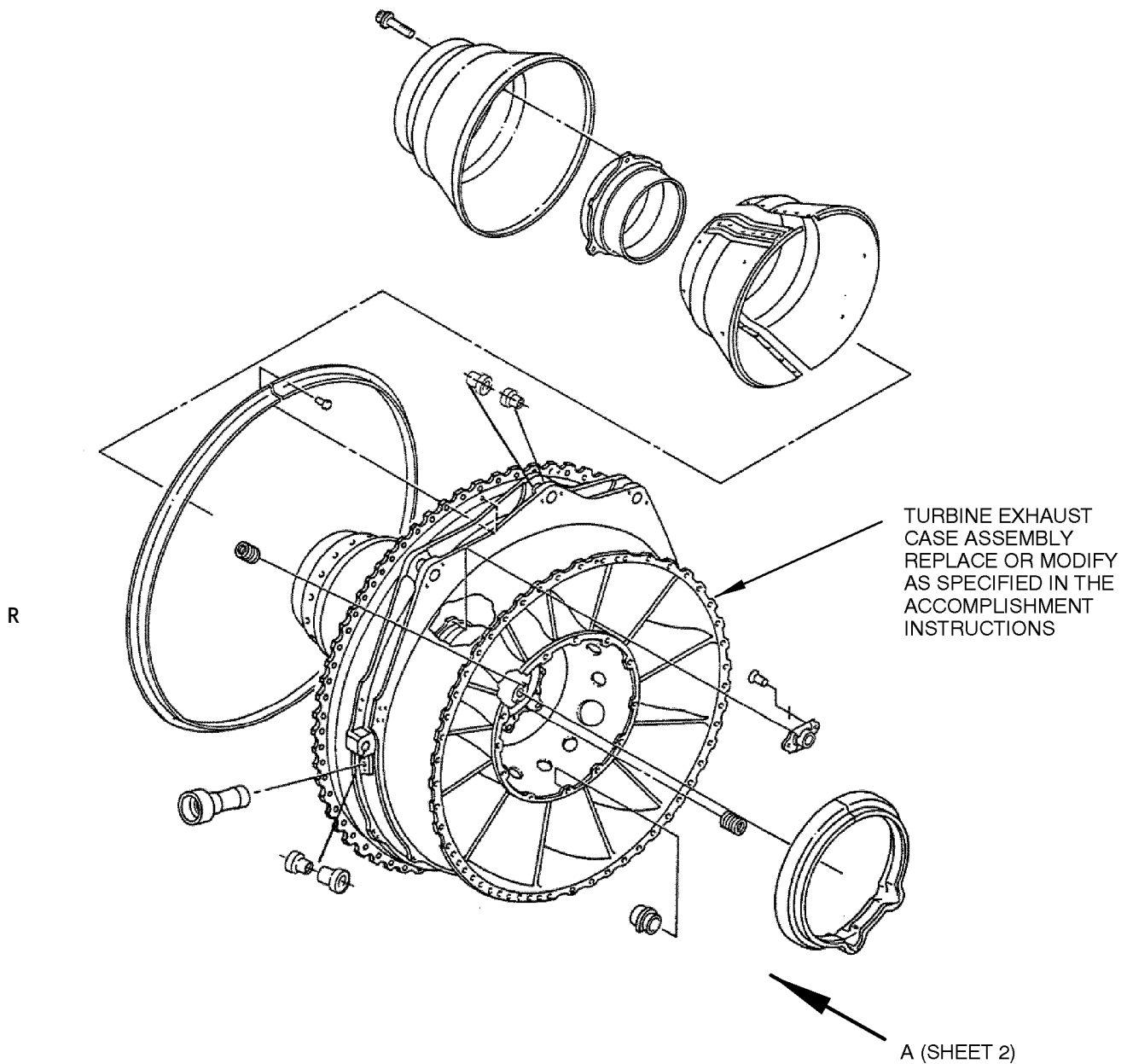
- (p) Identify the turbine exhaust case group and turbine exhaust case assembly as given in Table 2 below. Mark the new part number as specified in Reference 9, Standard Practices Manual, Chapter/Section 70-09-00, vibro-peen method. Mark the part number in the same location of existing part number and maintain the same serial number. See Figure 1, Sheet 2 for the location of marking.

Table 2:

New PN	Keyword	Old PN
2A4261	Group - Exhaust Case, Turbine	2A9500
2A4263-01	Case - Assy Of, Turbine Exhaust	2A3455-01
2A8500-005	Group - Exhaust Case, Turbine	2A8500
2A3183-101	Case - Assy Of, Turbine Exhaust	2A3183-01

(2) Recording Instructions

- (a) A record of accomplishment is required.



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R
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LOCATION AND MODIFICATION OF THE TURBINE EXHAUST CASE ASSEMBLY
72-50-53

FIGURE 1, SHEET 1

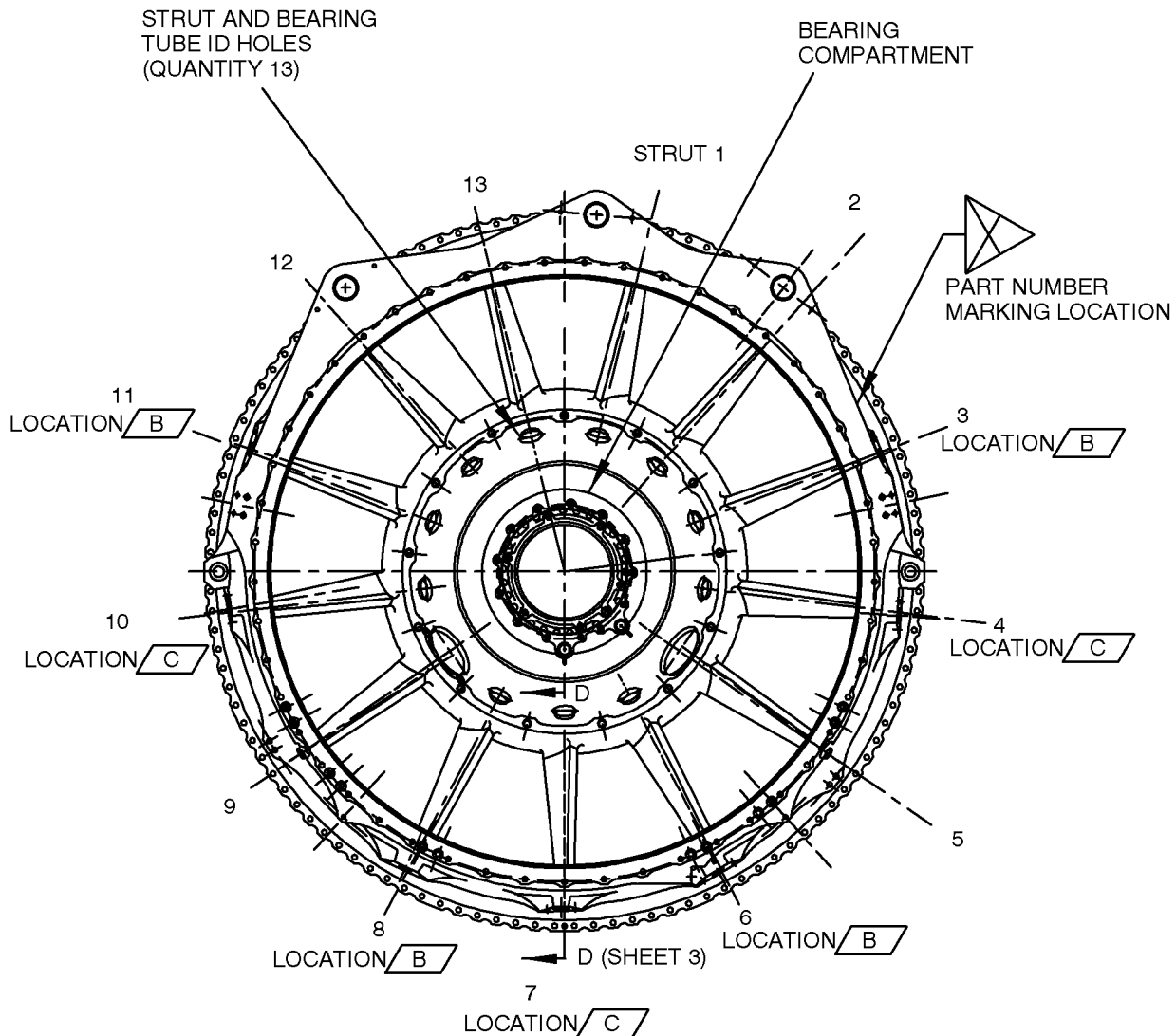
Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590

Page 15

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LOCATION AND MODIFICATION OF THE TURBINE EXHAUST CASE ASSEMBLY
FIGURE 1, SHEET 2

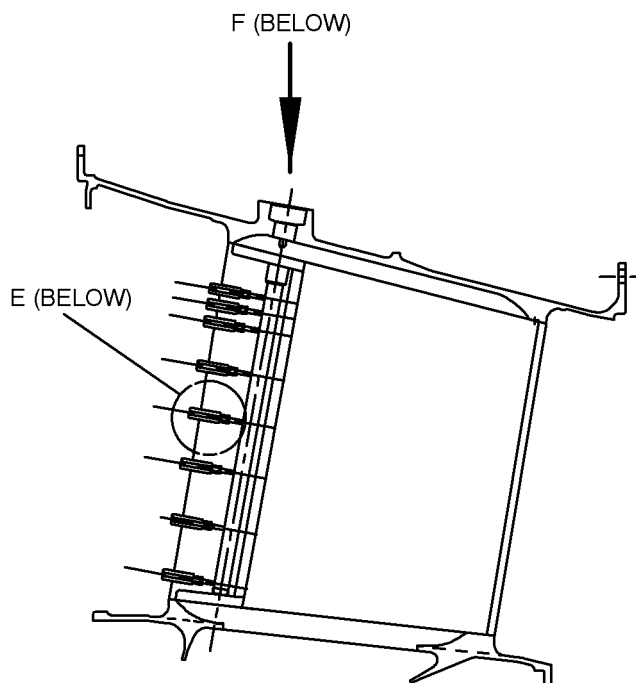
Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590

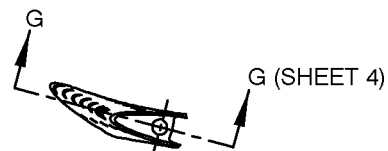
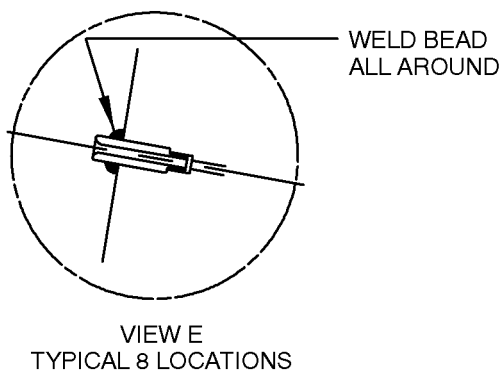
Page 16

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SECTION D - D
(TYPICAL 3 PLACES AT LOCATION C)
ROTATED 180° CW



VIEW IN DIRECTION F
(TYPICAL 3 PLACES AT LOCATION C)

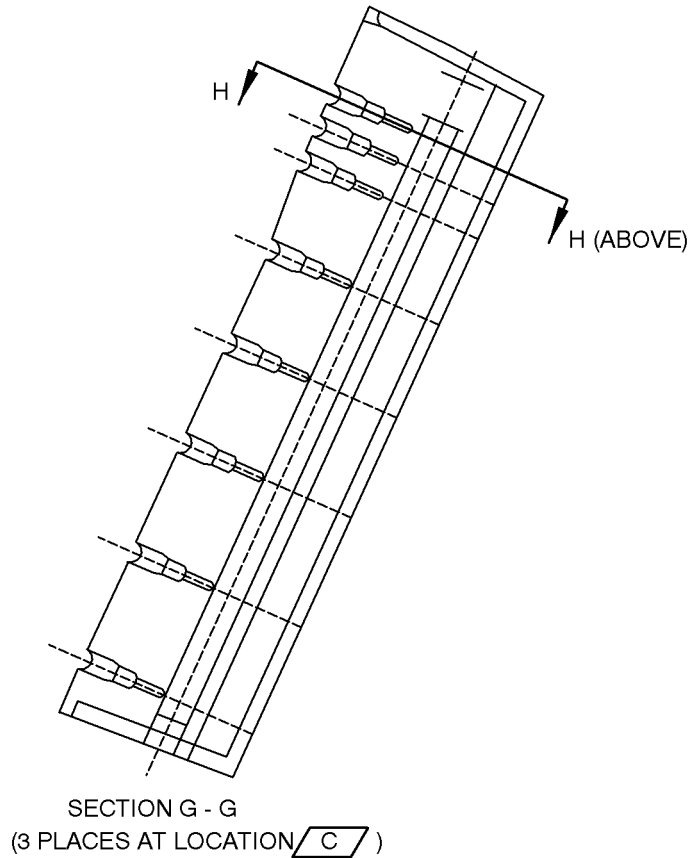
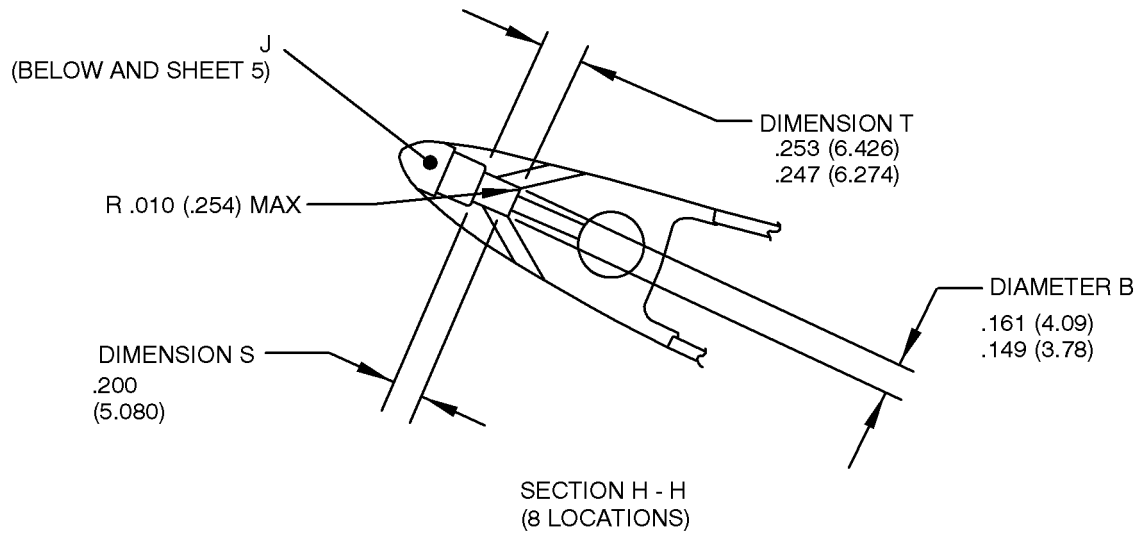
pw0523027

LOCATION AND MODIFICATION OF THE TURBINE EXHAUST CASE ASSEMBLY
FIGURE 1, SHEET 3

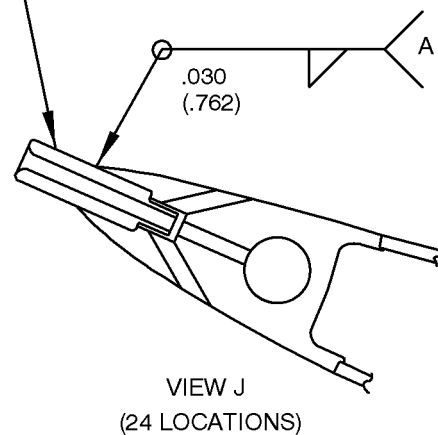
Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590

Page 17



2A4257
PRESSURE KIEL TAP
INSTALL 24 LOCATIONS



LOCATION AND MODIFICATION OF THE TURBINE EXHAUST CASE ASSEMBLY
FIGURE 1, SHEET 4

Apr. 9/09
May 2/11 Revision 2

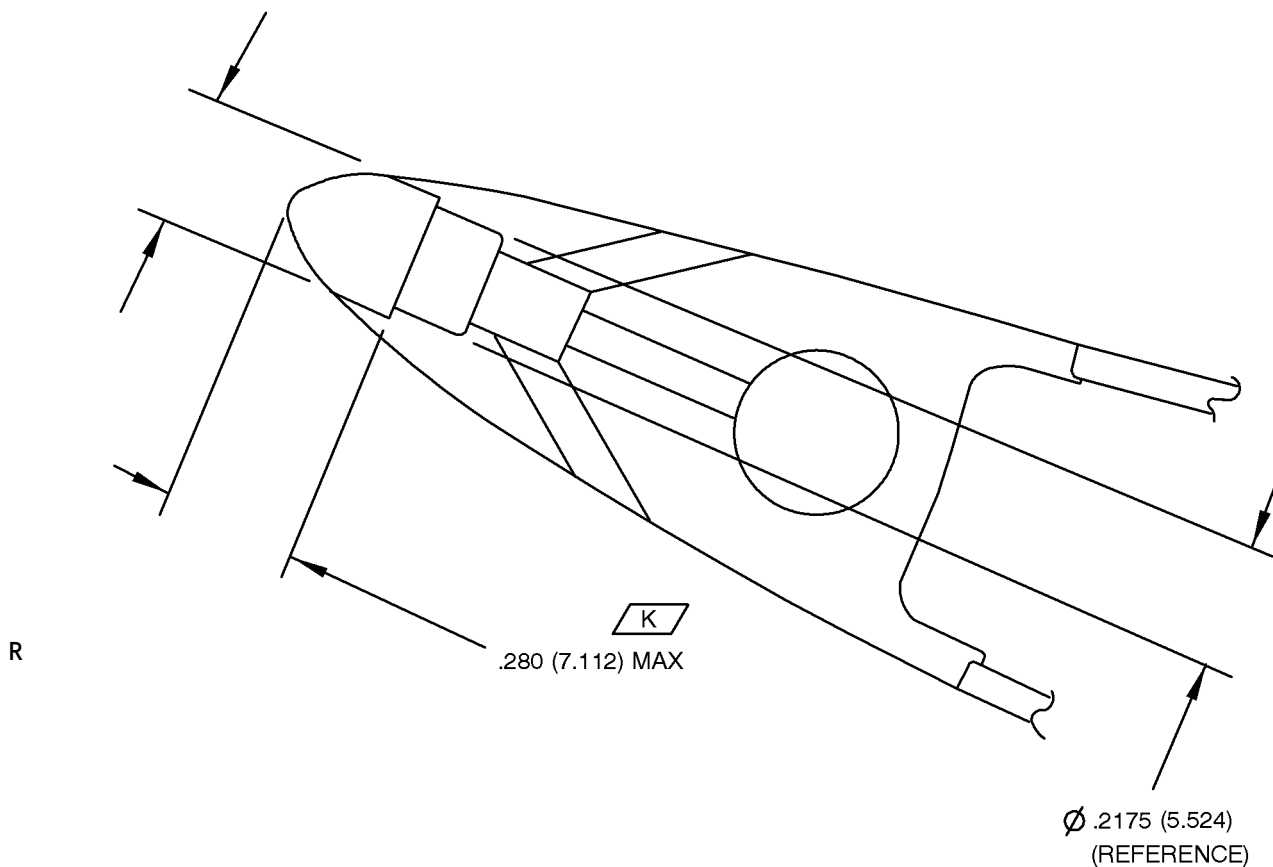
V2500-ENG-72-0590

Page 18

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DIAMETER .238 (6.045) MAXIMUM PERMISSIBLE FOR DISTANCE K
BREAK-EDGE REQUIREMENT WAIVED ON EDGE SURFACE,
CONSUMED DURING WELD.



VIEW J
(24 LOCATIONS)

pw0b523029

LOCATION AND MODIFICATION OF THE TURBINE EXHAUST CASE ASSEMBLY
FIGURE 1, SHEET 5

Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590

Page 19

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APPENDIXParts Progression To Show the Changed Part in Relation to Other Parts

Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590

Appendix - Page 1 of 3

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V2500-ENG-72-0063
ENGINE - LP TURBINE ROTOR
AND STATOR ASSEMBLY - INTRODUCE
NEW TUBE ASSEMBLIES REQUIRED
FOR MODIFIED TURBINE EXHAUST
CASE - CATEGORY CODE 8 - MOD.ENG-72-0063

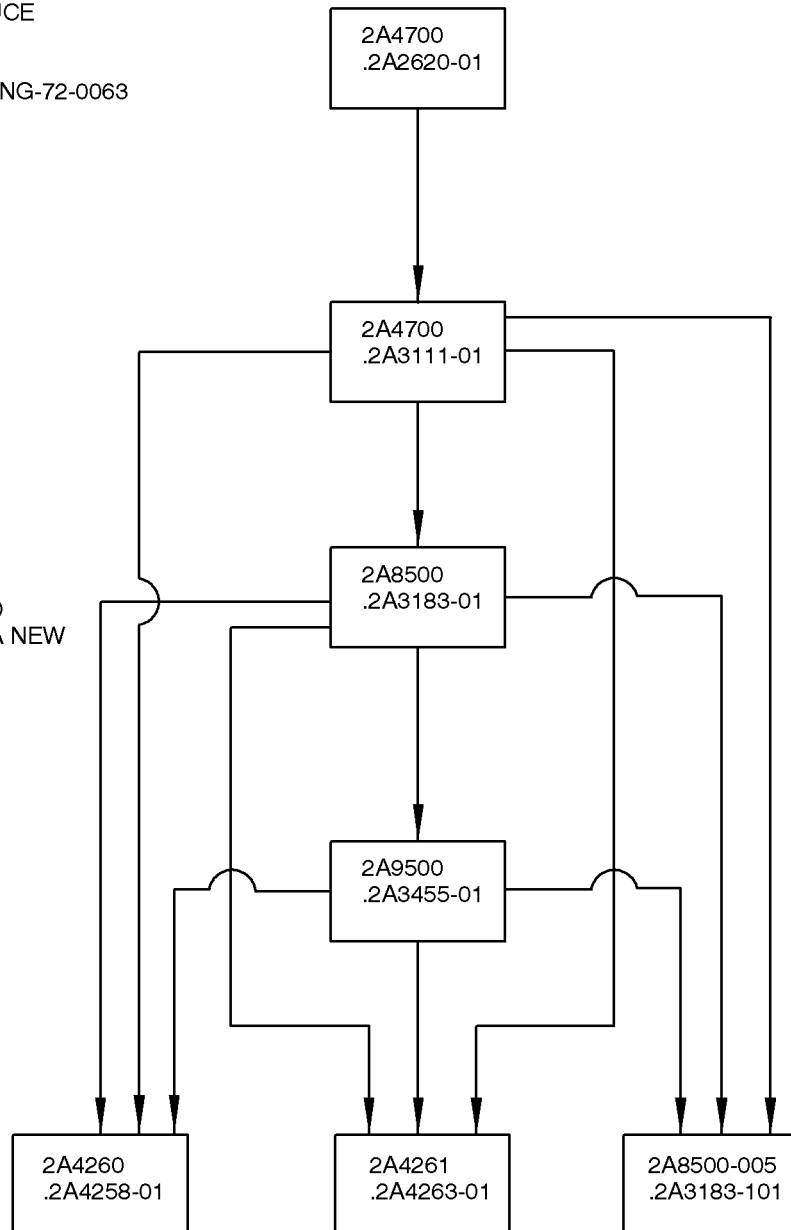
V2500-ENG-70-0245
ENGINE - TO ANNOUNCE
THE AVAILABILITY OF A
NEW TURBINE EXHAUST
CASE ASSEMBLY

V2500-ENG-72-0192
ENGINE - TURBINE EXHAUST
CASE ASSEMBLY AND FITTINGS -
REMOVE THE TURBINE EXHAUST
CASE FAIRING

V2500-ENG-70-0480
ENGINE - LP TURBINE MODULE - TO
ANNOUNCE THE AVAILABILITY OF A NEW
TURBINE EXHAUST CASE
WITH INCREASED THICKNESS

V2500-ENG-70-0783
ENGINE - TURBINE EXHAUST
CASE GROUP - TO ANNOUNCE
THE AVAILABILITY OF A NEW
TURBINE EXHAUST CASE
ASSEMBLY

V2500-ENG-72-0590
ENGINE - CASE ASSEMBLY,
TURBINE EXHAUST -
REPLACEMENT OR MODIFICATION
TO INCREASE N1 MARGIN
AND IMPROVE PERFORMANCE
DURING TAKE OFF



pw0b520929

FAMILY TREE - TURBINE EXHAUST CASE GROUP AND TURBINE EXHAUST CASE ASSEMBLY, REF.
CATALOG SEQUENCE NO. 72-50-53 FIGURE 21, ITEM 300
CHART A

Apr. 9/09
May 2/11 Revision 2

V2500-ENG-72-0590
Appendix - Page 2

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R Added Data

R Internal Reference Information

R	Revision No.	Reference Document	Origination
R	Original	EC 08VA092, EC 08VA092F	RG/JDH/IEL
R	1	EC 08VA092F	RG/JDH
R	2	EC 08VA092Q, EC 08VA092J	RG/JDH

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

ENGINE – CASE ASSEMBLY, TURBINE EXHAUST – REPLACEMENT OR MODIFICATION TO INCREASE N1
MARGIN AND IMPROVE PERFORMANCE DURING TAKE OFF

R SUPPLEMENT – PRICES AND AVAILABILITY

V2500 ALL

1. Modification Kit

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

2. Material Cost

NOTE: The prices if 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. There is no kit provided to do this Service Bulletin.

3. New Production Parts

	New Production Part Number	Description	Unit Price US Dollars
R	2A4258-01	CASE – ASSY OF, TURBINE EXHAUST	416,610.00
R	2A4263-01	CASE – ASSY OF, TURBINE EXHAUST	416,610.00
R	2A4257	TAP – PRESSURE KIEL	207.00

R Parts are currently available.

4. Tools

None.