



400 MAIN STREET, MAIL STOP 121-10
EAST HARTFORD, CT 06108, USA.
TELEPHONE:- 860 565 5515
FAX:- 860 565 0600

DATE: Jan.31/06

P.O. BOX 31, DERBY
TELEGRAMS - 'ROYCAR' DERBY
TELEX - 37645
TELEPHONE:- 44 (0) 1332 242424
FAX:- 44 (0) 1332 249936

V2500-A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

Printed in Great Britain

This document transmits Revision 1 to Service Bulletin EV2500-72-0242 and the Initial Issue of the Supplement

Document History

Service Bulletin Revision Status
Initial Issue Jul.30/96

Supplement Revision Status

Bulletin Revision 1

Remove	Incorporate Page 1 and 2 of the Summary	Reason for change Update rework to include 5 or 6 leakage fed platform cooling holes.
All pages of the Service Bulletin	Pages 1 to 17 of the Service Bulletin	Update rework to include 5 or 6 leakage fed platform cooling holes.
All pages of Appendix 1	Pages 1 to 8 of Appendix 1	Update rework to include 5 or 6 leakage fed platform cooling holes.

Supplement Initial Issue

Remove	Incorporate Page 1	Reason for change Update rework to include 5 or 6 leakage fed platform cooling holes.
--------	-----------------------	--

V2500-ENG-72-0242

Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

If any have not been received please advise Customer Data Services, Rolls-Royce plc, Derby, England

© Rolls-Royce plc (date as above) Printed in Great Britain

LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin following incorporation of Revision 1 to the Bulletin and the Initial Issue of the Supplement are as follows:

<u>Page</u>	<u>Revision Number</u>	<u>Revision Date</u>
Summary		
R 1	1	Jan.31/06
R 2	1	Jan.31/06
Bulletin		
R 1	1	Jan.31/06
R 2	1	Jan.31/06
R 3	1	Jan.31/06
R 4	1	Jan.31/06
R 5	1	Jan.31/06
R 6	1	Jan.31/06
R 7	1	Jan.31/06
R 8	1	Jan.31/06
R 9	1	Jan.31/06
R 10	1	Jan.31/06
R 11	1	Jan.31/06
R 12	1	Jan.31/06
R 13	1	Jan.31/06
R 14	1	Jan.31/06
R 15	1	Jan.31/06
R 16	1	Jan.31/06
R 17	1	Jan.31/06
Appendix 1		
R 1	1	Jan.31/06
R 2	1	Jan.31/06
R 3	1	Jan.31/06
R 4	1	Jan.31/06
R 5	1	Jan.31/06
R 6	1	Jan.31/06
R 7	1	Jan.31/06
R 8	1	Jan.31/06
Supplement		
1		Jan.31/06

Printed in Great Britain

ENGINE – HP TURBINE ROTOR AND STATOR ASSEMBLY – PROVIDE NEW STAGE 1 HPT BLADES

SUMMARY

R 1. PLANNING

R A. EFFECTIVITY

R Engine V2500-A5 Serial Numbers V10001 thru V10197

R Engine V2500-D5 Serial Numbers V20001 thru V20072

R B. CONCURRENT REQUIREMENTS

R This Service Bulletin must be incorporated at the same time as or after Service
R Bulletin V2500-ENG-72-0241.

R C. REASON/PROBLEM

R Condition

R Higher thrust versions of the V2500 engine result in a more severe operating
R environment for the High Pressure Turbine Stage 1 blades.

R Background

R Higher thrust versions of the V2500 engine result in increased high pressure
R turbine operating temperatures. These higher temperatures directly lead to
R higher operating temperatures of the Stage 1 Blade and as a result, reduced
R blade life.

R Objective

R Provide a new Stage 1 High Pressure Turbine Blade that has an improved cooling
R configuration and remove the Stage 1 Blade Platform Seal, to reduce the blade
R operating temperature and maintain part life. This configuration will become
R the new standard for all V2500-A5 and V2500-D5 models.

R D. DESCRIPTION

R (1) Remove the Stage 1 Blade Platform Seals.

R (2) Do a modification to the Stage 1 HPT Blades.

R (3) Install a new set of stage 1 HPT Blades.

R E. COMPLIANCE

R Category Code 8

R Accomplish based upon experience with the prior configuration.

R F. MANPOWER

R (1) In service - Not applicable.

R (2) At overhaul - Not applicable.

R 2. MATERIAL INFORMATION

R PART PRICES

R A. There is no new material cost to do this Service Bulletin when the part
R modification procedure is used.

R NOTE: The 1996 prices shown are for estimating purposes only and as such
R are given in good faith without commercial liability for advanced
R planning purposes only. Refer to IAE Spares and/or current Price
R Catalog for current prices.

R B. The estimated price of new material to do this Service Bulletin using new
R replacement parts is \$ 249,536.00.

ENGINE – HP TURBINE ROTOR AND STATOR ASSEMBLY – PROVIDE NEW STAGE 1 HPT BLADES1. Planning InformationA. Effectivity Data

- (1) (For Airbus A320)

Engine Models Applicable

V2527-A5 Engines Serial Nos. V10001 thru V10197

- (2) (For Airbus A321)

Engine Models Applicable

V2530-A5 Engines Serial Nos. V10001 thru V10197

- (3) (For Boeing MD-90)

Engine Models Applicable

V2525-D5, V2528-D5 Engines Serial Nos. V20001 thru V20072

R B. Concurrent Requirements

R This Service Bulletin must be incorporated at the same time as or after Service
R Bulletin V2500-ENG-72-0241.

C. Reason

- (1) Condition: Higher thrust versions of the V2500 engine result in a more severe operating environment for the High Pressure Turbine Stage 1 blades.
- (2) Background: Higher thrust versions of the V2500 engine result in increased high pressure turbine operating temperatures. These higher temperatures directly lead to higher operating temperatures of the Stage 1 Blade and as a result, reduced blade life.
- (3) Objective: Provide a new Stage 1 High Pressure Turbine Blade that has an improved cooling configuration and remove the Stage 1 Blade Platform Seal, to reduce the blade operating temperature and maintain part life. This configuration will become the new standard for all V2500-A5 and V2500-D5 models.
- (4) Substantiation: Satisfactorily completed by structural analytical review; 694 hours of testing were satisfactorily completed on a test engine.

(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

(1) Remove the Stage 1 Blade Platform Seals.

(2) Do a modification to the Stage 1 HPT Blades.

(3) Install a new set of stage 1 HPT Blades.

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 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

Not Applicable.

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

1. IAE V2500 Service Bulletin V2500-ENG-70-0379 (Information - Engine - HP Turbine Rotor and Stator Assembly - To Announce the Availability Of A New First Stage Turbine Blade With Improved Durability Features).
2. IAE V2500 Service Bulletin V2500-ENG-72-0146 (Engine - HP Turbine Rotor and Stator Assembly - Provide New Stage 1 HPT Blades).
3. IAE V2500 Service Bulletin V2500-ENG-72-0180 (Engine - HP Turbine Rotor and Stator Assembly - Introduce a New First Stage Turbine Outer Air Seal).
4. IAE V2500 Service Bulletin V2500-ENG-72-0187 (Engine - HP Turbine Rotor and Stator Assembly - Provide a New Stage 2 Turbine Blade (For Various Model Parts Commonality)).
5. IAE V2500 Service Bulletin V2500-ENG-72-0190 (Engine - HP Turbine Rotor and Stator Assembly - Introduce a New Stage 1 HPT Air Seal and a New No. 4 Bearing Rear Cooling Duct Assembly).
6. IAE V2500 Service Bulletin V2500-ENG-72-0194 (Engine - HP Turbine Rotor and Stator Assembly - Introduce a New Stage 1 HP Turbine Air Seal).

7. IAE V2500 Service Bulletin V2500-ENG-72-0220 (Engine - HP Turbine Rotor and Stator Assembly - Introduce New First And Second Stage Turbine Blades With More Durable Tips And Improved Repairability).
8. IAE V2500 Service Bulletin V2500-ENG-72-0238 (Engine - HP Turbine Rotor and Stator Assembly - Provide a New Stage 1 Turbine Hub).
9. IAE V2500 Service Bulletin V2500-ENG-72-0240 (Engine - HP Turbine Rotor and Stator Assembly - Provide New Stage 2 Turbine Airseal And New Stage 1 High Pressure Turbine (HPT) Hub Metering Plug).
10. IAE V2500 Service Bulletin V2500-ENG-72-0241 (Engine - Stage 1 Turbine Nozzle Assembly - Provide a New Stage 1 HPT Cooling Duct Assembly).
11. V2500 Standard Practices Manual (SPP-V2500-21A), Marking of Parts.
12. V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-7IA, and S-V2500-71B), Chapter/Section 72-45-00, 72-45-10, and 72-45-14.
13. V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-45-10.
14. V2500 Engine Manual (E-V2500-3IA), Chapter/Section 72-45-10.
- R 15. Internal Reference No. - 95VA021H, 99VA036.
- R 16. ATA Locator - 72-45-00.

L. Other Publications Affected

1. V2500 Engine Manuals (E-V2500-1IA and E-V2500-3IA), Chapter/Section 72-45-14 Cleaning, Inspection and Repair, to add the new part.
2. V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-7IA, and S-V2500-71B), Chapter/Section 72-45-00, 72-45-10, and 72-45-14. to add the new parts

R M. Interchangeability of Parts

- R Old and new parts are directly interchangeable.

N. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (Yes)

Added Data (No)

Revision to Table of Limits (No)

Inspection Procedures (No)

Printed in Great Britain

2. Material Information

A. Industry Support Program

Not Applicable.

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

72-45-00

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0187 and V2500-ENG-72-0240 (Incorporating a Stage 1 Turbine Rotor Assembly that uses only 2A9021 Stage 1 HPT Blades.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001		2A8400	1	Rotor and Stator Assembly	-	2A8800	(G) (H) (S1) (1D)

72-45-00

For V2527-A5, V2530-A5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0187 and does not incorporate V2500-ENG-72-0240 (Incorporates Blade Intermix).

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001		2A7000-002	1	Rotor and Stator Assembly	-	2A7000	(A) (J) (S1) (1D)

72-45-00

For V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0187 and does not incorporate V2500-ENG-72-0240 (Incorporates Blade Intermix).

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001		2A7000-002	1	Rotor and Stator Assembly	-	2A7000	(A) (K) (S1) (1D)

72-45-00

For V2527-A5, V2530-A5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0187,

V2500-ENG-72-0239, V2500-ENG-72-0240, (Incorporates Blade Intermix).

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001	2A7000-003	1	Rotor and Stator Assembly	-	2A7000-001	(A) (L) (S1) (1D)

72-45-00

For V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0187, V2500-ENG-72-0239, V2500-ENG-72-0240, (Incorporates Blade Intermix).

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001	2A7000-003	1	Rotor and Stator Assembly	-	2A7000-001	(A) (M) (S1) (1D)

72-45-00

For V2527-A5, V2530-A5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0239 and V2500-ENG-72-0240, but does not incorporate V2500-ENG-72-0187, (Incorporates Blade Intermix).

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001	2A4200-003	1	Rotor and Stator Assembly	-	2A4200-001	(A) (N) (S1) (1D)

72-45-00

For V2527-A5, V2530-A5 Engines: to incorporate this Service Bulletin that does not incorporate V2500-ENG-72-0187, (Incorporates Blade Intermix).

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-001	2A4200-002	1	Rotor and Stator Assembly	-	2A4200	(A) (P) (S1) (1D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates V2500-ENG-72-0146, V2500-ENG-72-190 but does not incorporate V2500-ENG-72-0180, V2500-ENG-72-0194, V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010	2A9021	1	Turbine Rotor, Stg. 1 Assy	-	2A3401	(G) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-190 but does not incorporate V2500-ENG-72-0180, V2500-ENG-72-0194, V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8421-003	1	Turbine Rotor, Stg. 1 Assy	-	2A8421-001	(A) (E) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0180, V2500-ENG-72-0190, but does not incorporate, V2500-ENG-72-0194, V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8821-002	1	Turbine Rotor, Stg. 1 Assy	-	2A8821	(A) (E) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0180, V2500-ENG-72-0194, but does not incorporate, V2500-ENG-72-0190, V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8721-002	1	Turbine Rotor, Stg. 1 Assy	-	2A8721	(A) (E) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0180, but does not incorporate, V2500-ENG-72-0190, V2500-ENG-72-0194, V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8721-002	1	Turbine Rotor, Stg. 1 Assy	-	2A8721	(A) (E) (S1) (2D)

72-45-10

V2500-ENG-72-0242

Page 8

© Rolls-Royce plc

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

Jul 30/96
R Jan.31/06

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0190, V2500-ENG-72-0240, but does not incorporate, V2500-ENG-72-0180, V2500-ENG-72-0194, V2500-ENG-72-0238.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8421-004	1	Turbine Rotor, Stg. 1 Assy	-	2A8421-002	(A) (F) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0180, V2500-ENG-72-0240, but does not incorporate, V2500-ENG-72-0190, V2500-ENG-72-0194, V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8721-003	1	Turbine Rotor, Stg. 1 Assy	-	2A8721-001	(A) (F) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0180, V2500-ENG-72-0190, V2500-ENG-72-0240, but does not incorporate, V2500-ENG-72-0194, V2500-ENG-72-0238.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8821-003	1	Turbine Rotor, Stg. 1 Assy	-	2A8821-001	(A) (F) (S1) (2D)

72-45-10

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0180, V2500-ENG-72-0194, V2500-ENG-72-0240, but does not incorporate, V2500-ENG-72-0190, V2500-ENG-72-0238.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8921-003	1	Turbine Rotor, Stg. 1 Assy	-	2A8921-001	(A) (F) (S1) (2D)

72-45-14

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0190, but does not incorporate, V2500-ENG-72-0180,

V2500-ENG-72-0194 V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010		2A8801	64	Blade, HPT Stage 1	-	2A8701	(B) (C) (S1) (3D)

72-45-14

For V2527-A5, V2530-A5, V2525-D5, V2528-D5 Engines: to incorporate this Service Bulletin that incorporates Service Bulletin V2500-ENG-72-0146, V2500-ENG-72-0190, but does not incorporate, V2500-ENG-72-0180, V2500-ENG-72-0194 V2500-ENG-72-0238, V2500-ENG-72-0240.

FIG- NUMBER	ITEM NUMBER	NEW PART NUMBER	QTY	PART TITLE	MAT	OLD PN	INSTR - DISP
01-010			64	Seal, HPT, Stage 1	-	2A0530	(C) (4D)

C. Instructions/Disposition Code Statements:

(S1) Old and New parts coded (S1) are not interchangeable and the new parts must be installed at the same time as or after V2500-ENG-72-0241 is incorporated.

(1D) You can obtain the rotor and stator assembly by installation of the Stage 1 Turbine Rotor assembly specified in the Accomplishment Instructions.

(2D) You can obtain the new part number by installation of the new blades or blade intermix combinations and removal of the platform seals as specified in the Accomplishment Instructions.

(3D) You can obtain the new part by sending the old part to the Authorized Rework Vendor given in Accomplishment Instructions paragraph 1.A. for modification and identification as the new part.

(4D) Old part is removed and will not be used in the new configuration.

(A) The new part is obtained only by assembly in the field and will not be sold as a spare.

(B) The new part is currently available.

(C) The old part will no longer be supplied.

(E) These Stage 1 Turbine Rotor Assemblies contain a mixture of the 2A8521, 2A8701, 2A8801, 2A8521-001, 2A8321 and/or 2A8321-001 Stage 1 HPT Blades.

(F) These Stage 1 Turbine Rotor Assemblies contain a mixture of the 2A8521, 2A8701, 2A8801, 2A8521-001, 2A8321 and/or 2A8321-001 Stage 1 HPT Blades and incorporate V2500-ENG-72-0239 and V2500-ENG-72-0240.

(G) New Part is available on a lead time quotation basis only.

(H) This HPT Rotor and Stator Assembly can contain the Stage 1 Turbine Rotor Assembly that follows: 2A9021.

(J) This HPT Rotor and Stator Assembly can contain the Stage 1 Turbine Rotor Assembly that follows: 2A8921-002.

(K) This HPT Rotor and Stator Assembly can contain any one of the Stage 1 Turbine Rotor Assemblies that follows: 2A8421-003, 2A8821-002 or 2A8921-002.

(L) This HPT Rotor and Stator Assembly can contain the Stage 1 Turbine Rotor Assembly that follows: 2A8921-003.

(M) This HPT Rotor and Stator Assembly can contain any one of the Stage 1 Turbine Rotor Assemblies that follows: 2A8421-004, 2A8821-003 or 2A8921-003.

(N) This HPT Rotor and Stator Assembly can contain any one of the Stage 1 Turbine Rotor Assemblies that follows: 2A8421-004, 2A8721-003, 2A8821-003 or 2A8921-003.

(P) This HPT Rotor and Stator Assembly can contain any one of the Stage 1 Turbine Rotor Assemblies that follow: 2A8421-003, 2A8721-002, 2A8821-002 or 2A8921-003.

D. Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

E. Reidentified Parts

R	Reidentified Parts	Data	
R	New PN	Keyword	Old PN
R	2A4200-001	Rotor and Stator Assembly	2A4200
R	2A7000-001	Rotor and Stator Assembly	2A4200-001
R	2A7000-002	Rotor and Stator Assembly	2A7000
R	2A7000-003	Rotor and Stator Assembly	2A7000-001
R	2A8400	Rotor and Stator Assembly	2A8800
R	2A8421-002	Turbine Rotor, Stg. 1 Assy	2A8721-001
R	2A8421-003	Turbine Rotor, Stg. 1 Assy	2A8421-001
R	2A8421-004	Turbine Rotor, Stg. 1 Assy	2A8421-002
R	2A8721-002	Turbine Rotor, Stg. 1 Assy	2A8721
R	2A8801	Blade, HPT Stage 1	2A8701
R	2A8821-002	Turbine Rotor, Stg. 1 Assy	2A8821
R	2A8821-003	Turbine Rotor, Stg. 1 Assy	2A8821-001
R	2A8921-003	Turbine Rotor, Stg. 1 Assy	2A8921-001
R	2A9021	Turbine Rotor, Stg. 1 Assy	2A3401

F. Other Material Information Data

Not Applicable.

3. Accomplishment Instructions

(1) Rework Instructions

- (a) Do a modification of the 2A8521 Stage 1 HPT Blade (64 off) or 2A8701 Stage 1 HPT Blade (64 off). See Reference (12), 72-45-14 Figure /Item No. 01-010).

NOTE: This procedure can be accomplished by sending the blades to one of the following Authorized Rework Vendors.

Pratt Whitney
Connecticut Airfoil Repair Operations
Attention: Lori Paturzo
400 Main Street
Well 11
East Hartford, Ct. 06108
U.S.A.

PWES-Dallas Airfoil Repair Operations
1177 North Great Southwest Parkway
Grand Prairi, Tx. 75050
U.S.A.

Japan Turbine Technologies
Taiei Kogyo Danchi
Kichioka, Taiei-cho
Katori-gun, Chiba-ken 287-02
Japan

- (i) Four pressure side airfoil and either five (diameter .026 - .032) or six (diameter .023 - .029) leakage fed platform cooling holes are added by the rework specified.
- (ii) Identify the 2A8521 Stage 1 HPT Blade Assembly as 2A8521-001 and the 2A8701 Stage 1 HPT Blade as 2A8801.
- (1) Use the procedure specified in reference (11), Chapter/Section 70-09-00, Marking of Parts.
- (2) Mark the new part number adjacent to the existing part number.
- (3) Use the vibration peen method.

Printed in Great Britain

R
R
R
R
R
R
R

R
R
R
R

R
R
R
R

R
R
R

(2) Installation

(a) Install the new Stage 1 High Pressure Turbine Blades by the steps that follow for V2527-A5 and V2530-A5 engines:

- (i) Install the 2A8801 Stage 1 High Pressure Turbine Blades (64 off) by the procedure given in Reference (13), Chapter/Section 72-45-10, Assembly.

NOTE: It is permissible to mix 2A8521, 2A8801, 2A8521-001, 2A8321 and/or 2A8321-001 blades.

- (ii) Identify the new Stage 1 Turbine Rotor Assembly per Table 1. Use the vibration peen method specified in Reference (11), Chapter/Section 70-09-00, Marking of Parts.

- (1) Mark the new part number adjacent to the existing part number.

TABLE 1 (Stage 1 Turbine Rotor Assembly)

New PN	Old PN
2A8421-003*	2A8421-001
2A8821-002*	2A8821
2A8921-002*	2A8921
2A8721-002* -	2A8721
V2500-A5 models only	For V2500-A5 models only
2A8421-004**	2A8421-002
2A8721-003**	2A8721-001
2A8821-003**	2A8821-001
2A8921-003**	2A8921-001
2A9021	2A3401

* These Stage 1 Turbine Rotor Assemblies contain a mixture of the 2A8521, 2A8701, 2A8801, 2A8521-001, 2A8321 and/or 2A8321-001 Stage 1 HPT Blades.

** These Stage 1 Turbine Rotor Assemblies contain a mixture of the 2A8521, 2A8701, 2A8801, 2A8521-001, 2A8321 and/or 2A8321-001 Stage 1 HPT Blades and incorporate V2500-ENG-72-0239 and V2500-ENG-72-0240.

(b) Install the new Stage 1 High Pressure Turbine Blades by the steps that follow for V2525-D5 and V2528-D5 engines:

- (i) Install the 2A8801 Stage 1 High Pressure Turbine Blades (64 off) by the procedure given in Reference (14), Chapter/Section 72-45-10, Assembly.

NOTE: It is permissible to mix 2A8521, 2A8701, 2A8801, 2A8521-001, 2A8321 and/or 2A8321-001 blades.

- (ii) Identify the new Stage 1 Turbine Rotor Assembly by Table 1. Use the vibration peen method specified in Reference (11), Chapter/Section 70-09-00, Marking of Parts.

(c) When you assemble the new Rotor And Stator Assemblies identify by the procedure specified in Reference (11), Chapter/Section 70-09-00, Marking of Parts (Control No./Task No. 70-09-00-400-501) and as follows:

The List that follows (Table 2) shows the Stage 1 Turbine Rotor Assemblies that can be used in each Rotor and Stator Assembly. See the Material Information section and Figures 2 through 5 for more information.

TABLE 2 (Turbine Rotor Assemblies that can be used in each Rotor and Stator Assembly)

Rotor and Stator Assy.	Stg. 1 Turbine Rotor
2A7000-002*	2A8921-002
2A7000-002**	2A8421-003 2A8821-002 2A8921-002
2A4200-002	2A8421-003 2A8721-002 2A8821-002 2A8921-002
2A7000-003*	2A8921-003
2A7000-003**	2A8421-004 2A8821-003 2A8921-003
2A8400	2A9021
2A4200-003	2A8421-004 2A8721-003 2A8821-003 2A8921-003



Rotor and Stator Assy. Stg. 1 Turbine Rotor

* V2500-A5 Engines, as applicable. See the material Information Section and Figures 2 through 4 for specific applicability.

** V2500-D5 Engines, as applicable. See the material Information Section and Figures 2 through 4 for specific applicability.

(d) Mark the new part number adjacent to the existing Rotor and Stator Assembly part number.

(i) Identify by applicable in the following list (Table 3)

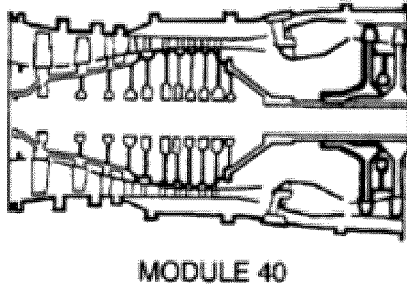
Table 3 (Rotor and Stator Assembly)

New PN	Old PN
2A7000-002	2A7000
2A4200-002	2A4200
2A7000-003	2A7000-001
2A8400	2A8800
2A4200-003	2A4200-001

(3) Recording Instructions

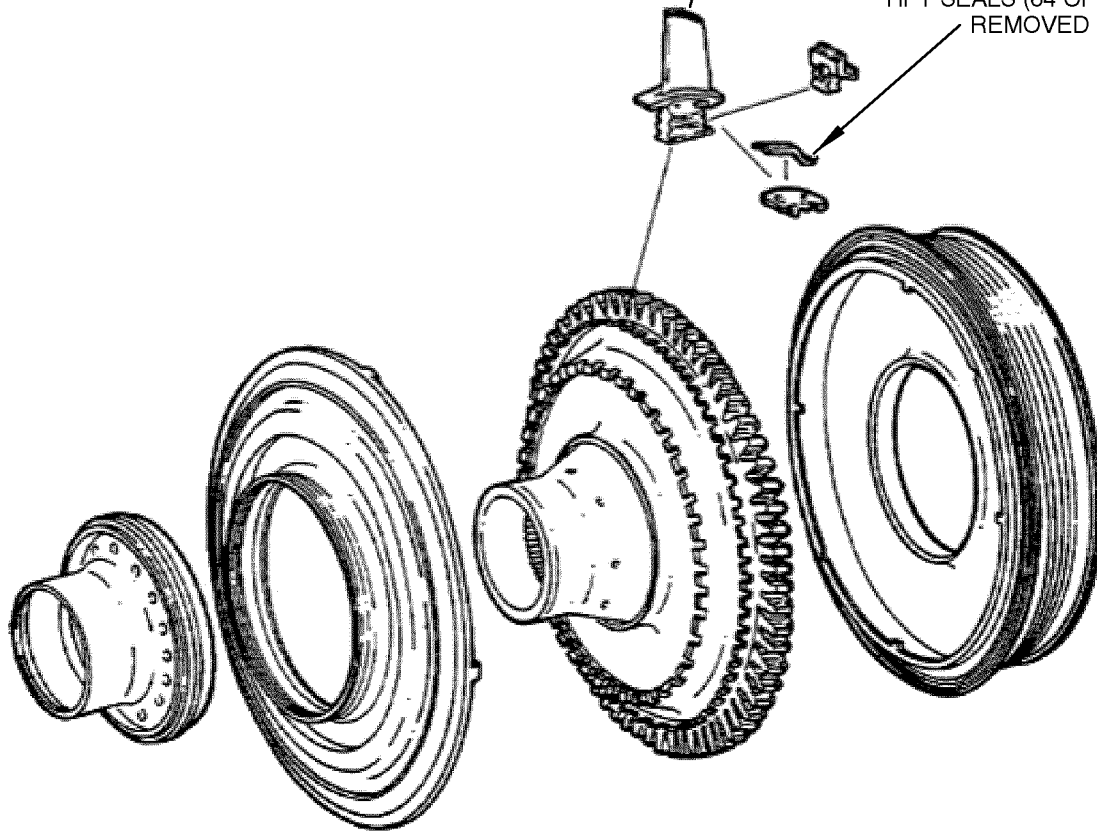
(a) A record of accomplishment is required.

Printed in Great Britain



INSTALL THE 2A8801 STAGE 1 HPT
BLADE (64 OFF)

THE 2A0530 STAGE 1
HPT SEALS (64 OFF) ARE
REMOVED



pw0b515420

LOCATION OF THE STAGE 1 HPT BLADE
Fig.1

R
R

Jul 30/96
R Jan.31/06

V2500-ENG-72-0242
Page 17

© Rolls-Royce plc

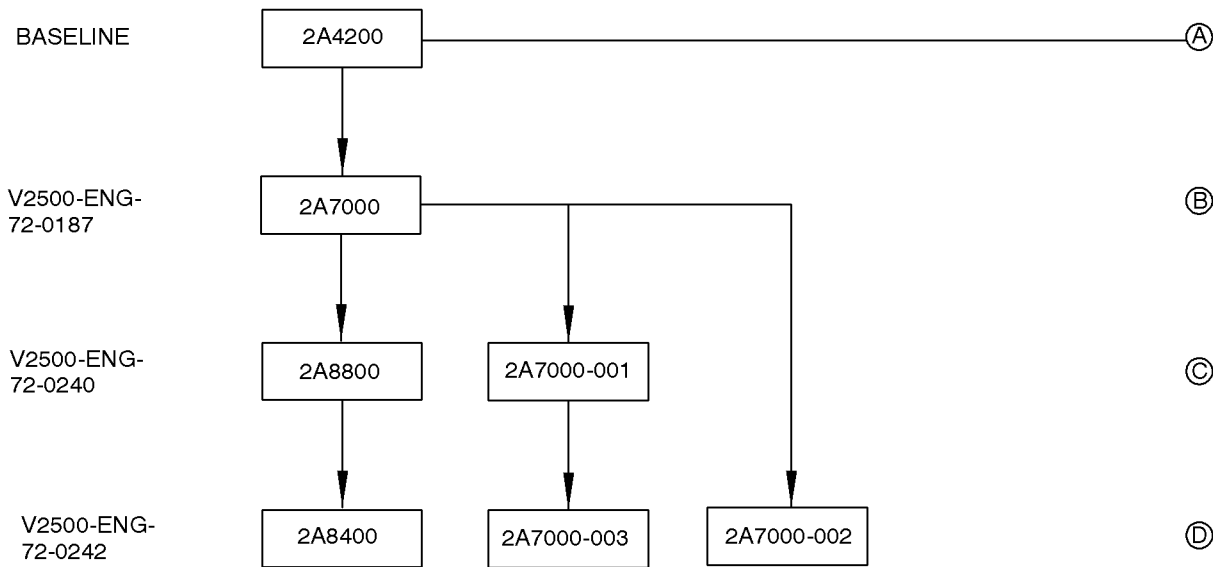
Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

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

Printed in Great Britain

MODIFICATION

PART NUMBER CHANGE



Printed in Great Britain

R

pw0b515421

R
R

FAMILY TREE - ROTOR AND STATOR ASSEMBLY HPT MODULE V2527-A5 AND V2530-A5 ENGINES
REF. CATALOG SEQUENCE NO. 72-45-00 FIG 01. ITEM 001
Fig.2 (Sheet 1)

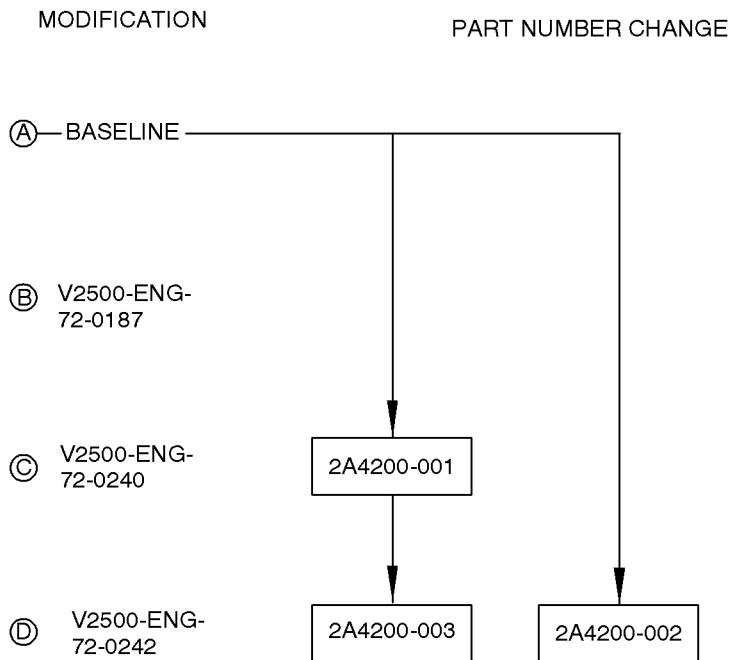
Jul 30/96
R Jan.31/06

V2500-ENG-72-0242
Appendix 1 - Page 2

© Rolls-Royce plc

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

Printed in Great Britain



R

pw0b515422

R
R

FAMILY TREE — ROTOR AND STATOR ASSEMBLY HPT MODULE V2527-A5 AND V2530-A5 ENGINES
REF. CATALOG SEQUENCE NO. 72-45-00 FIG 01. ITEM 001
Fig.2 (Sheet 2)

Jul 30/96
R Jan.31/06

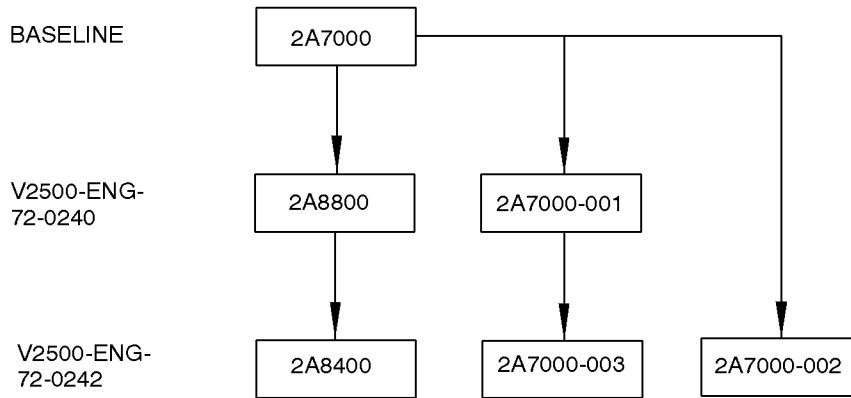
V2500-ENG-72-0242
Appendix 1 — Page 3

© Rolls-Royce plc

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

MODIFICATIONS

PART NUMBER CHANGE



Printed in Great Britain

R

pw0b515423

R

R

FAMILY TREE - ROTOR AND STATOR ASSEMBLY HPT MODULE V2525-D5 AND V2528-D5 ENGINES
REF. CATALOG SEQUENCE NO. 72-45-00 FIG 01. ITEM 001

Fig.3

Jul 30/96
R Jan.31/06

V2500-ENG-72-0242

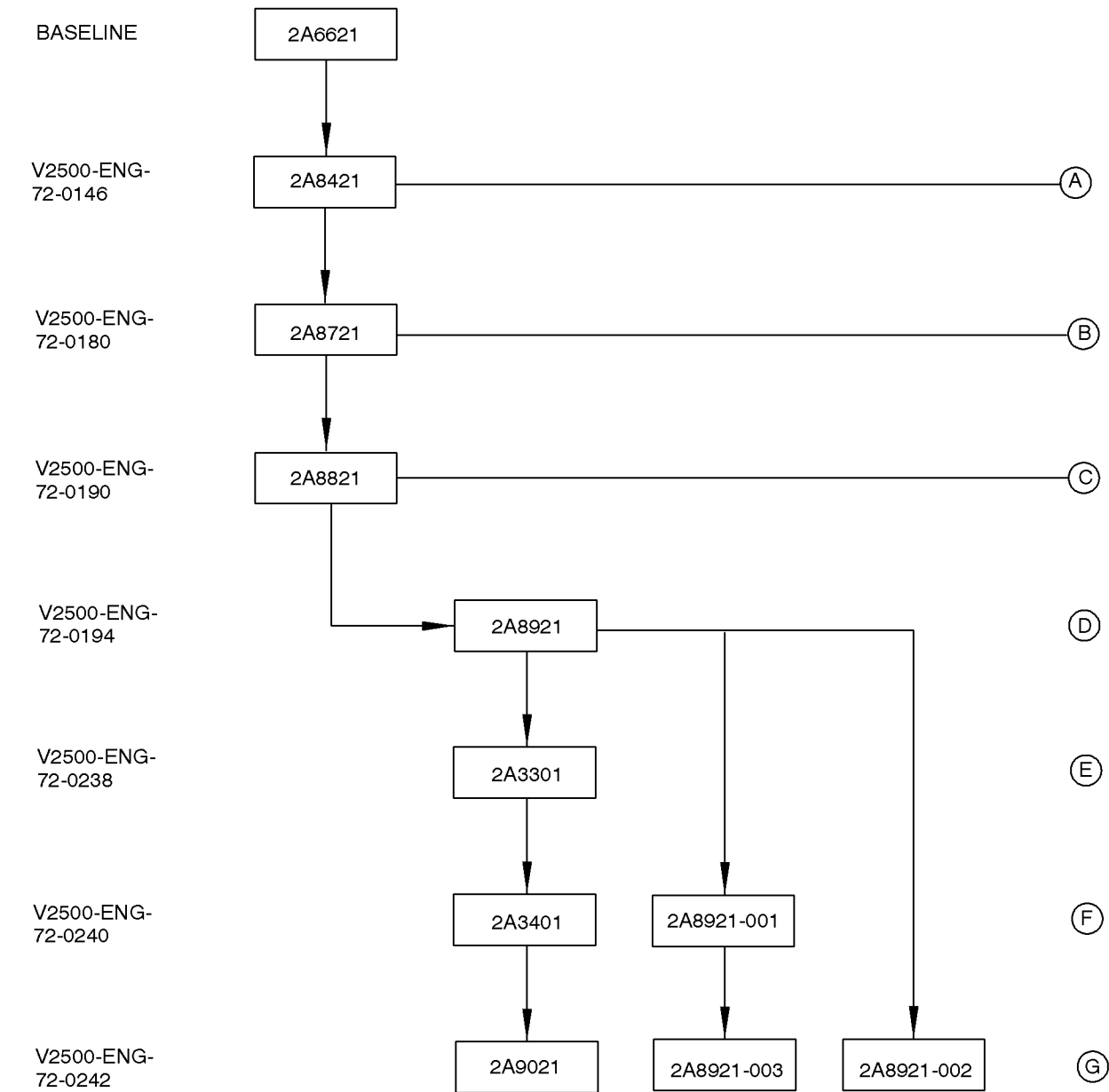
Appendix 1 - Page 4

© Rolls-Royce plc

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

Printed in Great Britain

R



pw0b515424

R

R

FAMILY TREE - STAGE 1 TURBINE ROTOR ASSEMBLY REF CATALOG SEQUENCE NO. 72-45-10
FIG.01 ITEM 010
Fig.4 (Sheet 1)

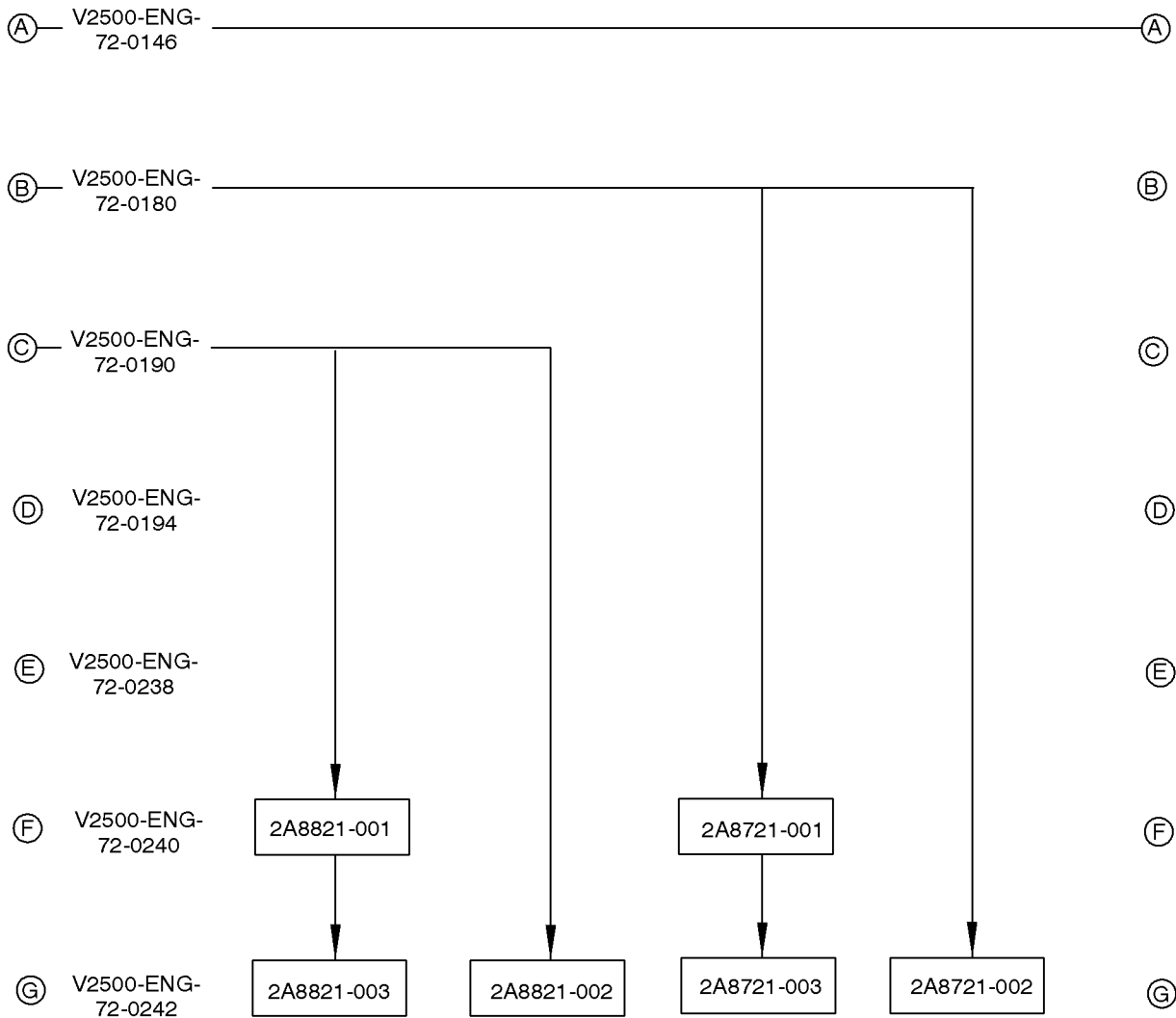
Jul 30/96
R Jan.31/06

V2500-ENG-72-0242
Appendix 1 - Page 5

© Rolls-Royce plc

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

BASELINE



FAMILY TREE – STAGE 1 TURBINE ROTOR ASSEMBLY REF CATALOG SEQUENCE NO. 72-45-10
FIG.01 ITEM 010
Fig.4 (Sheet 2)

V2500-ENG-72-0242

Appendix 1 – Page 6

© Rolls-Royce plc

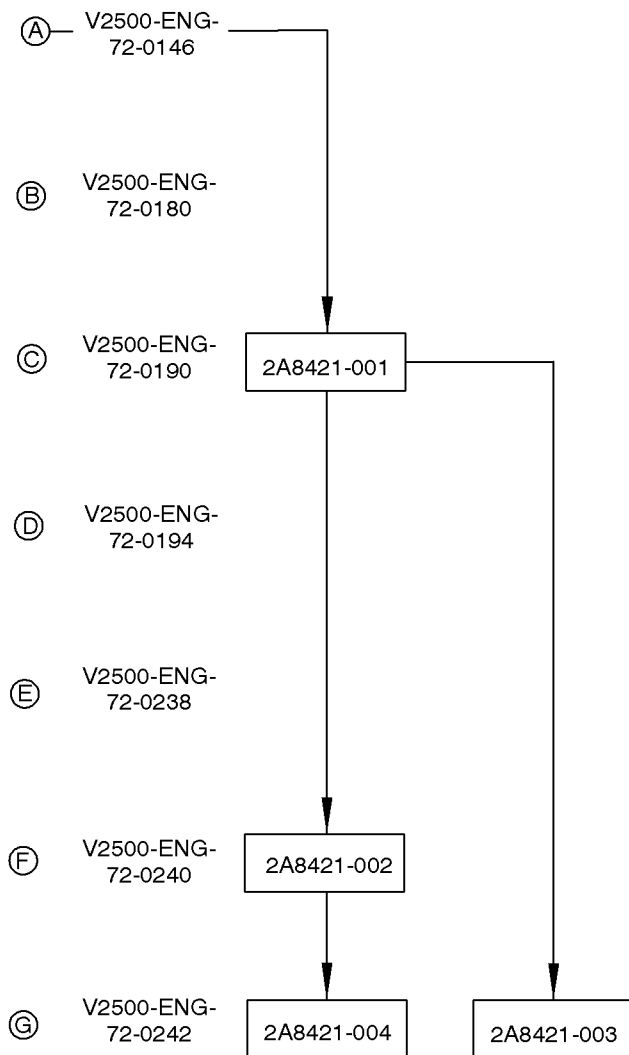
Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

Printed in Great Britain

pw0b515425

Printed in Great Britain

BASELINE



pw0b515426

FAMILY TREE - STAGE 1 TURBINE ROTOR ASSEMBLY REF CATALOG SEQUENCE NO. 72-45-10
FIG.01 ITEM 010
Fig.4 (Sheet 3)

Jul 30/96
R Jan.31/06

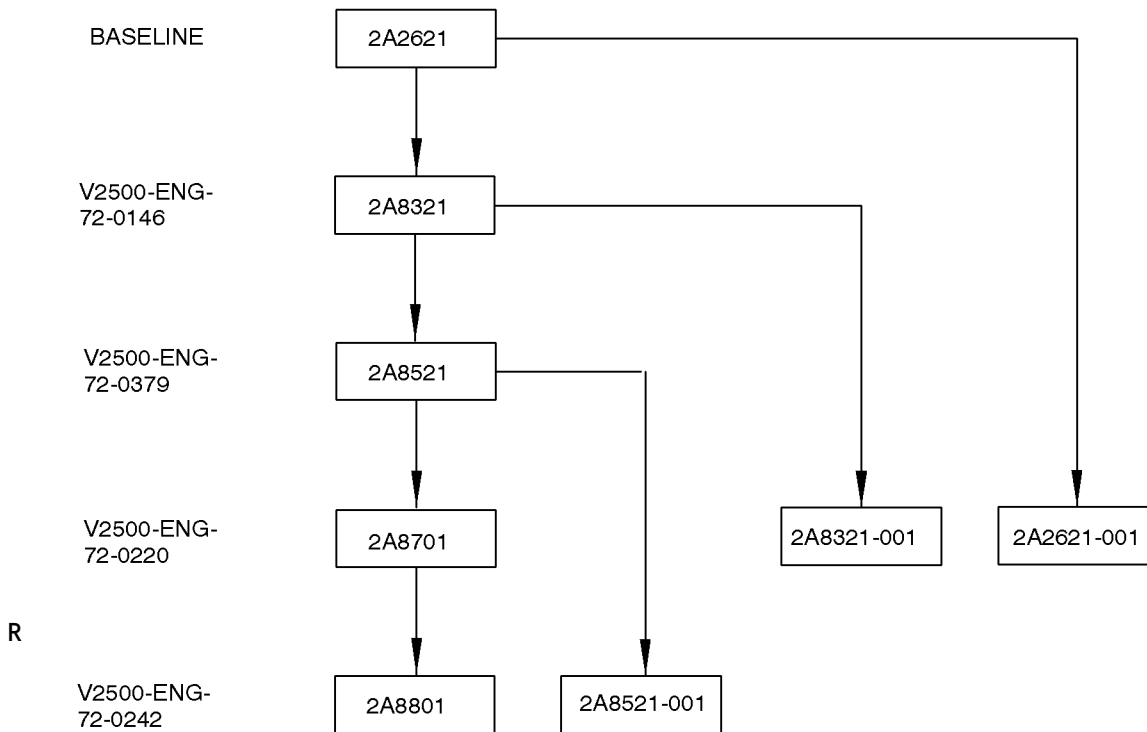
V2500-ENG-72-0242
Appendix 1 - Page 7

© Rolls-Royce plc

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

MODIFICATIONS

PART NUMBER CHANGE



Printed in Great Britain

pw0b515427

R FAMILY TREE – STAGE 1 HPT BLADE REF CATALOG SEQUENCE NO. 72-45-14 FIG.01 ITEM 010
R Fig.5

Jul 30/96
R Jan.31/06

V2500-ENG-72-0242
Appendix 1 – Page 8

© Rolls-Royce plc

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

ENGINE – HP TURBINE ROTOR AND STATOR ASSEMBLY – PROVIDE NEW STAGE 1 HPT BLADES

Printed in Great Britain

R Supplement

R V2500 ALL

R 1. Modification Kit

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

R 2. Material Cost

R NOTE: The 1996 prices shown are for estimating purposes only and as such are
R given in good faith without commercial liability for advanced planning
R purposes only. Refer to IAE Spares and/or current Price Catalog for
R current prices.

R A. There is no new material cost to do this Service Bulletin when the part
R modification procedure is used.

R B. The estimated 1996 price of new material to do this Service Bulletin using
R new replacement parts is \$ 249,536.00

R C. There is no kit provided to do this Service Bulletin.

R 3. New Production Parts

R	New Production	Description	Unit Price US
R	Part Number		Dollars
R	2A8801	Blade, HPT Stg. 1	3,899.00