

Date: Nov.7/00

Subject: Transmittal of Revision 1 To Service Bulletin Number
V25000-ENG-72-0330.

Service Bulletin Revision History:

<u>Event</u>	<u>Date</u>
Basic Issue	Sep.3/99
Revision 1	Nov.7/00

Reason For Issuance Of Revision:

- (1) Reformat to latest specifications.
- (2) Add Model to page 1.
- (3) Revise effectivity page 2.
- (4) To provide old and new part numbers on pages 5 and 6.
- (5) Add the word None on page 7.
- (6) Update family tree pages 11 through 15.
- (7) Make editorial corrections.

Effect on Prior Compliance:

None.

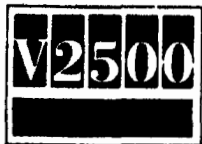
List of Effective Pages:

<u>Bulletin Page No.</u>	<u>Rev. No.</u>	<u>Effective Date</u>
1 and 2	1	Nov.7/00
3	Basic	Sep.3/99
4 to 15	1	Nov.7/00

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Transmittal

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International Aero Engines SERVICE BULLETIN

ENGINE - DIFFUSER AND COMBUSTION GROUP - PROVIDE NEW BULKHEAD LINER SEGMENTS

MODEL APPLICATION

V2500-A1
V2522-A5
V2524-A5
V2527-A5
V2527E-A5
V2527M-A5
V2530-A5
V2533-A5
V2525-D5
V2528-D5

BULLETIN INDEX LOCATOR

72-40-00

Compliance Category Code

Internal Reference No.

| 7

96VA025, 96VA025P, 96VA025Q

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SERVICE BULLETIN

ENGINE - DIFFUSER AND COMBUSTION GROUP - PROVIDE NEW BULKHEAD LINER SEGMENTS

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A319, A320, A321
McDonnell Douglas MD-90
- (2) Engine: V2500-A1 Engines Before Serial No. V0362
V2500-A5 Engines before Serial No. V10637*
V2500-D5 Engines Serial No. V20291*

*The serial Number data shown is of a preliminary nature and is provided for advanced planning only. A future revision to this Service Bulletin will confirm final serial number effectivity.

B. Concurrent Requirements

None

C. Reason

(1) Condition:

Bulkhead segment damage has been a major contributor to combustion chamber distress and limiting engine durability. The distress has caused premature engine removals and requires a reduced borescope inspection interval.

(2) Background:

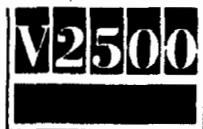
Segment cracking and burnback is being experienced during take-off and climb. Current hardware is insufficient to withstand the environment.

(3) Objective:

The redesigned segment incorporates a flattened hot-side surface and improved pin array and rail configuration.

(4) Substantiation

The redesigned bulkhead segments successfully completed 320 hours of testing on a test engine.



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(5) Effects of Bulletin on Workshop Procedures:

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) Install new Combustion Chamber Liner Bulkhead Segments.

E. Approval

The Part Number Changes and/or part modifications 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.

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

F. Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

G. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

<u>Venue</u>	<u>Estimated Manhours</u>
(1) In service	Not applicable
(2) At overhaul	Not applicable

H. Material - Price and Availability

- (1) Modification kit is not required. Parts are supplied as single line items.
- (2) See "Material Information" section for prices and availability of future spares.

I. Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

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J. Weight and Balance

- | | |
|-------------------|--|
| (1) Weight change | + 1.18 lbs (0,54 Kg) |
| (2) Moment arm | No effect |
| (3) Datum | Engine Front mount Centerline
(Power Plant station (PPS) 100) |

K. Electrical Load Data

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

L. References

(1) IAE V2500 Service Bulletins:

V2500-ENG-70-0253 (Engine - Diffuser And Combustion Section - Provide New Inner And Outer Combustion Chambers With Increased Hardface Thickness and Relocated Cooling Holes)

V2500-ENG-72-0006 (Engine - Diffuser And Combustion Group And Stage 1 Turbine Nozzle Assembly - Thermal Barrier Coating For Combustor Liners)

V2500-ENG-72-0060 (Engine - Diffuser And Combustion Group And Stage 1 Turbine Nozzle Assembly - Introduce Thermal Barrier Coating On Inner And Outer Combustion Chamber Liners)

V2500-ENG-72-0116 (Engine - Diffuser And Combustion Group And Stage 1 Turbine Nozzle Assembly - Provide New Inner And Outer Combustion Chamber Assemblies With Generation II Liner Segments)

V2500-ENG-72-0159 (Engine - Diffuser And Combustion Section - Introduce New Inner And Outer Combustion Chamber Assemblies)

V2500-ENG-72-0315 (Engine - Diffuser And Combustion Group And Stage 1 Turbine Nozzle Assembly - Provide New Inner And Outer Combustion Chamber Liners With Addition Of PWA 281 Coating)

- (2) The V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 72-42-61 add the new parts.
- (3) The V2500 Engine Manual (E-V2500-1IA), 72-42-61 Repair VRS3096.
- (4) The V2500 Engine Manual (E-V2500-3IA), 72-42-61 Repair VRS3096.
- (5) The V2500 Standard Practices/Processes Manual (SPP-V2500-1IA), 70-09-00 Marking of Parts

M. Other Publications Affected

- (1) The V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-42-61 to add the new part.
- (2) The V2500 Engine Manual(E-V2500-1IA or E-V2500-3IA), 72-42-61 Cleaning to add the new part.
- (3) The V2500 Engine Manual(E-V2500-1IA or E-V2500-3IA), 72-42-61 Inspection to add the new part.
- (4) The V2500 Engine Manual (E-V2500-1IA or E-V2500-3IA), 72-42-61 Repair to add the new part.

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2. Material Information

A. Kit associated with this 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
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Applicability: For each V2500-A1 Engine to incorporate this Service Bulletin

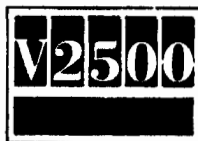
2A3439-01 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3347-01 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-001 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3347-001 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-002 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3347-002 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-003 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3347-003 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-004 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3347-004 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-005 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3347-005 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)

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New Part No. (ATA No.)	Qty	Est'd Unit Price(\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
2A3439-006 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A1620 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-007 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A2837-01 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3439-008 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A2032 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead	2A3324 (01-680)	(S1)(C)(D)

New Part No. (ATA No.)	Qty	Est'd Unit Price(\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
------------------------------	-----	----------------------------	---------	------------------------------	-----------------------------

Applicability: For each V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5, V2525-D5, and V2528-D5 Engine to incorporate this Service Bulletin

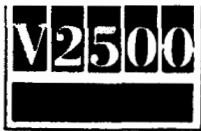
2A3440-01 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A3345-01 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3440-001 (72-42-61)			.Outer Comb. Chamber Assy.	2A3345-001 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead or	2A3324 (01-680)	(S1)(C)(D)
2A3440-002 (72-42-61)	1		.Outer Comb. Chamber Assy.	2A2723-01 (01-501)	(S1)(1D)(A)(B)
2A2452 (72-42-61)	20		..Liner Assy. CC Bulkhead	2A3324 (01-680)	(S1)(C)(D)

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C. Consumable Materials

None

D. Instructions/Disposition Code Statements:

(S1) Old and New Parts are freely and fully interchangeable

(1D) You can obtain the new part by modification of the old part and identification to the new part number.

(A) The new part is an assembly that will not be provided as a spare.

(B) The old part is an assembly that will not be provided as a spare.

(C) The new part will be available approximately August, 1999.

(D) The old part will be supplied until stock is depleted.

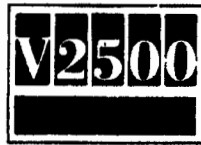
NOTE: The estimated 1998 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.

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3. Accomplishment Instructions

A. Install the 2A2452 Combustion Chamber Liner Assembly Bulkhead Segment (20 off) by the procedure specified in Reference (3) or (4), Chapter/Section 72-42-61 Repair, VRS3096.

B. Identify the new Combustion Chamber Case Assembly with the new part number given.

(1) Use the procedure specified in Reference (5), Chapter/Section 70-09-00 Marking of Parts.

(2) Mark the new part number adjacent to the old part number.

Old Part Number

New Part Number

2A1620	2A3439-006
2A2032	2A3439-008
2A2723-01	2A3440-002
2A2837-01	2A3439-007
2A3345-01	2A3440-01
2A3345-001	2A3440-001
2A3347-01	2A3439-01
2A3347-001	2A3439-001
2A3347-002	2A3439-002
2A3347-003	2A3439-003
2A3347-004	2A3439-004
2A3347-005	2A3439-005

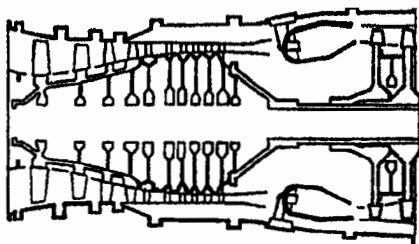
C. Recording Instructions

(1) A record of accomplishment is necessary.

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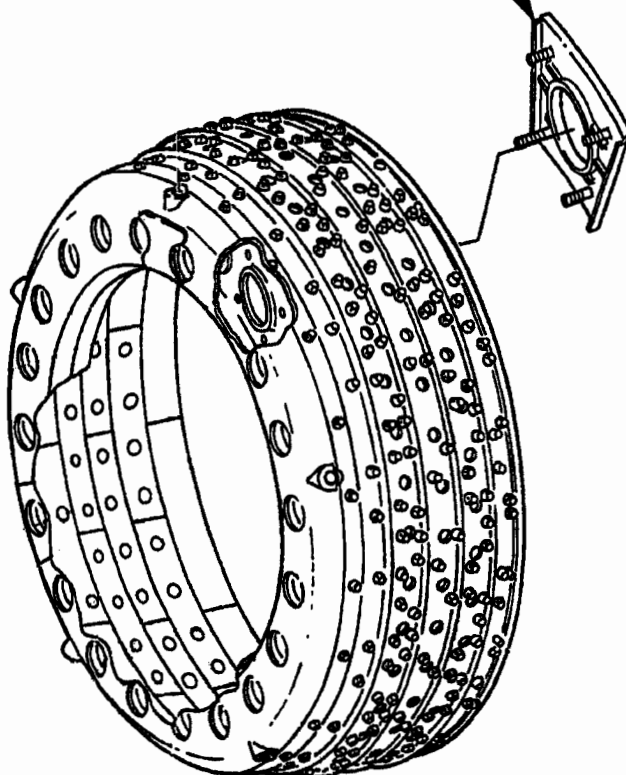
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MODULE 40

INSTALL THE 2A2452 BULKHEAD
LINER SEGMENTS (20 OFF)



E8084

Location of the Combustion Chamber Liner Assembly Bulkhead Segment
Figure 1

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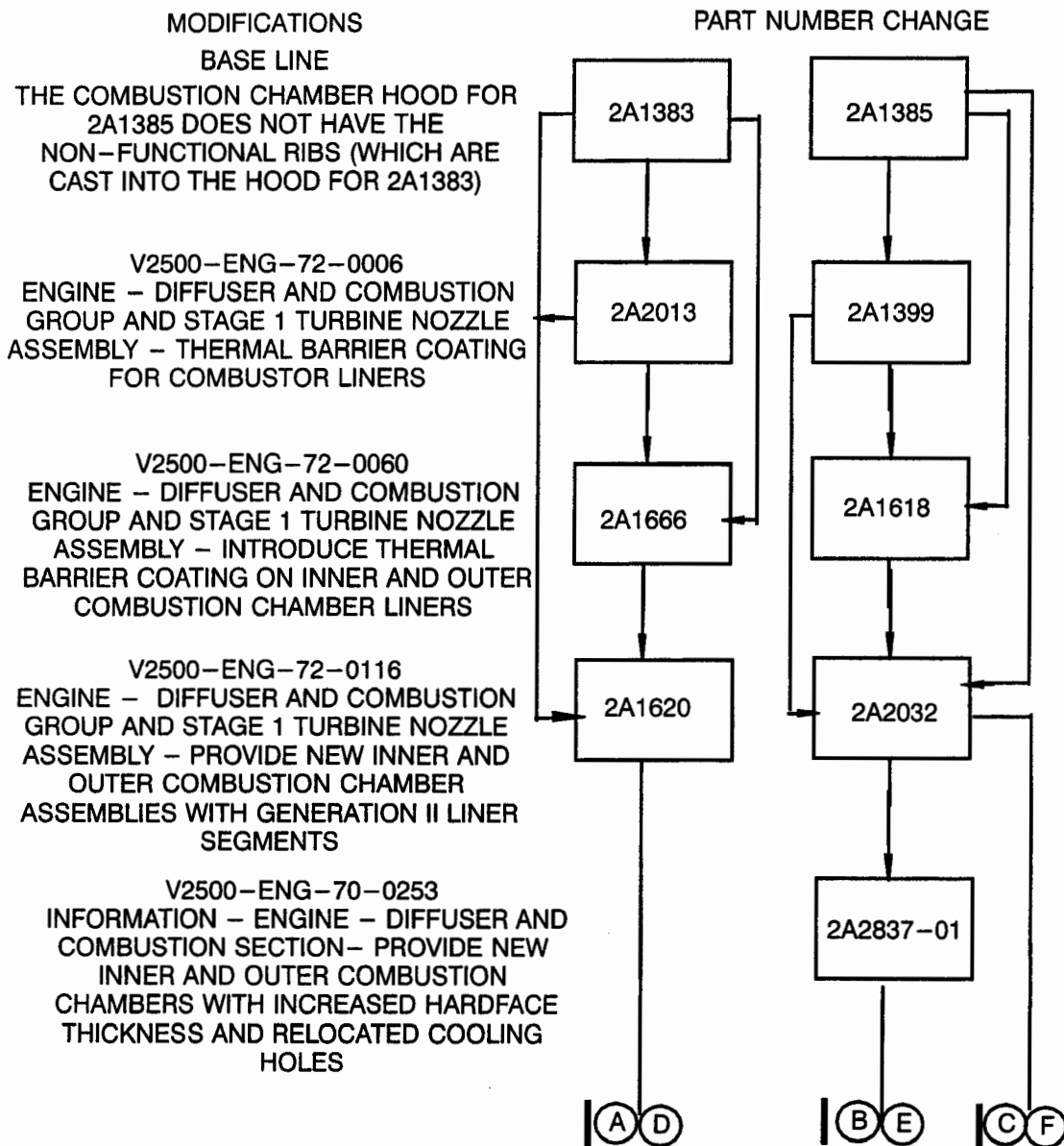
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A, B, C CONTINUED ON SHEET 2

D, E, F CONTINUED ON SHEET 3

E8085A

Family Tree - Outer Combustion Chamber Assembly (V2500-A1 Only)
Ref. Catalog Sequence No. 72-42-61. Fig. 1 Item 501
Revision Figure 2 (Sheet 1 of 2)

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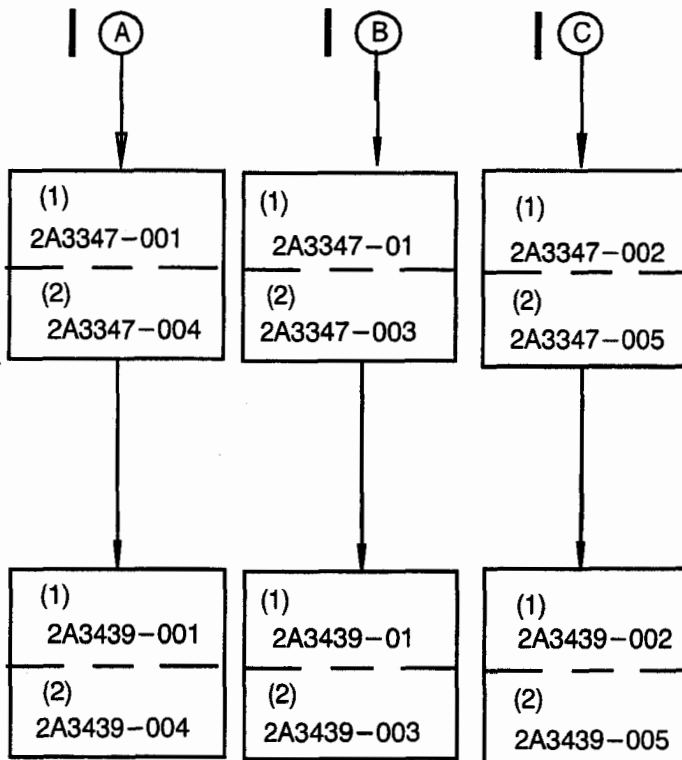


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CONTINUED FROM SHEET 1

MODIFICATIONS

V2500-ENG-72-0315
ENGINE - DIFFUSER AND COMBUSTION
GROUP AND STAGE 1 TURBINE NOZZLE
ASSEMBLY - PROVIDE NEW INNER AND
OUTER COMBUSTION CHAMBER LINERS
WITH ADDITION OF PWA 281 COATING
NOTE: ROW 5 REPLACEMENT IS OPTIONAL



V2500-ENG-72-0330
ENGINE - DIFFUSER AND COMBUSTION
GROUP - PROVIDE NEW BULKHEAD
LINER SEGMENTS

- (1) ROW 5 IS REPLACED
- (2) ROW 5 IS NOT REPLACED

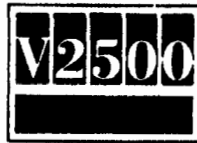
E8319

Family Tree - Outer Combustion Chamber Assembly (V2500-A1 Only)
Ref. Catalog Sequence No. 72-42-61. Fig. 1 Item 501
Revision Figure 2 (Sheet 2 of 2)

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CONTINUED FROM SHEET 1

MODIFICATIONS

V2500-ENG-72-0315
ENGINE - DIFFUSER AND COMBUSTION
GROUP AND STAGE 1 TURBINE NOZZLE
ASSEMBLY - PROVIDE NEW INNER AND
OUTER COMBUSTION CHAMBER LINERS
WITH ADDITION OF PWA 281 COATING
NOTE: ROW 5 REPLACEMENT IS OPTIONAL

D

E

F

V2500-ENG-72-0330
ENGINE - DIFFUSER AND COMBUSTION
GROUP - PROVIDE NEW BULKHEAD LINER
SEGMENTS

2A3439-006

2A3439-007

2A3439-008

E8320

Family Tree - Outer Combustion Chamber Assembly (V2500-A1 Only)
Ref. Catalog Sequence No. 72-42-61. Fig. 1 Item 501
Figure 2 (Sheet 3 of 3)

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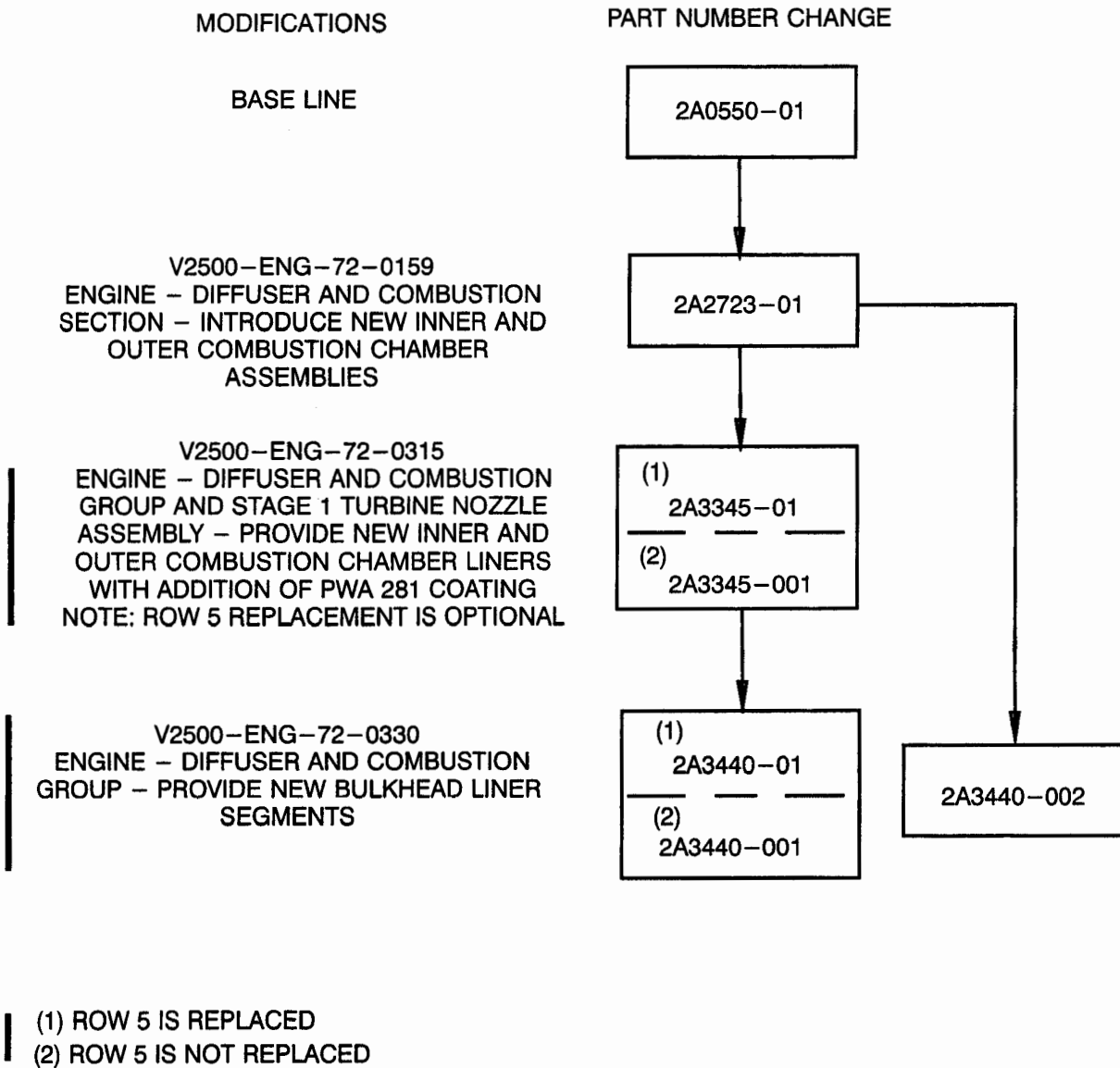
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E8086A

Family Tree - Outer Combustion Chamber Assembly (All Except V2500-A1)
Ref. Catalog Sequence No. 72-42-61. Fig. 1 Item 501
Figure 3

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MODIFICATIONS

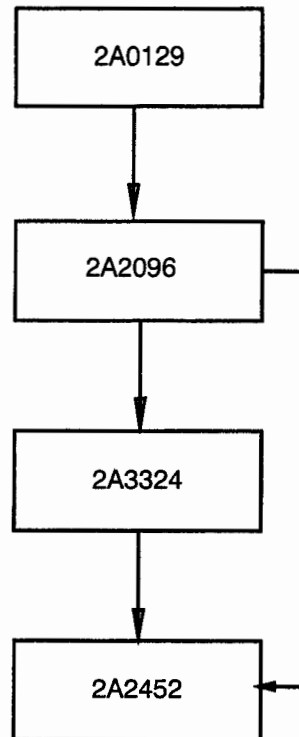
PART NUMBER CHANGE

BASE LINE

V2500-ENG-72-0116
ENGINE - DIFFUSER AND COMBUSTION GROUP
AND STAGE 1 TURBINE NOZZLE ASSEMBLY -
PROVIDE NEW INNER AND OUTER COMBUSTION
CHAMBER ASSEMBLIES WITH GENERATION II
LINER SEGMENTS

V2500-ENG-72-0315
ENGINE - DIFFUSER AND COMBUSTION GROUP
AND STAGE 1 TURBINE NOZZLE ASSEMBLY -
PROVIDE NEW INNER AND OUTER COMBUSTION
CHAMBER LINERS WITH ADDITION OF PWA 281
COATING

V2500-ENG-72-0330
ENGINE - DIFFUSER AND COMBUSTION
GROUP - PROVIDE NEW BULKHEAD LINER
SEGMENTS



E8087

Family Tree - Outer Combustion Chamber Liner Segments (V2500-A1 Only)
Ref. Catalog Sequence No. 72-42-61. Fig. 1 Item 680
Figure 4

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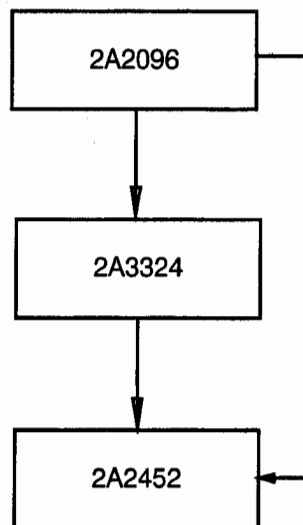
MODIFICATIONS

BASE LINE

V2500-ENG-72-0315
ENGINE - DIFFUSER AND COMBUSTION GROUP
AND STAGE 1 TURBINE NOZZLE ASSEMBLY -
PROVIDE NEW INNER AND OUTER COMBUSTION
CHAMBER LINERS WITH ADDITION OF PWA 281
COATING

V2500-ENG-72-0330
ENGINE - DIFFUSER AND COMBUSTION
GROUP - PROVIDE NEW BULKHEAD LINER
SEGMENTS

PART NUMBER CHANGE



E8088

Family Tree - Outer Combustion Chamber Liner Segments (All Except V2500-A1)
Ref. Catalog Sequence No. 72-42-61. Fig. 1 Item 680
Figure 5

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