

**International
Aero Engines**

V2500 Propulsion System — Nacelle

SERVICE BULLETIN

Date: January 27, 1998

Subject: Transmittal of Revision 2 to Service Bulletin Number V2500-NAC-78-0085

Service Bulletin Revision History:

<u>Event</u>	<u>Date</u>
Basic Issue	Oct. 23/96
Revision 1	Oct. 30/96
Revision 2	Jan. 27/98

Reasons for Issuance of Revision

- (1) To instruct removal of the 740-0002-8000 series part numbers and re-identification to the original part number because the '8000' series part numbers are not traceable in the manufacturer's engineering system.
- (2) To revise the text of the service bulletin to remove references to 740-0002-8000 series part numbers.

Effect on Past Compliance

- (1) Thrust reversers which have been re-identified to a 740-0002-8000 series part number must be re-identified to their prior part number.
- (2) Thrust reversers which have had the basic issue or REV 1 of the bulletin incorporated must have 'REV 2' marked after the service bulletin number on the thrust reverser data plate.

List of Effective Pages:

<u>Page No.</u>	<u>Rev. No.</u>	<u>Date</u>
1	2	Jan. 27/98
2 and 3	Basic	Oct. 23/96
4 and 5	2	Jan. 27/98
6 thru 13	Basic	Oct. 23/96
14 thru 25	2	Jan. 27/98

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Transmittal
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NACELLE — EXHAUST — FLUID DRAINAGE, THRUST REVERSER —
MODIFICATION OF

MODEL APPLICATION

V2500-A1

V2500-A5

BULLETIN INDEX LOCATOR

78-32-00

Compliance Category Code

4 V2500-A5

6 V2500-A1

Internal Reference No.

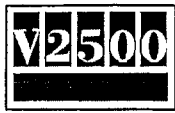
JG/LL 93VN093/C/E

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1. Planning Information

A. Effectivity

(1) Airplane:

(a) Airbus A320

(2) Nacelle: V2500-A1 and V2500-A5 Thrust Reversers prior to serial number 0401001 except those units listed below:

Serial Number

268, 269, 300, 301, 303, 304, 311, 312,
319, 320, 323, 324, 0327001, 0328001, 0337001,
0338001, 0343001-0348001, 0353001-0356001,
0363001, 0364001, 0373001-0380001,
0385001-0392001, 0397001-0400001

B. Reason

(1) Condition

Fluids, such as hydraulic, fuel, and water, may become trapped in cavities on the upper thrust reverser track fittings and in the lower bifurcation area.

(2) Background

Not applicable.

(3) Objective

To eliminate any possible entrapment of fluid in the upper thrust reverser track fitting cavities and in the lower bifurcation area.

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(4) Substantiation

Not applicable.

(5) Impact of Bulletin on Workshop Procedures:

Removal/Installation	Not Affected
Disassembly/Assembly	Not Affected
Cleaning	Not Affected
Inspection/Repair	Not Affected
Repair	Not Affected
Testing	Not Affected

(6) Supplemental Information

None.

C. Description

The change introduced by this Bulletin is to install spacers in track pockets on the fixed duct assembly, add drain holes to the lower skin panels, and seal holes and gaps that lead into the fan air duct.

D. Approval

The part number changes and/or part modifications described in Paragraphs 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved for the equipment model(s) listed.

E. Compliance

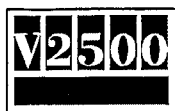
Category 4 for V2500-A5

Accomplish at the first visit of the nacelle or nacelle component to a maintenance base capable of compliance with the accomplishment instructions regardless of the planned maintenance action for the nacelle or nacelle component.

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Category 6 for V2500-A1

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

F. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

<u>VENUE</u>	<u>ESTIMATED MANHOURS</u>
(1) In Service (Compliance Category 4)	
(a) To get access	0.25 M/Hrs
(b) To rework	8.00 M/Hrs
(c) To put nacelle to service	<u>0.25 M/Hrs</u>
Total	8.50 M/Hrs
(2) In Shop (Compliance Category 6)	
(a) To rework	<u>8.00 M/Hrs</u>
Total	8.00 M/Hrs.
(3) To Re-identify (removal of "8000" series numbers only)	
(a) To re-identify	<u>0.25 M/Hrs</u>
Total	0.25 M/Hrs.

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G. Material Cost and Availability

Because it has been over one year since the initial issue date of this service bulletin, kit V2578085-551 is no longer available for purchase. Operators who wish to incorporate this change should submit a charge purchase order for the detail parts of kit V2578085-551 shown in Paragraph 3.A.

Direct Purchase order to:

Rohr, Inc.

850 Lagoon Drive

Chula Vista, CA. 91910-2098

U.S.A.

Attn: Airline Support Manager, MZ 107A

(Ref. Service Bulletin V2500-NAC-78-0085)

H. Tooling Cost and Availability

Not applicable.

I. Weight and Balance

(1) Weight change No effect

(2) Moment arm No effect

(3) Datum Engine Front Mount Centerline

..... (Power Plant Station (PPS) 100.00)

J. Electrical Load Data

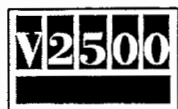
Not affected.

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K. References

Chapter/Section

A320/A321 Aircraft Maintenance Manual	78-32-00
	78-32-01

Overhaul Processes and Consumable Index
(PCI-V2500-1IA)

IAE V2500 Standard Practices/Processes Manual (SPP-V2500-1IA)	70-09-00
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Aircraft Modifications 24220 and 24333

AIB SB A320-72-1012

L. Other Publications Affected

A320/V2500A1 and A320/A321/V2500A5	78-30-00
Power Plant Illustrated Parts Catalogs (PIP-V2500-1IA and PIP-V2500-2IA)	78-32-49
	78-32-79

A320/V2500-A1 and A320/A321/V2500-A5	78-30-00
Engine Illustrated Parts Catalogs (S-V2500-1IA and S-V2500-2IA)	78-32-49
	78-32-79

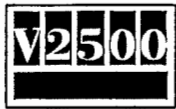
M. Family Tree Charts

Refer to Figures 3 through 6 on pages 21 through 26.

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2. Accomplishment Instructions

A. Prerequisite Instructions

WARNING: YOU MUST DEACTIVATE THE THRUST REVERSER HYDRAULIC CONTROL UNIT BEFORE YOU WORK ON OR AROUND THE THRUST REVERSER. IF YOU DO NOT DO THIS THE THRUST REVERSER CAN OPERATE ACCIDENTLY AND CAUSE INJURY AND DAMAGE.

- (1) Make sure the thrust reverser hydraulic control unit is deactivated. Refer to the A320/A321 Aircraft Maintenance Manual Chapter 78-32-00, TASK 78-30-00-040-012.
- (2) Remove the hinge access panel. Refer to the A320/A321 Aircraft Maintenance Manual, Chapter 78-32-01, Page block 401.
- (3) Open the thrust reverser halves. Refer to the A320/A321 Aircraft Maintenance Manual, Chapter 78-32-00, TASK 78-32-00-010-010.

B. Rework or Modification Instructions

- (1) Find the machined-out (track) pockets on the left hand thrust reverser forward upper track area aft of hinge number 1. Refer to Figure 1.

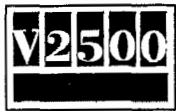
WARNING: METHYL ETHYL KETONE (MEK) (COMAT 01-076) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND CAN CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD ONLY BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

- (2) Use a lint free cloth (CoMat 02-099) and MEK (CoMat 01-076) to clean the track pockets. Wipe surface dry before solution becomes dry.

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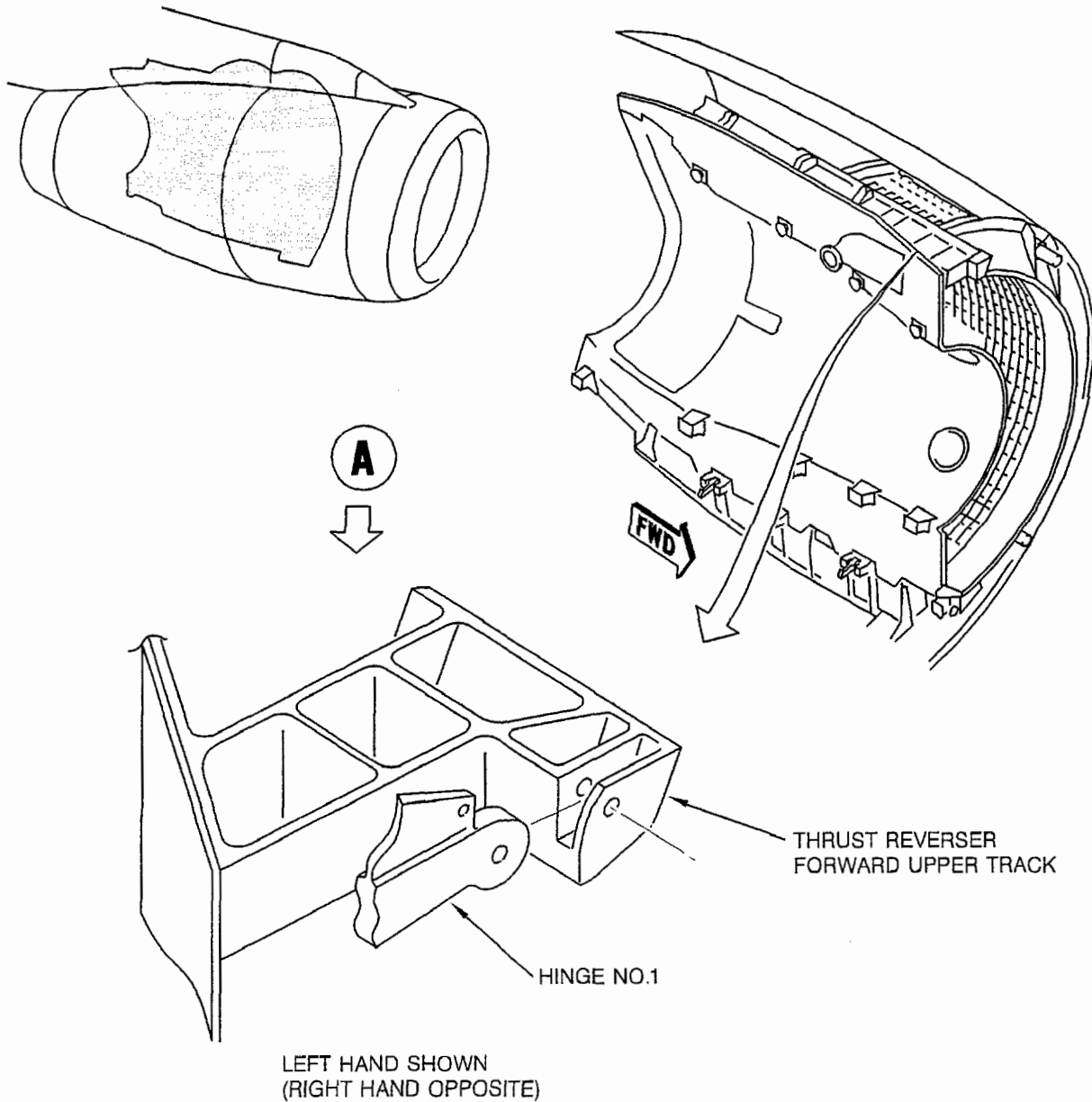
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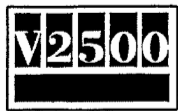
VSB259-SO

Addition of Spacers to the Track Installation
Figure 1 (Sheet 1 of 2)

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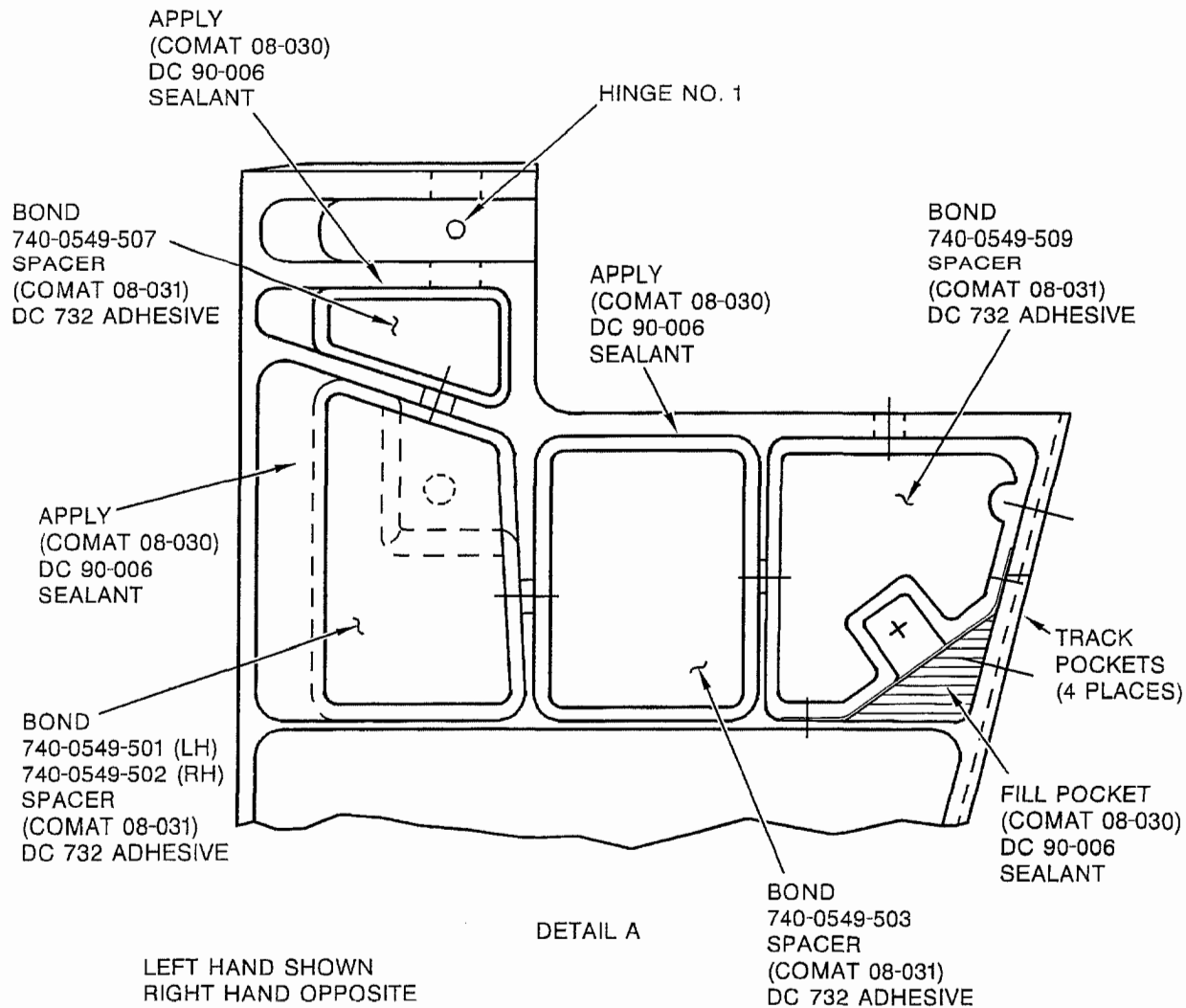
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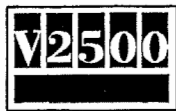
VS258A-SO

Addition of Spacers to the Track Installation
Figure 1 (Sheet 2 of 2)

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- (3) Use aluminum oxide abrasive paper (CoMat 05-129) to make rough the mating surfaces of the track pockets.
- (4) Use a lint free cloth (CoMat 02-099) and MEK (CoMat 01-076) to clean the track pockets. Wipe surface dry before solution becomes dry.
- (5) Use silicon carbide abrasive paper (CoMat 05-153) to make rough the mating surface of each of the four 740-0549 spacers.
- (6) Use a lint free cloth (CoMat 02-099) and aliphatic naphtha solvent to remove all unwanted material from the mating surfaces. Wipe surfaces dry before solution becomes dry.

WARNING: PRIMER (COMAT 08-032) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND CAN CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD ONLY BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

- (7) Apply a thin layer of primer (CoMat 08-032) on the mating surfaces of the track pockets. Allow to dry for 30 minutes.

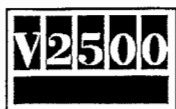
WARNING: ADHESIVE (COMAT 08-031) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND CAN CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD ONLY BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

- (8) Apply an equal layer of adhesive (CoMat 08-031)

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0.005-0.010 inches (0.127-0.254 mm) thick to the mating surfaces of the four spacers and the track pockets.

- (9) Put each 740-0549 spacer in the position shown in Figure 1. Apply sufficient pressure to keep spacer in touch with mating surface without causing too much adhesive leakage.
- (10) Allow to dry for a minimum of 8 hours.

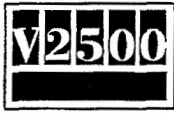
WARNING: SEALANT (COMAT 08-030) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND CAN CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD ONLY BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

- (11) Refer to manufacturer's instructions to mix sealant (CoMat 08-030). Apply sealant around the spacers. Fill all clearances and stop as many air bubbles as possible.
- (12) Do steps 2.A.3 through 2.A.12 for the right hand thrust reverser door.
- (13) Find and make a mark for the drain hole positions on the lower track panels. Refer to Figure 2.
- (14) Drill a 0.386 inch (9.8 mm) hole with a letter W drill in each panel. Burr holes.

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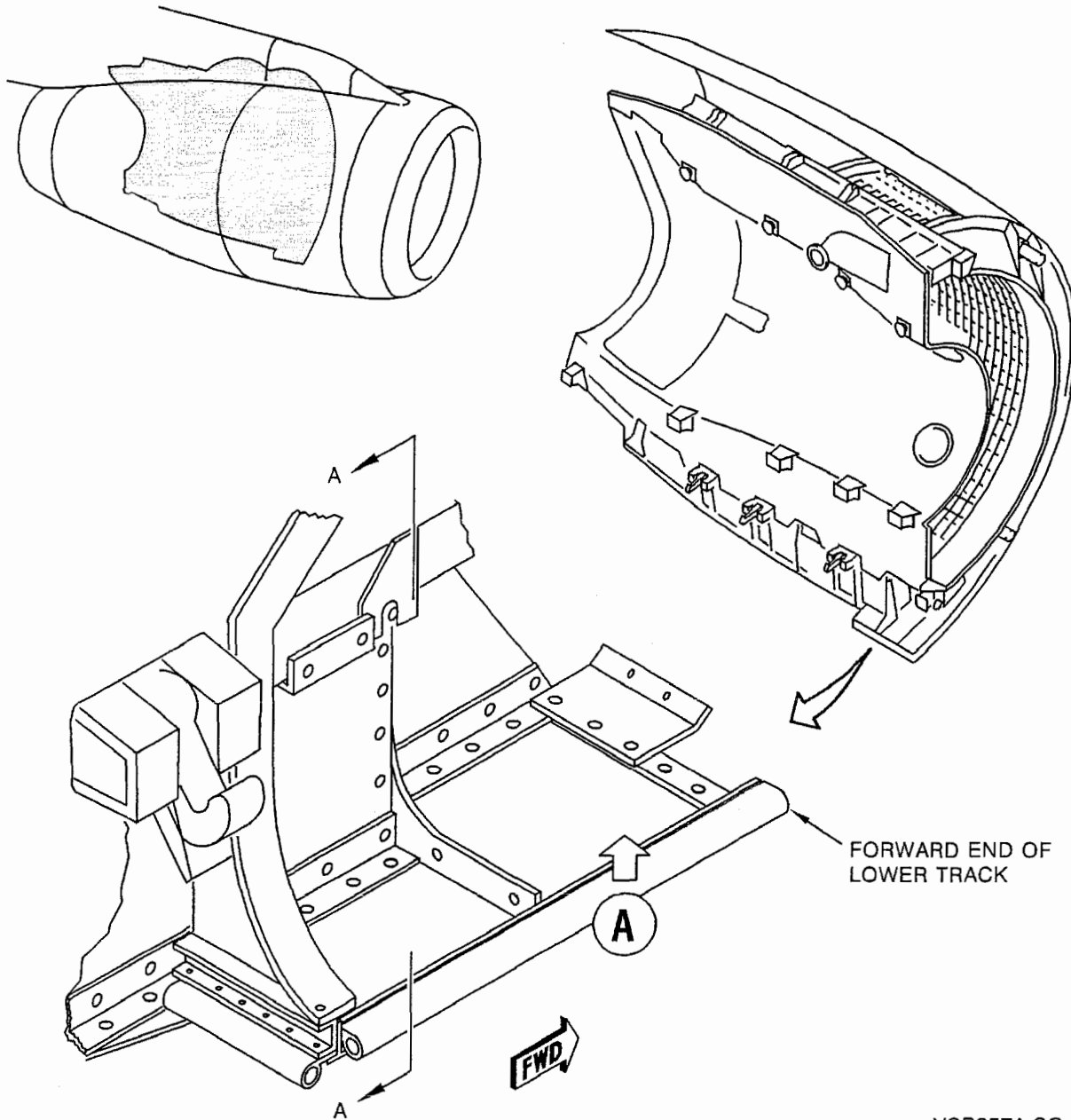
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VSB257A-SO

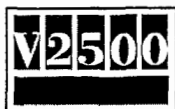
Addition of Drain Holes and Sealing of Gaps and Holes
in the Lower Track Installation

Figure 2 (Sheet 1 of 2)

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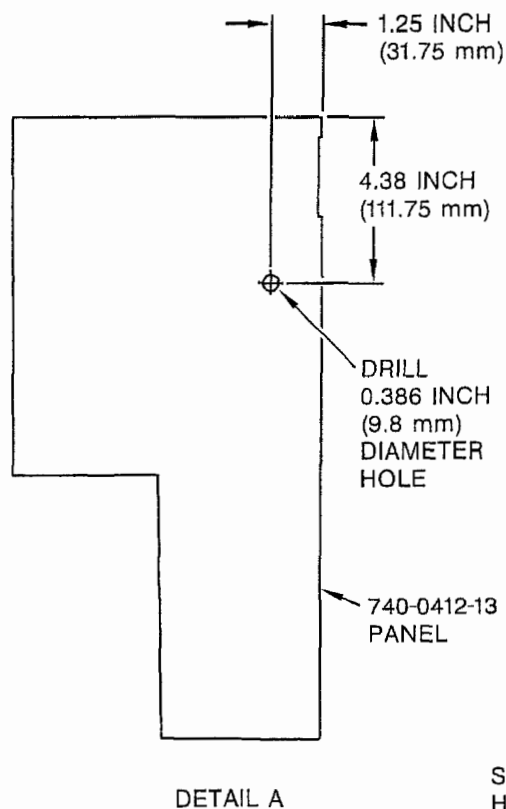
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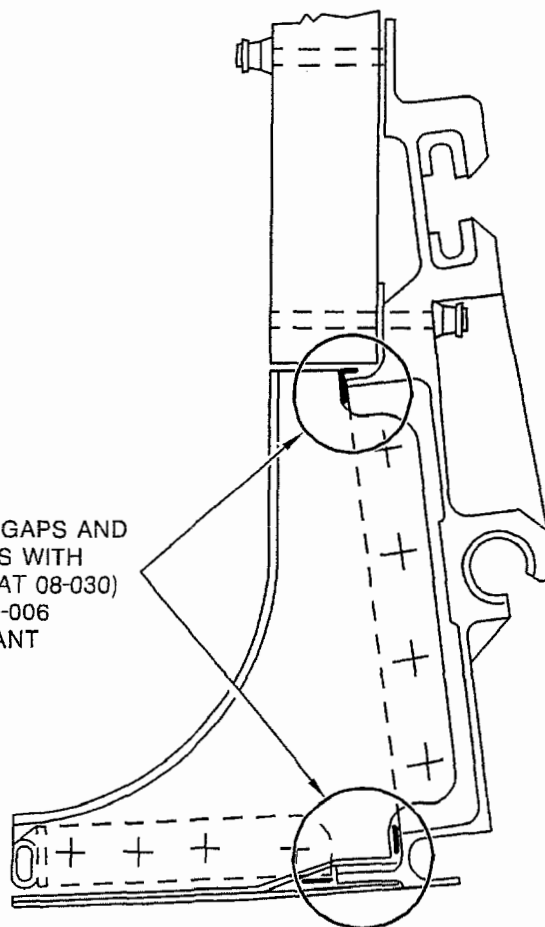
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LEFT HAND SHOWN
RIGHT HAND OPPOSITE

SEAL GAPS AND
HOLES WITH
(COMAT 08-030)
DC 90-006
SEALANT



VSB260B-SO

Addition of Drain Holes and Sealing of Gaps and Holes
in the Lower Track Installation

Figure 2 (Sheet 2 of 2)

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WARNING: CONVERSION COATING (COMAT 07-028) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND CAN CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD ONLY BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

- (15) Apply conversion coating (CoMat 07-028) to the holes with a nylon brush or cheesecloth. Keep surface wet with fresh solution for 2 to 5 minutes.
- (16) Inspect the entire lower track for gaps or holes and all pandowns for correct sealing. Refer to Figure 2.
- (17) Use a lint free (CoMat 02-099) cloth and MEK (CoMat 01-076) to clean any areas of the assembly (holes or gaps) to be sealed. Wipe surface dry before solution becomes dry.
- (18) Refer to manufacturer's instructions to mix sealant (CoMat 08-032). Apply sealant in the clearances or holes as necessary. Fill all clearances and stop as many air bubbles as possible.

(19) Reidentify the thrust reverser as follows:

740-0002-701 as 740-0002-709
740-0002-693 as 740-0002-705
740-0002-703 as 740-0002-711
740-0002-695 as 740-0002-707

Use metal stamp, vibroetch or electroetch method. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

For thrust reverser which have been previously re-identified as a 740-0002-8000 series part number, re-identify these thrust reversers to their original part number. Refer to Figures 3, 4, and 5 if you need help to determine the original part number.

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C. Post-Requisite Instructions

- (1) Close the thrust reverser halves. (Refer to the A320/A321 Aircraft Maintenance Manual, Chapter 78-32-00, TASK 78-32-00-410-010.)
- (2) Install hinge access panels. Refer to the A320/A321 Aircraft Maintenance Manual, Chapter 78-32-01, Page Block 401.
- (3) Activate the thrust reverser hydraulic control unit. Refer to the A320/A321 Aircraft Maintenance Manual, Chapter 78-30-00, TASK 78-30-00-040-012.

D. Recording Instructions

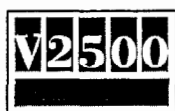
- (1) A record of accomplishment is necessary. Write in the aircraft log and metal stamp, vibroetch, or electroetch on the thrust reverser data plate that Service Bulletin V2500-NAC-78-0085 "REV 2" has been done. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

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3. Material Information

A. Kits Associated with this Bulletin:

Applicability: For each V2500-A1/A5 Nacelle to incorporate this Bulletin.

<u>NEW PART NO.</u> <u>(ATA NO.)</u>	<u>QTY</u>	<u>EST'D UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO.</u> <u>(IPC NO.)</u>	<u>INSTR/</u> <u>DISPOS</u>
V2578085-551	1	\$634.00			
Consisting of:					
740-0549-501	1		Spacer		
740-0549-502	1		Spacer		
740-0549-503	2		Spacer		
740-0549-507	2		Spacer		
740-0549-509	2		Spacer		

B. Parts Affected by this Bulletin:

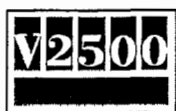
Applicability: For V2500-A1 thrust reverser.

	<u>NEW PART NO.</u> <u>(ATA NO.)</u>	<u>QTY</u>	<u>EST'D UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO.</u> <u>(IPC NO.)</u>	<u>INSTR/</u> <u>DISPOS</u>
	740-0002-709 (78-30-00)	1		No. 1 LH T/R	740-0002-701 (01-130)	(1D) (S1)
R	740-0002-705	1		No. 1	740-0002-693	(1D) (S1)
R	(78-30-00)			RH T/R	(01-140)	
R	740-0002-711	1		No. 2	740-0002-703	(1D) (S1)
R	(78-30-00)			LH T/R	(02-130)	
R	740-0002-707	1		No. 2	740-0002-695	(1D) (S1)
R	(78-30-00)			RH T/R	(02-140)	

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<u>NEW PART NO.</u> <u>(ATA NO.)</u>	<u>QTY</u>	<u>EST'D UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO.</u> <u>(IPC NO.)</u>	<u>INSTR/</u> <u>DISPOS</u>
740-0549-501 (78-32-49)	1		Spacer	--- (01-500)	(A) (B)
740-0549-502 (78-32-79)	1		Spacer	--- (01-505)	(A) (B)
740-0549-503 (78-32-49) (78-32-79)	2		Spacer	--- (01-505) (01-510)	(A) (B)
740-0549-509 (78-32-49) (78-32-79)	2		Spacer	--- (01-510) (01-515)	(A) (B)
740-0549-507 (78-32-49) (78-32-79)	2		Spacer	--- (01-515) (01-520)	(A) (B)

Applicability: For V2500-A5 thrust reverser.

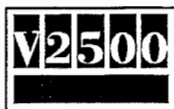
<u>NEW PART NO.</u> <u>(ATA NO.)</u>	<u>QTY</u>	<u>EST'D UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO.</u> <u>(IPC NO.)</u>	<u>INSTR/</u> <u>DISPOS</u>
740-0002-709 (78-30-00)	1		No. 1 LH T/R	740-0002-701 (01-130)	(1D) (S1)
740-0002-705 (78-30-00)	1		No. 1 RH T/R	740-0002-693 (01-140)	(1D) (S1)
740-0002-711 (78-30-00)	1		No. 2 LH T/R	740-0002-703 (02-130)	(1D) (S1)
740-0002-707 (78-30-00)	1		No. 2 RH T/R	740-0002-695 (02-140)	(1D) (S1)

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<u>NEW PART NO.</u> <u>(ATA NO.)</u>	<u>QTY</u>	<u>EST'D UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO.</u> <u>(IPC NO.)</u>	<u>INSTR/</u> <u>DISPOS</u>
740-0549-501 (78-32-49)	1		Spacer	--- (01-500)	(A) (B)
740-0549-502 (78-32-79)	1		Spacer	--- (01-505)	(A) (B)
740-0549-503 (78-32-49) (78-32-79)	2		Spacer	--- (01-505) (05-510)	(A) (B)
740-0549-509 (78-32-49) (78-32-79)	2		Spacer	--- (01-510) (01-515)	(A) (B)
740-0549-507 (78-32-49) (78-32-79)	2		Spacer	--- (01-515) (01-520)	(A) (B)

C. Instruction/Disposition Code Statements

(1D) New part number may be obtained by rework and reidentification.

(A) Part supplied as a detail of the kit.

(S1) Old and new parts are fully interchangeable.

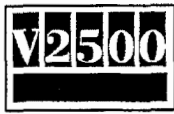
(B) Not available as a spare for replenishment purposes.

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D. Materials Required to Incorporate This Bulletin:

CoMat 01-076	Methylethylketone
CoMat 02-099	Lint Free Cloth
CoMat 06-073	Metal Marking Ink
CoMat 07-028	Chromate Conversion Coating for Aluminum
CoMat 08-030	Sealant
CoMat 08-031	Adhesive
CoMat 08-032	Primer

NOTE: To Identify the consumable materials, refer to the
Overhaul Processes and Consumable Index PCI-V2500-1IA.

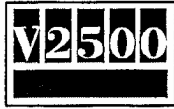
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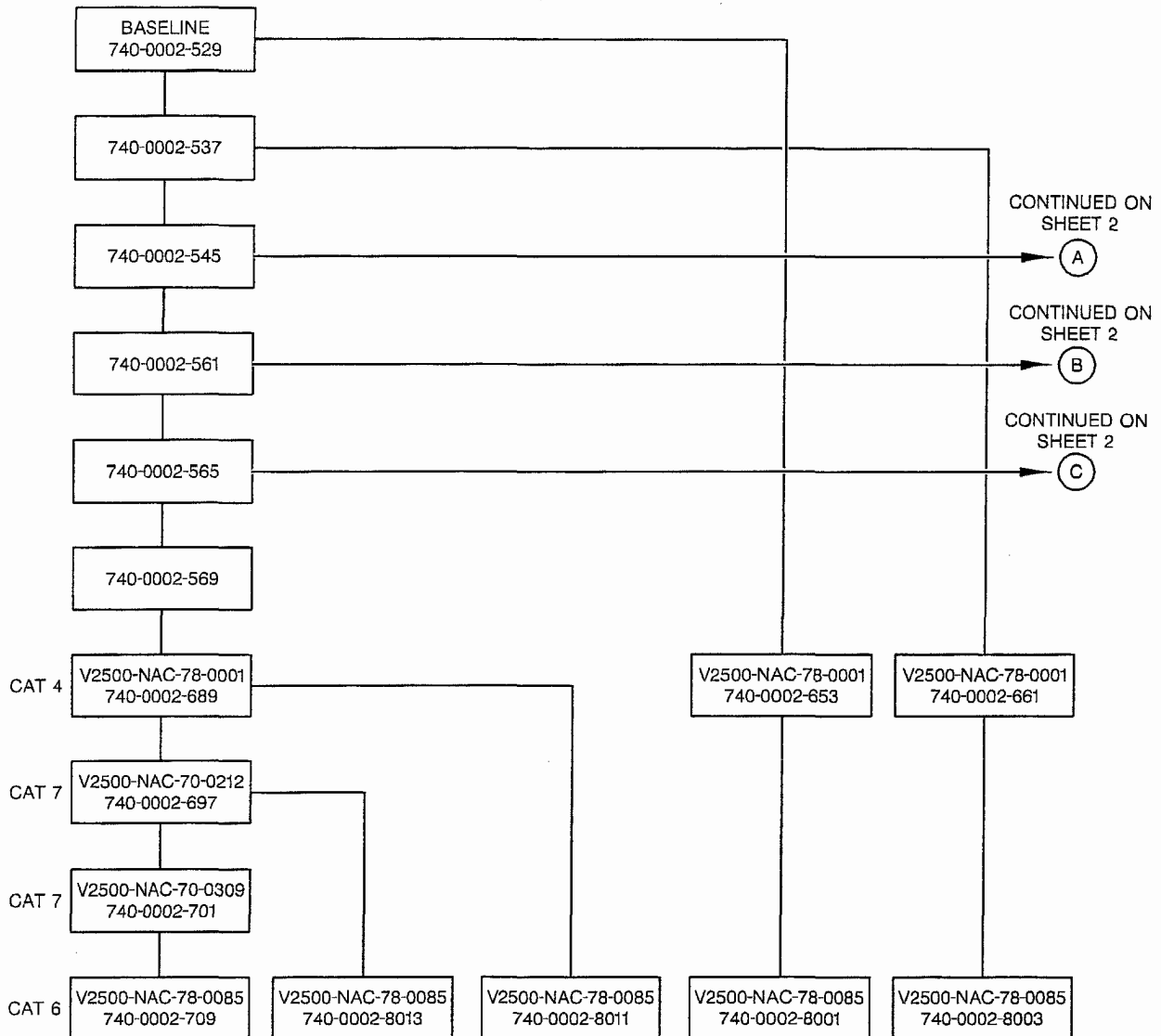
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V2500 Propulsion System — Nacelle

SERVICE BULLETIN



FAMILY TREE-
NO. 1 POSITION THRUST REVERSER
LEFT HAND SIDE
REF: CATALOG SEQUENCE NO. 78-30-00 FIG. 01, ITEM 130

VSB339

FIGURE 3 (Sheet 1 of 2)

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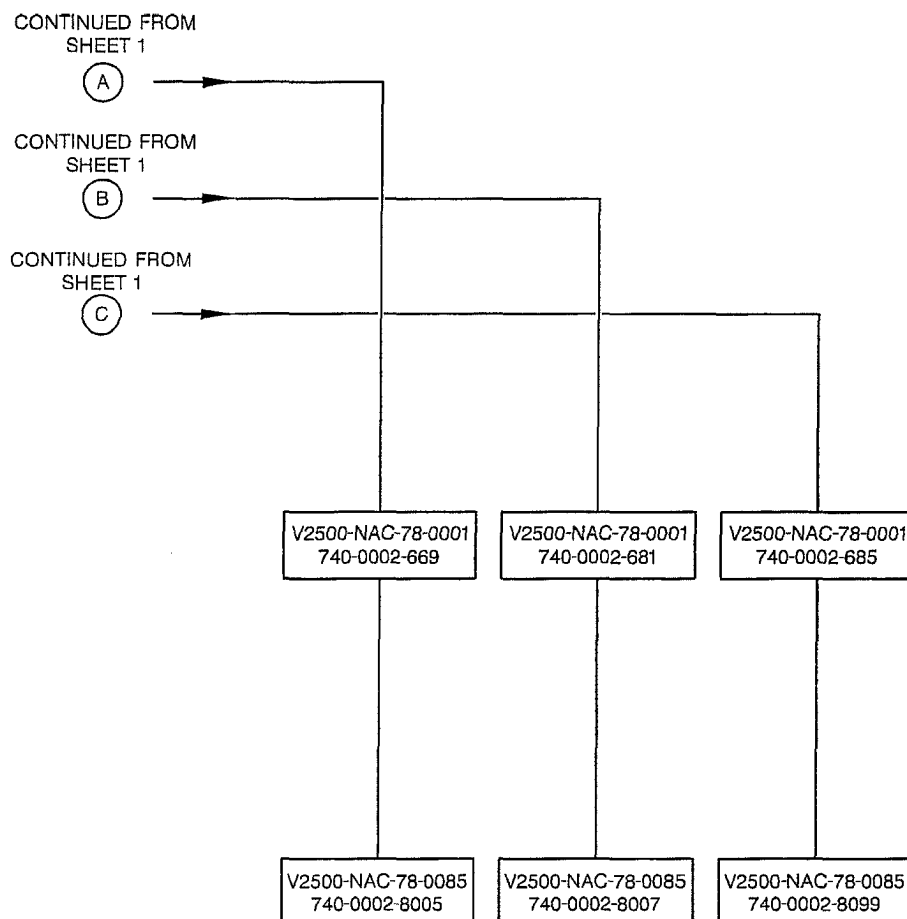
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V2500 Propulsion System — Nacelle

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FAMILY TREE-
NO. 1 POSITION THRUST REVERSER
LEFT HAND SIDE
REF: CATALOG SEQUENCE NO. 78-30-00 FIG. 01, ITEM 130

VSΒ345

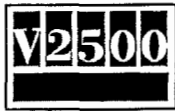
FIGURE 3 (Sheet 2 of 2)

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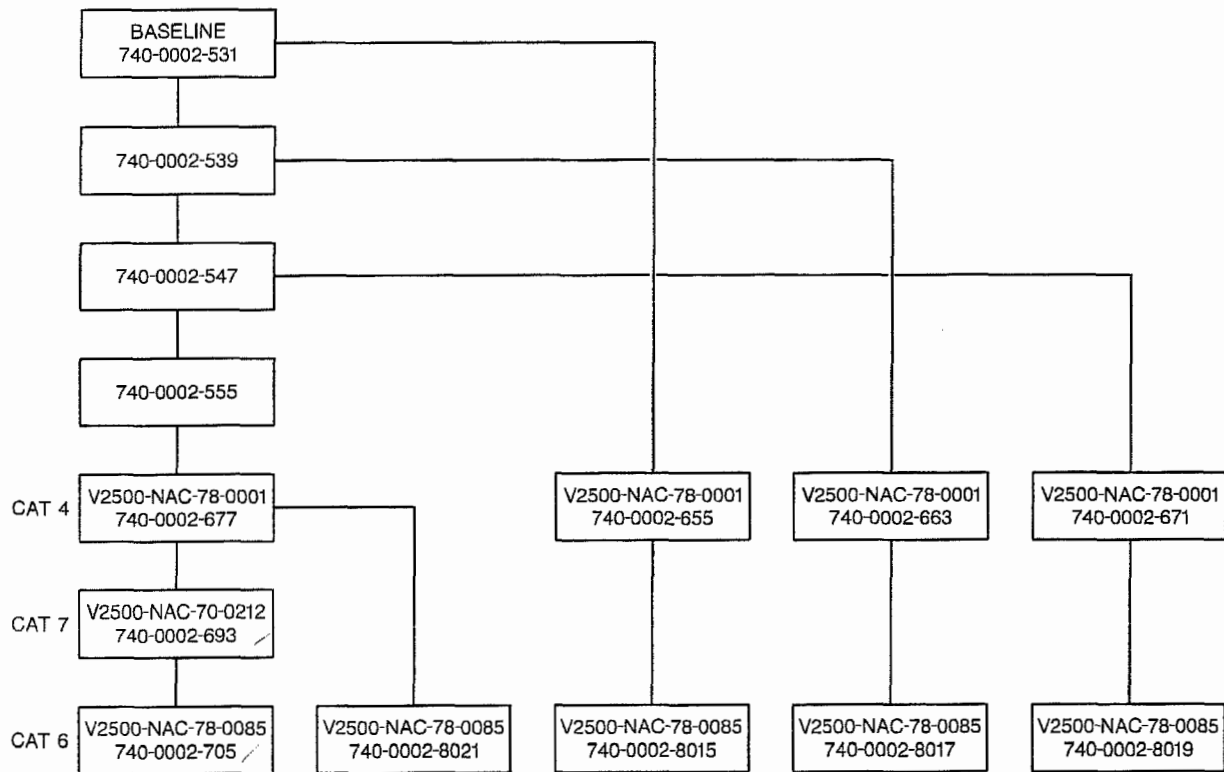
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FAMILY TREE-
NO. 1 POSITION THRUST REVERSER
RIGHT HAND SIDE
REF: CATALOG SEQUENCE NO. 78-30-00 FIG. 01, ITEM 140

VSB341

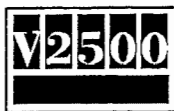
FIGURE 4

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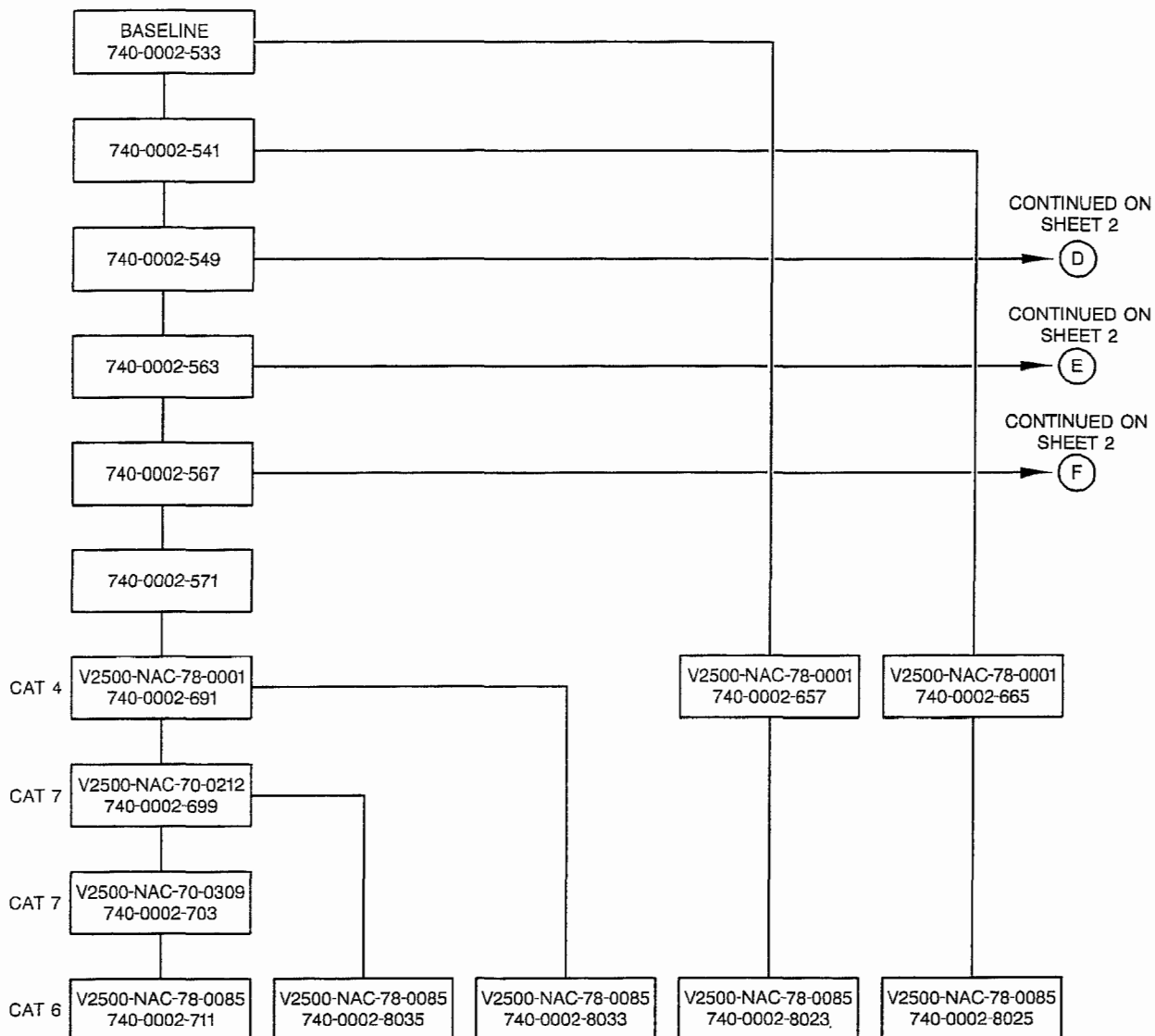
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FAMILY TREE-
NO. 2 POSITION THRUST REVERSER
LEFT HAND SIDE
REF: CATALOG SEQUENCE NO. 78-30-00 FIG. 02, ITEM 130

VS340

FIGURE 5 (Sheet 1 of 2)

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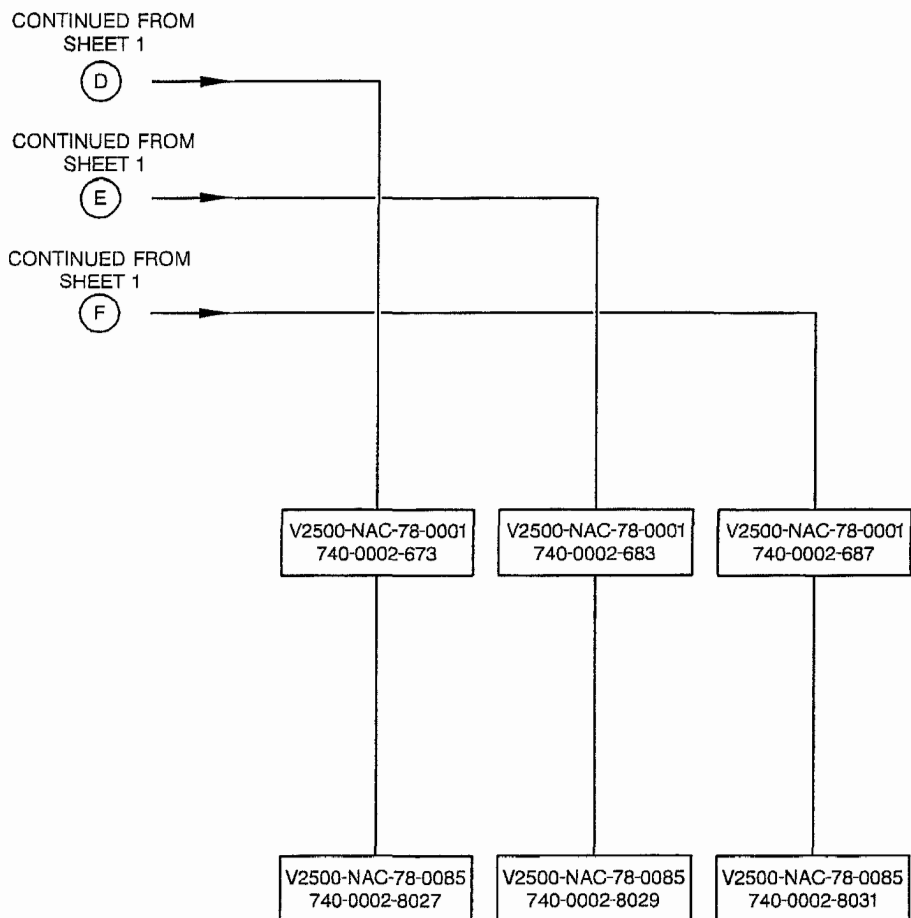
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FAMILY TREE-
NO. 2 POSITION THRUST REVERSER
LEFT HAND SIDE
REF: CATALOG SEQUENCE NO. 78-30-00 FIG. 02, ITEM 130

VSB346

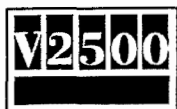
FIGURE 5 (Sheet 2 of 2)

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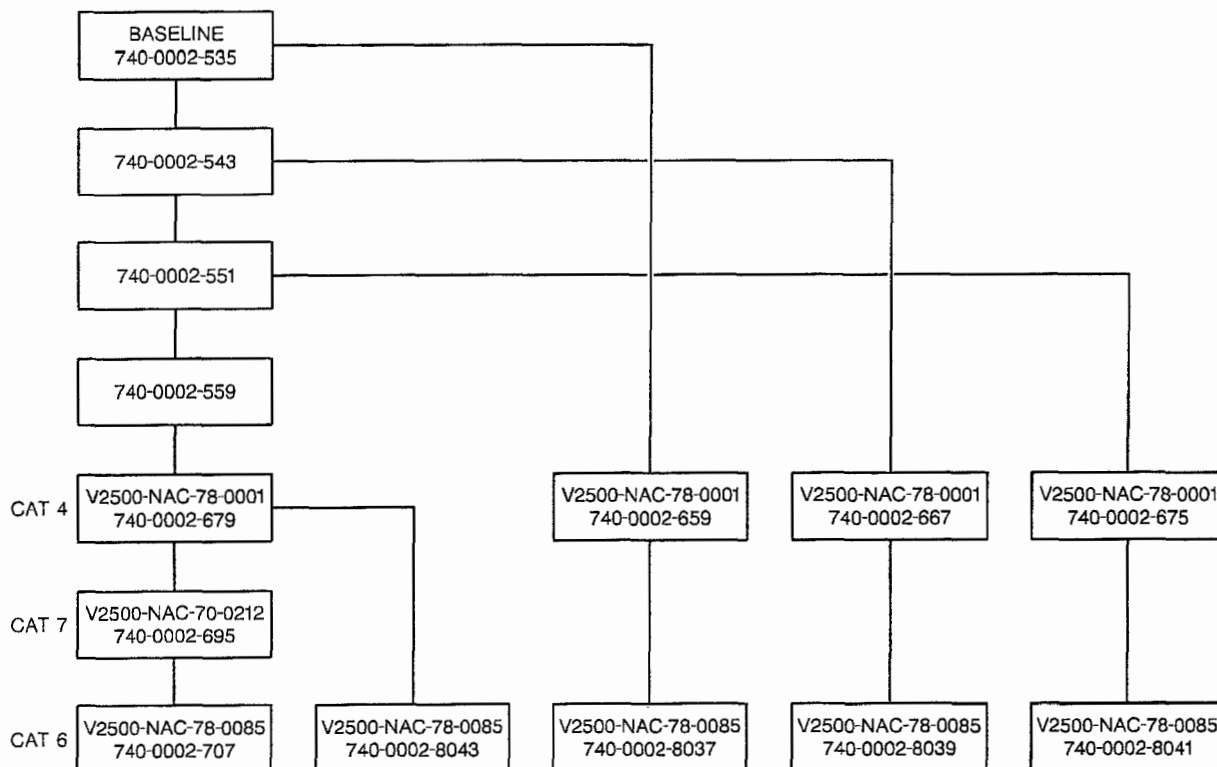
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FAMILY TREE-
NO. 2 POSITION THRUST REVERSER
RIGHT HAND SIDE
REF: CATALOG SEQUENCE NO. 78-30-00 FIG. 02, ITEM 140

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FIGURE 6

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