ENGINE - INTERMEDIATE STRUCTURE - REWORK THE FAN FRAME ASSEMBLY TO INCLUDE FILLER COMPOUND IN THE REAR INNER FLANGE AREA - CATEGORY CODE 3 - MOD.ENG-72-0009

1. Planning Information

A. Effectivity

(1) Aircraft: (a) Airbus A320

(2) Engine: (a) V2500-A1 Engines prior to Serial Number V0086

B. Reason

(1) Condition

The inside of the Fan Frame inner V-groove at B.D.C. may accumulate large amounts of fluid which will not conform to the requirements for the "Pylon, Nacelle, Engine Drainage" Test.

The cause of the problem is due to insufficient structure of the Fan Frame to drain fluid trapped in the V-groove.

(2) Background

An advance review of the Power Plants installed on a A320 aircraft, has revealed possible fluid traps in the Fan Frame V-groove, which will not be in line with the requirements for the Drainage Test. The Drainage Test is required to be satisfactorily completed prior to revenue service.

It is recommended that a filler material is incorporated as an interim fix until a modification is introduced to give a positive drain tube through the V-groove and into the lower bifurcation.

(3) Objective

To prevent possible accumulation of fluids in the Fan Frame V-groove area.

(4) Substantiation

Analysis of the changes substantiates that the problem has been solved.

(5) Effects of Bulletin on the following shop functions:

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

C. Description

(1) The changes introduced by this Service Bulletin are:

(a) The filler material (CoMat 08-006 Two-pack filler - Spec No. J-MSRR 9152 Two part epoxy low density void filling compound) is applied to the Fan Frame rear V-groove in the specified area.

(2) The existing Fan Frame Assemblies can be reworked to new Part Numbers.

(3) For relationship with other Service Bulletins, See Figure 5 "Family Tree Chart".

(4) This Bulletin is comprised of the following two parts;

(a) Part 1 -- Rework of Fan Frame A/O incorporating IAE SB No. V2500-ENG-72-0077.

(b) Part 2 -- Rework of Fan Frame A/O not incorporating IAE SB No. V2500-ENG-72-0077.

D. Approval

The Part Number changes and part modifications described in Sections 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.

E. Compliance

Category Code 3.

Accomplish prior to revenue service.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

VENUE	EST'D MANHOURS
(1) In Service	Not applicable
(2) In shop	Not affected

G. Material - Price and Availability

Modification kit not required; existing parts can be reworked. (See paragraph 3.B of "Material Information" section.)

H. Tooling - Price and Availability

Special tools are not required.

I. Weight and Balance

(1) Weight change	Plus 0.20 lb. (0,09 kg)
(2) Moment arm	2.0 in. (50,8 mm) rearward
(3) Datum	Engine front centerline (Powerplant Station (P.P.S.) 100)

J. Electrical Load Data

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

K. References

(1) Internal Reference No.

EC88VJ712C

(2) Other References

IAE V2500 Service Bulletin Numbers.

V2500-ENG-70-0002 (General Information - Provide the Intermediate Structures that Eliminates Flight Test Instrumentation Provisions).

V2500-ENG-72-0077 (Engine - LP Compressor - Provide a Fan Frame Assembly with revised Attachment Features).

V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-32-03.

A320 Aircraft Maintenance Manual, 71-13-00, Fan Cowls, Maintenance Practises, 78-32-00, Thrust Reverser Halves, Maintenance Practises.

V2500 Overhaul Processes and consumable Index.

L. Other Publications Affected

(1) V2500 Engine Illustrated Parts Catalog , Chapter/Section 72-32-03.

(2) V2500 Engine Manual, 72-32-03, Cleaning, Inspection/Check and Repair.

2. Accomplishment Instructions

A. Pre-requisite Instructions

(1) Open the Thrust Reverser Halves. (Refer to the A320 Aircraft Maintenance Manual, 78-32-00, Thrust Reverser Halves, Maintenance Practices, TASK 78-32-00-010-010, and also to 1.K.(2).)

NOTE: For uninstalled engines (without the Fan Cowls and Thrust Reverser Halves), this step is not applicable.

(2) Remove the clipping parts which attach 2A1497, EEC Core Harness and 5A0279, Ignitor Supply Harness to the Lug on 5W2552 Raceway, as follows: (Refer to Figure 2).

(a) At CP5692, remove 4W0104, Bolt, 4W0001, Nut and AN960XC10L, washer.

(b) At CP5691, remove 4W0104, Bolt, 4W0001, Nut and AN960XC10L, washer.

(3) Remove the clipping parts which attach 2A1497, EEC Core Harness and 5A0279, Ignitor Supply Harness to the Lugs on 6A2134 Raceway, as follows: (Refer to Figure 2).

(a) At CP5678, remove 4W0112 Bolt, 4W0001, Nut and AN960XC10L, Washer and 5W1030, Spacer.

(4) Remove the clipping parts which attach 2A1497, EEC Core Harness and 5A0279, Ignitor Supply Harness and 5W2556, Raceway to the Lug on 6A2134, Raceway, as follows: (Refer to Figure 2).

(a) At CP5679, remove 4W0115 Bolt, 4W0001, Nut and two AN960XC10L, Washer and 5W1030, Spacer.

(5) Remove the clipping parts which attach 2A1497, EEC Core Harness to the Lugs on 5W2556 Raceway, as follows: (Refer to Figure 2).

(a) At CP5740, remove 4W0104 Bolt, 4W0001, Nut and AN960XC10L, Washer.

(b) At CP5741, remove 4W0104 Bolt, 4W0001, Nut and AN960XC10L, Washer.

(c) At CP5742, remove 4W0105 Bolt, 4W0001, Nut and AN960XC10L, Washer.

(d) At CP5743, remove 4W0104 Bolt, 4W0001, Nut and AN960XC10L, Washer.

(6) Remove the clipping parts which attach 2A1497, EEC Core Harness and 5W2556, Raceway, to the Lug on 5A0174, Cooling Tube, as follows: (Refer to Figure 2).

(a) At CP5744, remove 4W0105 Bolt, 4W0001, Nut and AN960XC10L, Washer.

(b) Remove 5W2556, Raceway from the Harness.

(7) Remove the clipping parts which attach 2A1497, EEC Core Harness to 5W8366, Bracket, as follows: (Refer to Figure 2).

(a) At CP5745, remove 4W0103, Bolt and AN960XC10L, Washer.

(8) Remove the clipping parts which attach 2A1497, EEC Core Harness to the Lug on 6A2124, Fuel Tube, as follows: (Refer to Figure 2).

(a) At CP5725, remove 4W0104, Bolt, 4W0001, Nut and AN960XC10L, Washer.

(9) Move the EEC Core Harness and the Ignition Supply Harness rearward sufficiently to get access to the inner V-groove of the Fan Frame at B.D.C.

B. Rework Instruction

Procedure	Supplementary Information
(1) Find the filling area	Refer to Figure 3, Sheet 1.
(2) Clean the specified area	Use a clean white lint free cloth made moist with CoMat 01-031 acetone or CoMat 01-060 acetone or CoMat 01-076 methylethylketone or CoMat 01-124 isopropyl alcohol.

NOTE: To identify the consumable materials refer to the PCI.

(3) Allow the cleaned area to become dry

WARNING: DO NOT GET THE MATERIAL ON YOUR SKIN OR IN YOUR EYES. PUT ON PROTECTIVE GLOVES. USE THE MATERIAL IN A VENTILATED AREA. IF YOU GET THE MATERIAL ON YOUR SKIN OR IN YOUR EYES FLUSH IT AWAY WITH WATER. GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

(4) Mix the two-pack filler

The filler is a two-part mix.

Mix sufficient quantities, evenly, thoroughly, by weight as follows:

CoMat 08-006 filler two-pack
(Part A 94 parts - white)
(Part B 100 parts - Blue)

For detailed information comply with the manufacture's instruction on the material containers.

NOTE: To identify the consumable material refer to the PCI.

NOTE: Total mixing weight is approximately 0,221f (100 g) per engine.

NOTE: Make sure of the instruction on the material containers for the storage condition.

(5) Fill the specified area and form a rectangular recess for 5W8301, Bracket by finger. Allow slight overfilling for trimming.	Refer to Figure 3, Sheets 2 to 5.
(6) Trim the excess filler material flush and make the surface flat and smooth before curing.	Use spatula or equivalent.
(7) Cure the filler material	Room temperature for 24 hours.
(8) Temporarily renumber by the vibro-peen on the surface of the Fan Frame near the filler area at the bottom strut.	Refer to Figure 4.

Existing	Renumber
5A0256	5A0362
5A0230	5A0363
5A6592	5A0364
5A6596	5A0365
5A0267	5A0366

NOTE: These new part numbers will be transferred adjacent to the existing part numbers at next shop visit by a Service Bulletin or other instructions to be issued later.

C. Post-requisite Instructions

(1) Move the EEC Core Harness and the Ignition Supply Harness forward to return back to their original positions.

(2) Install the clipping parts which attach 2A1497, EEC Core Harness and 5A0279, Ignitor Supply Harness, to the Lug on 6A2134, Raceway, as follows: (Refer to Figure 2).

(a) At CP5678, install 5W1030, Space, 4W0112, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(3) Install the clipping parts which attach 2A1497, EEC Core Harness and 5A0279, Ignitor Supply Harness and 5W2556, Raceway to the Lug on 6A2134, Raceway, as follows: (Refer to Figure 2).

(a) Install 5W2556, Raceway to the Harness.

(b) At CP5679, install 5W1030, Space 4W0115, Bolt, two AN960XC10L, Washers and 4W0001, Nut.

(4) Install the clipping parts which attach 2A1497, EEC Core Harness, to the Lug on 5A2556, Raceway, as follows: (Refer to Figure 2).

(a) At CP5740, install 4W0104, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(b) At CP5741, install 4W0104, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(c) At CP5742, install 4W0105, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(d) At CP5743, install 4W0104, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(5) Install the clipping parts which attach 2A1497, EEC Core Harness, and 5W2556, Raceway, to the Lug on 5A0174, Cooling Tube, as follows: (Refer to Figure 2).

(a) At CP5744, install 4W0105, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(6) Install the clipping parts which attach 2A1497, EEC Core Harness, to the Lug on 5W8366, Bracket, as follows: (Refer to Figure 2).

(a) At CP5745, install 4W0103, Bolt, AN960XC10L, Washer.

(7) Install the clipping parts which attach 2A1497, EEC Core Harness, to the Lug on 6A2124, Fuel Tube, as follows: (Refer to Figure 2).

(8) Install the clipping parts which attach 2A1497, EEC Core Harness,and 5A0279, Ignition SUpply Harness to the Lug on 5A2552, Raceway, as follows: (Refer to Figure 2).

(a) At CP5691, install 4W0104, Bolt, AN960CX10L, Washer and 4W0001, Nut.

(b) At CP5692, install 4W0104, Bolt, AN960XC10L, Washer and 4W0001, Nut.

(9) Adjust the clippling parts, at CP5678, CP5679, CP5640, CP5641, CP5642 CP5643, CP5644, CP5745, CP5725, CP5691 and CP5692, in position and torque each bolt to 36 to 45 lbfin (4,00 to 5,00 Nm).

(10) Make sure that there is a sufficient clearance between JM44LC39H110RG Clip at CP5692 and the surface of the filler. Adjust clipping positions to get a sufficient clearance if necessary.

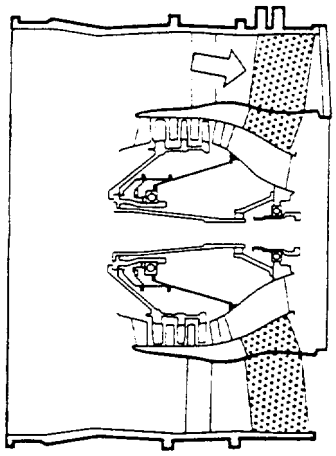
(11) Close the Thrust Reverser Halves. (Refer to the A320 Aircraft Maintenance Manual, 78-32-00, Thrust Reverser Halves, Maintenance Practices, TASK 78-32-00-010-010, and also refer to 1.K.(2)).

NOTE: For uninstalled engines (without the Fan Cowls and Thrust Reverser Halves), this step is not applicable.

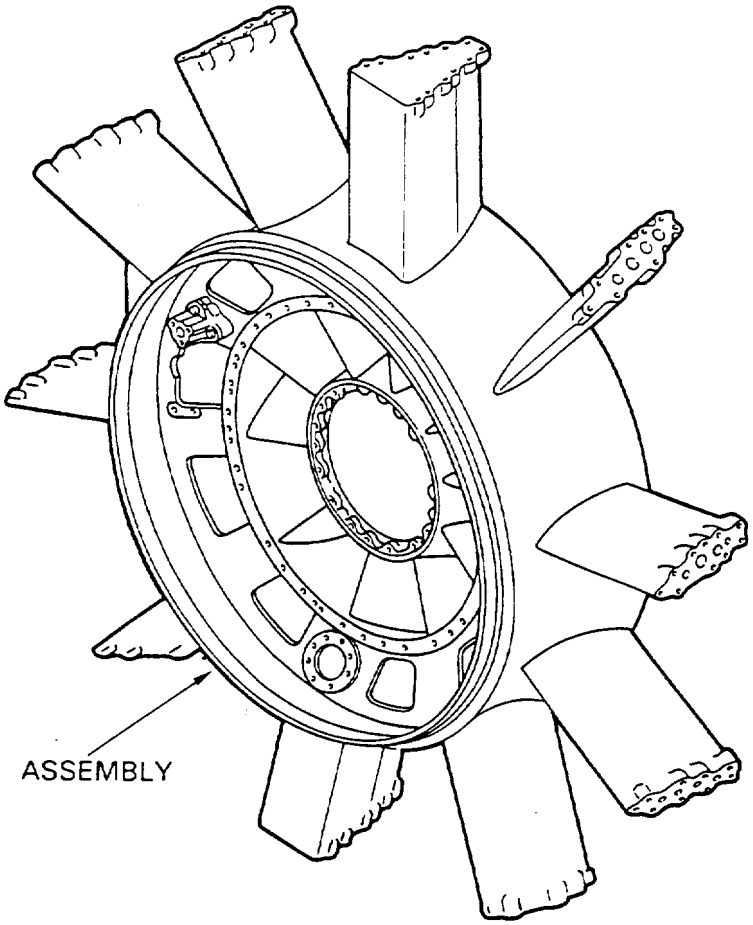
D. Recording Instructions

(1) A record of accomplishment is necessary.

Printed in Great Britain

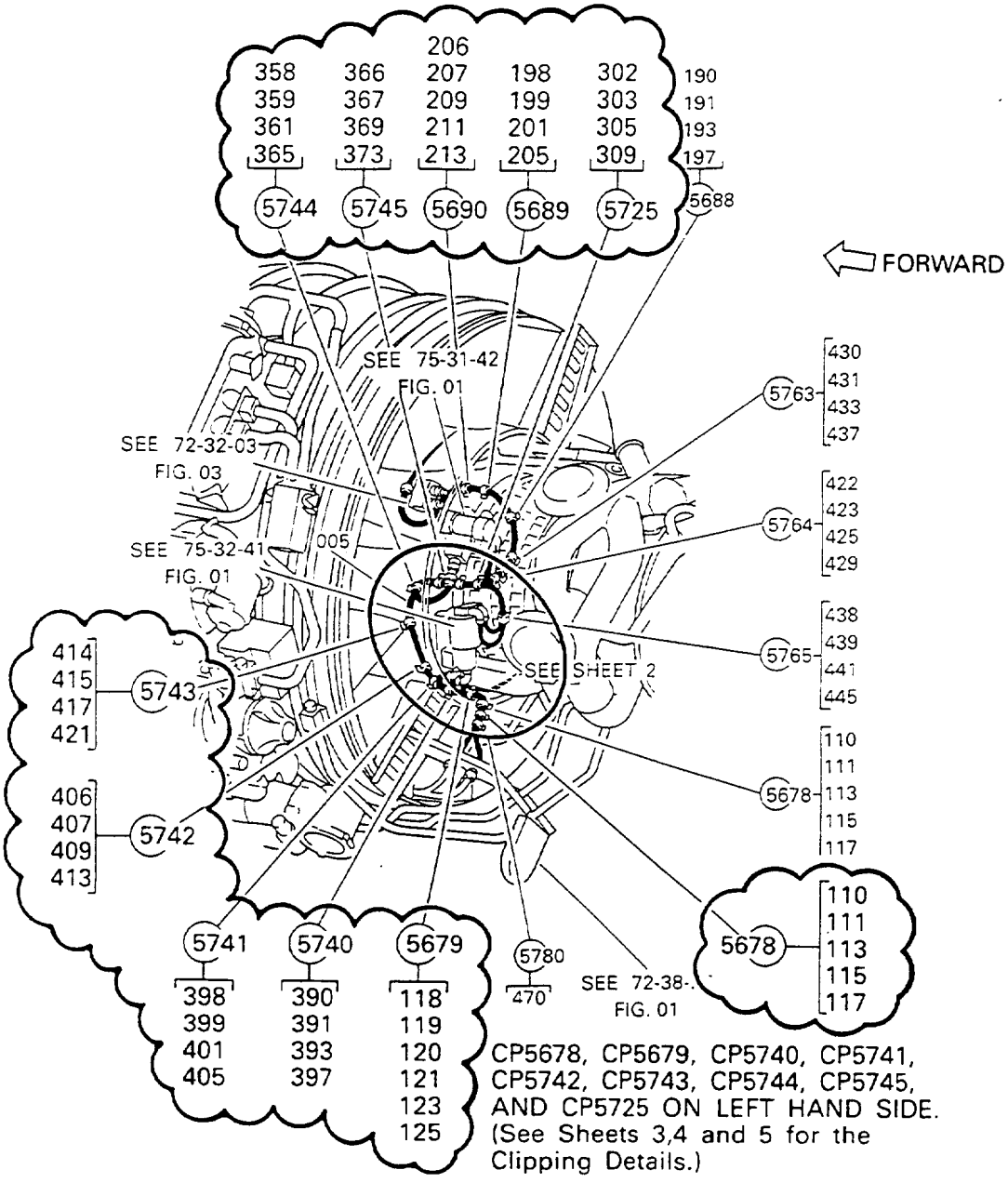


MODULE 32



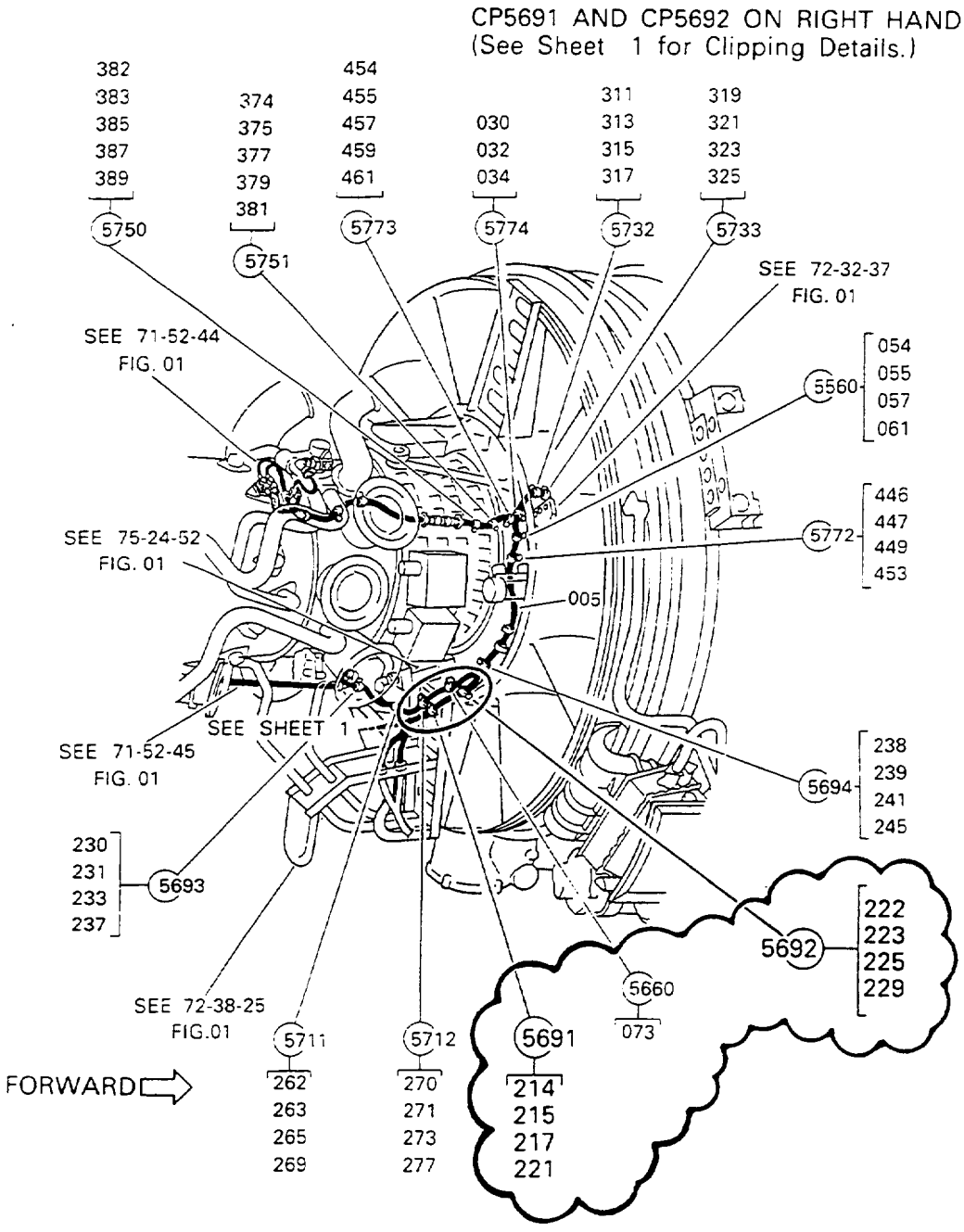
ded0000452

Location of the fan frame assembly
Fig.1



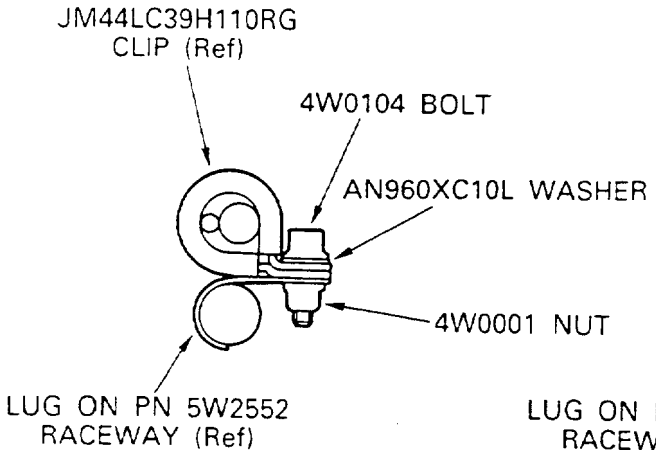
ded0000453

Location of the harness clipping parts to be removed and installed
Fig.2(Sheet 1 of 5)

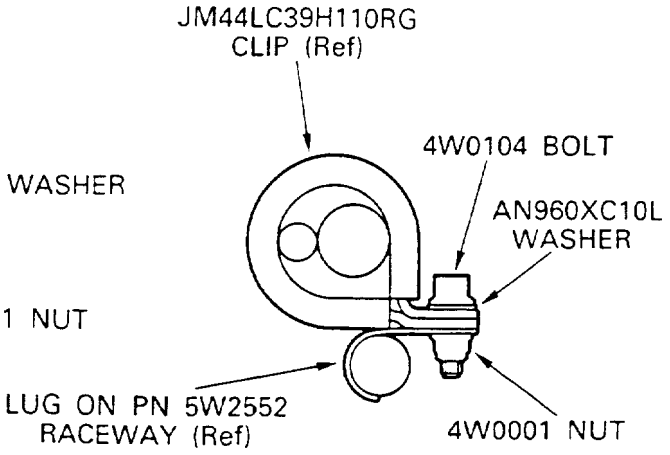


ded00000454

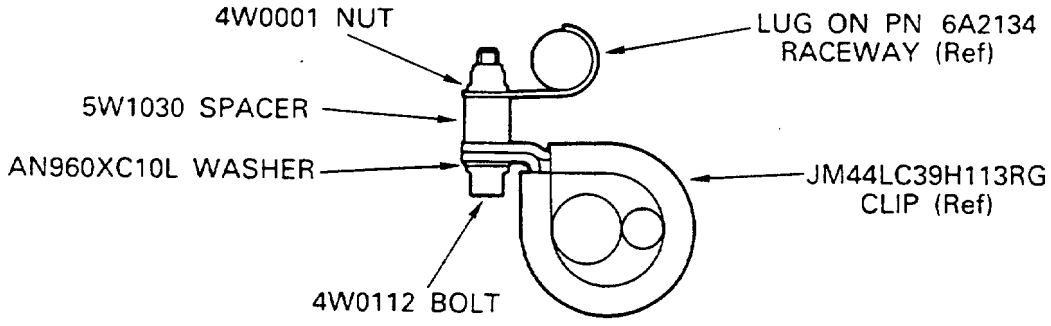
Location of the harness clipping parts to be removed and installed
Fig.2(Sheet 2 of 5)



CP5692



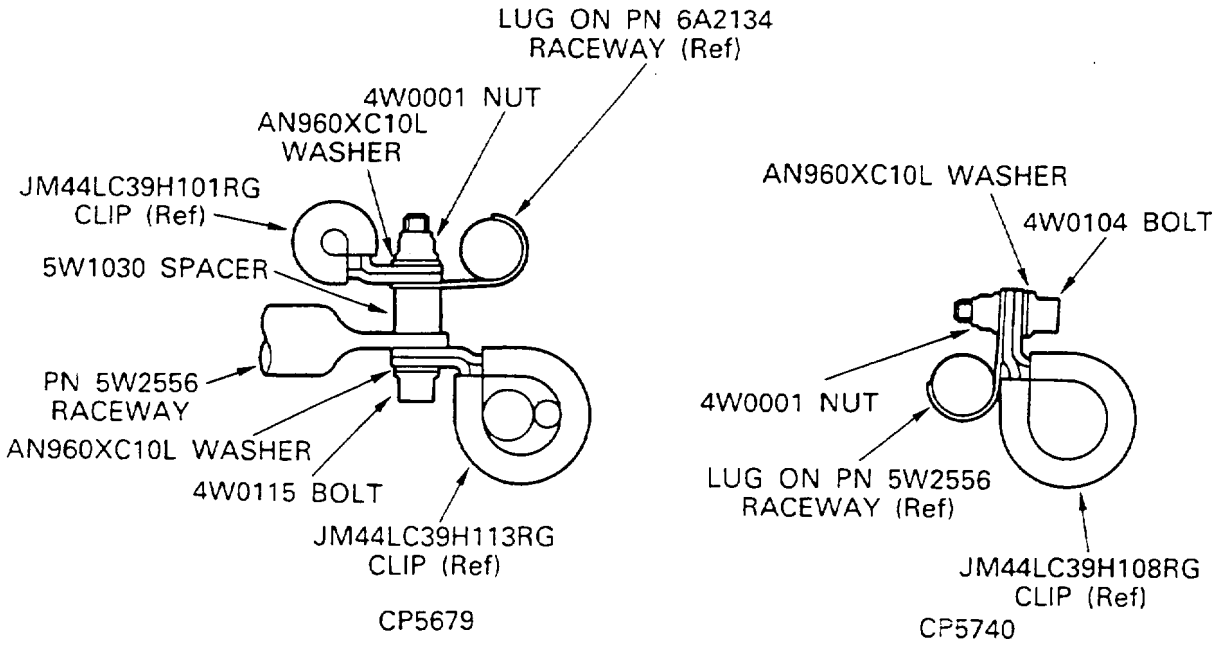
CP5691



CP5678

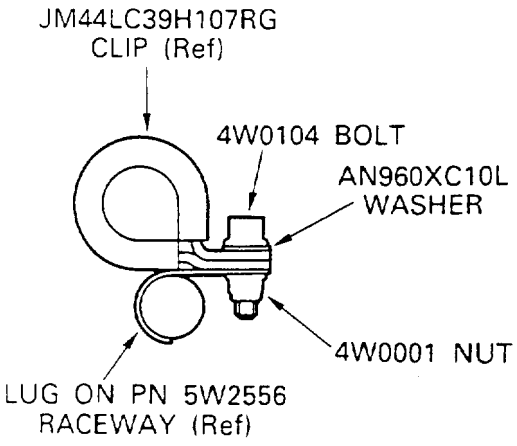
ded0000455

Location of the harness clipping parts to be removed and installed
Fig.2(Sheet 3 of 5)

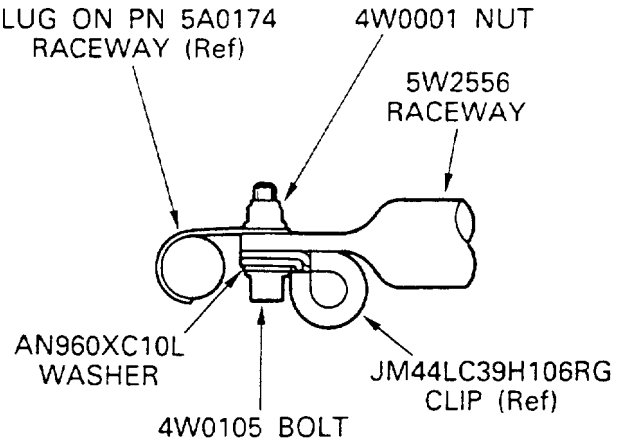


ded0000456

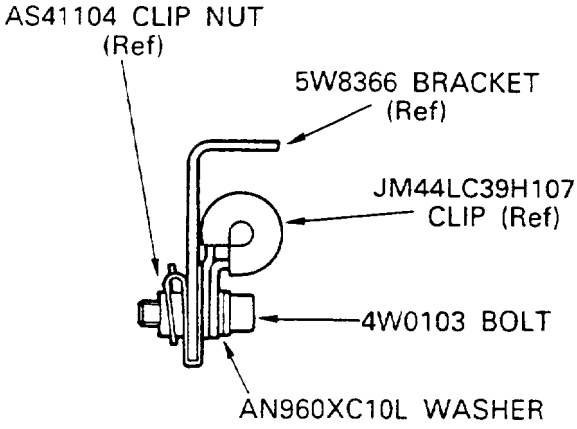
Location of the harness clipping parts to be removed and installed
Fig.2(Sheet 4 of 5)



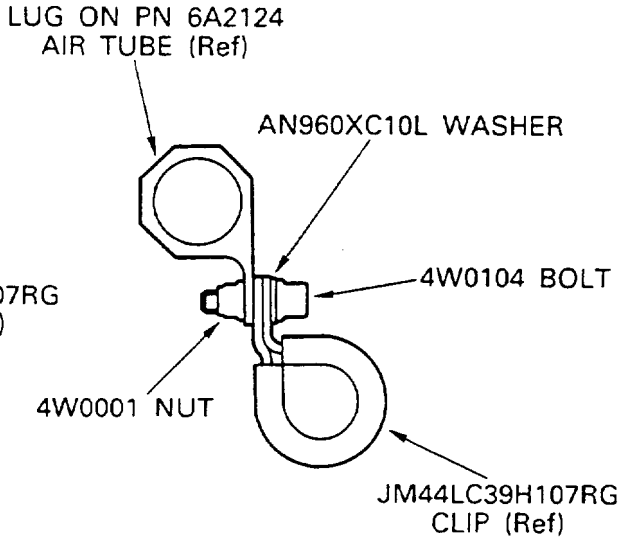
CP5743



CP5744



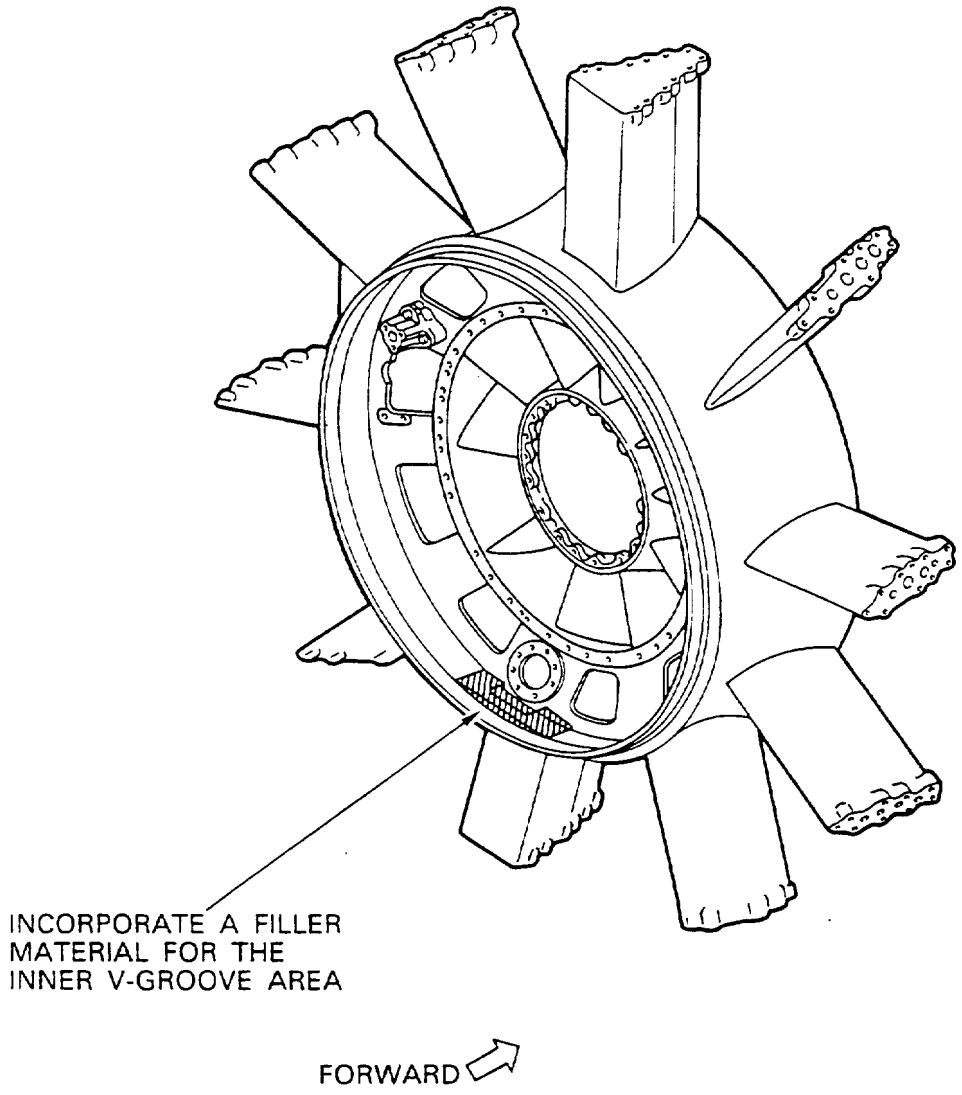
CP5745



CP5725

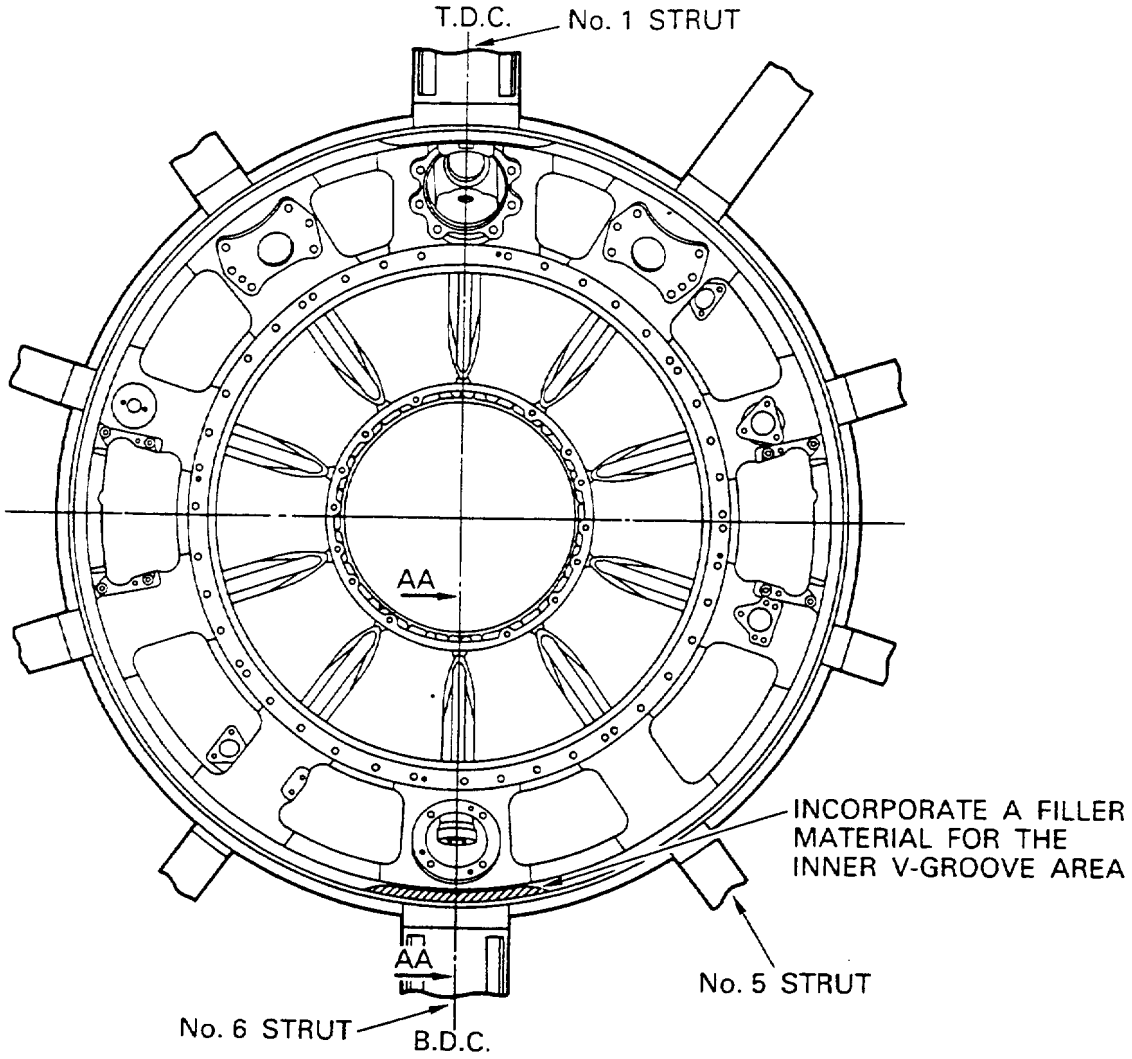
ded0000457

Location of the harness clipping parts to be removed and installed
Fig.2(Sheet 5 of 5)



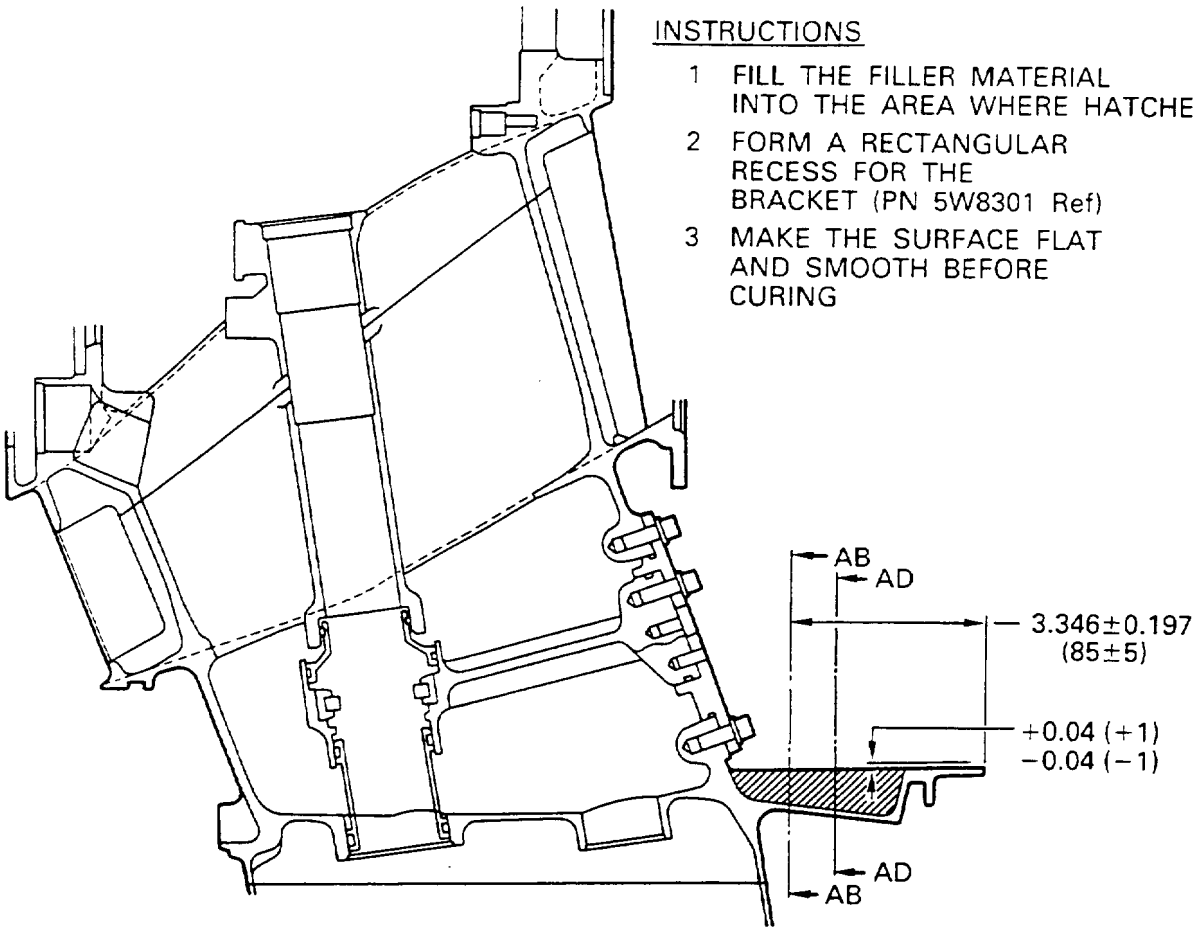
ded0000458

Modification of the fan frame assembly
Fig.3(Sheet 1 of 5)



ded0000459

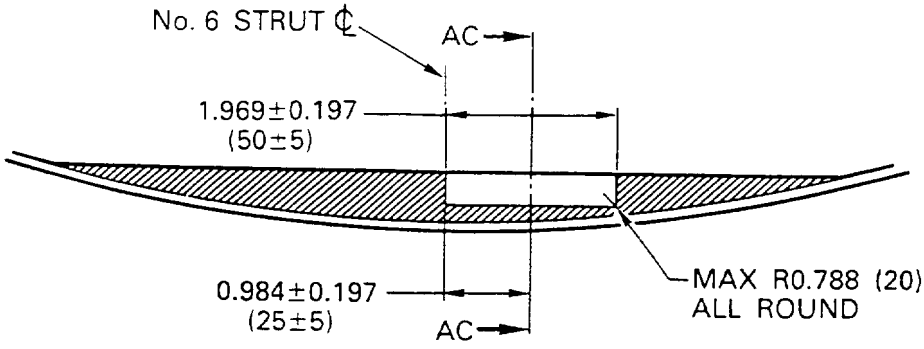
Modification of the fan frame assembly
Fig.3(Sheet 2 of 5)



SECTION AA – AA

ded0000460

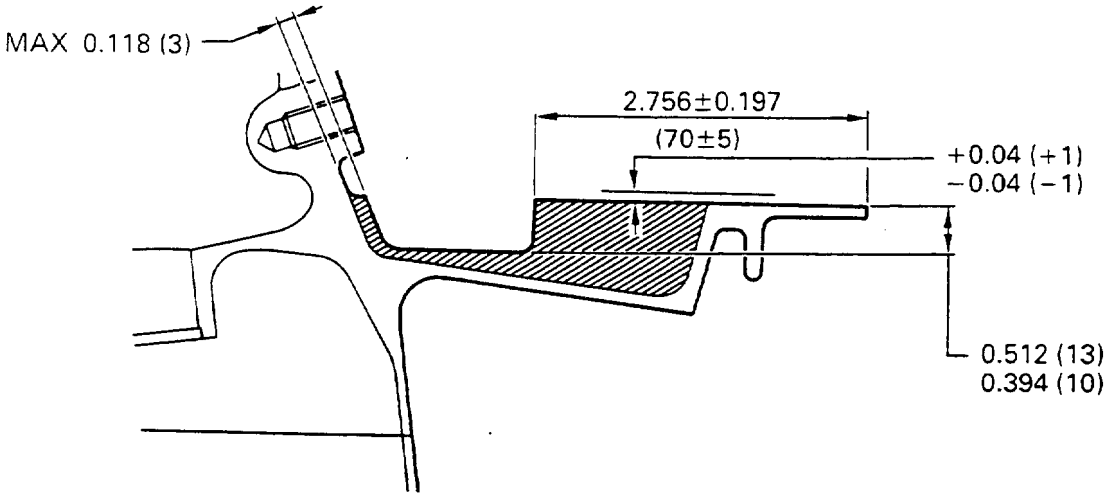
Modification of the fan frame assembly
Fig.3(Sheet 3 of 5)



SECTION AB – AB

INSTRUCTIONS

REFER TO SHEET 3



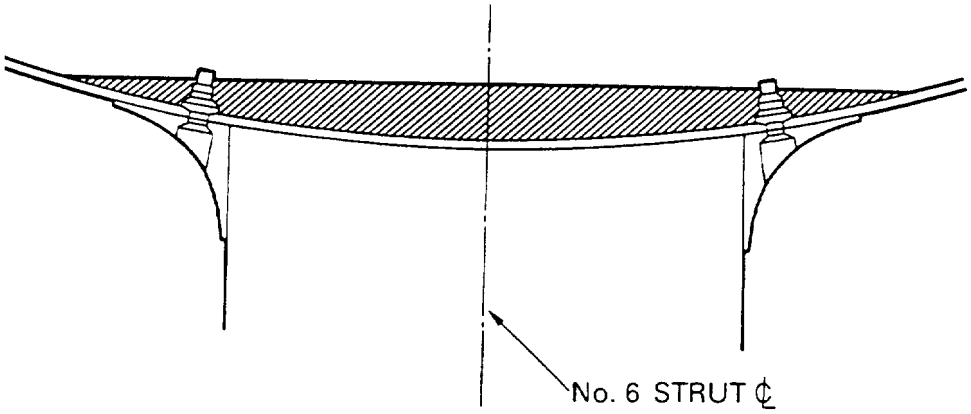
SECTION AC – AC

ded0000461

Modification of the fan frame assembly
Fig.3(Sheet 4 of 5)

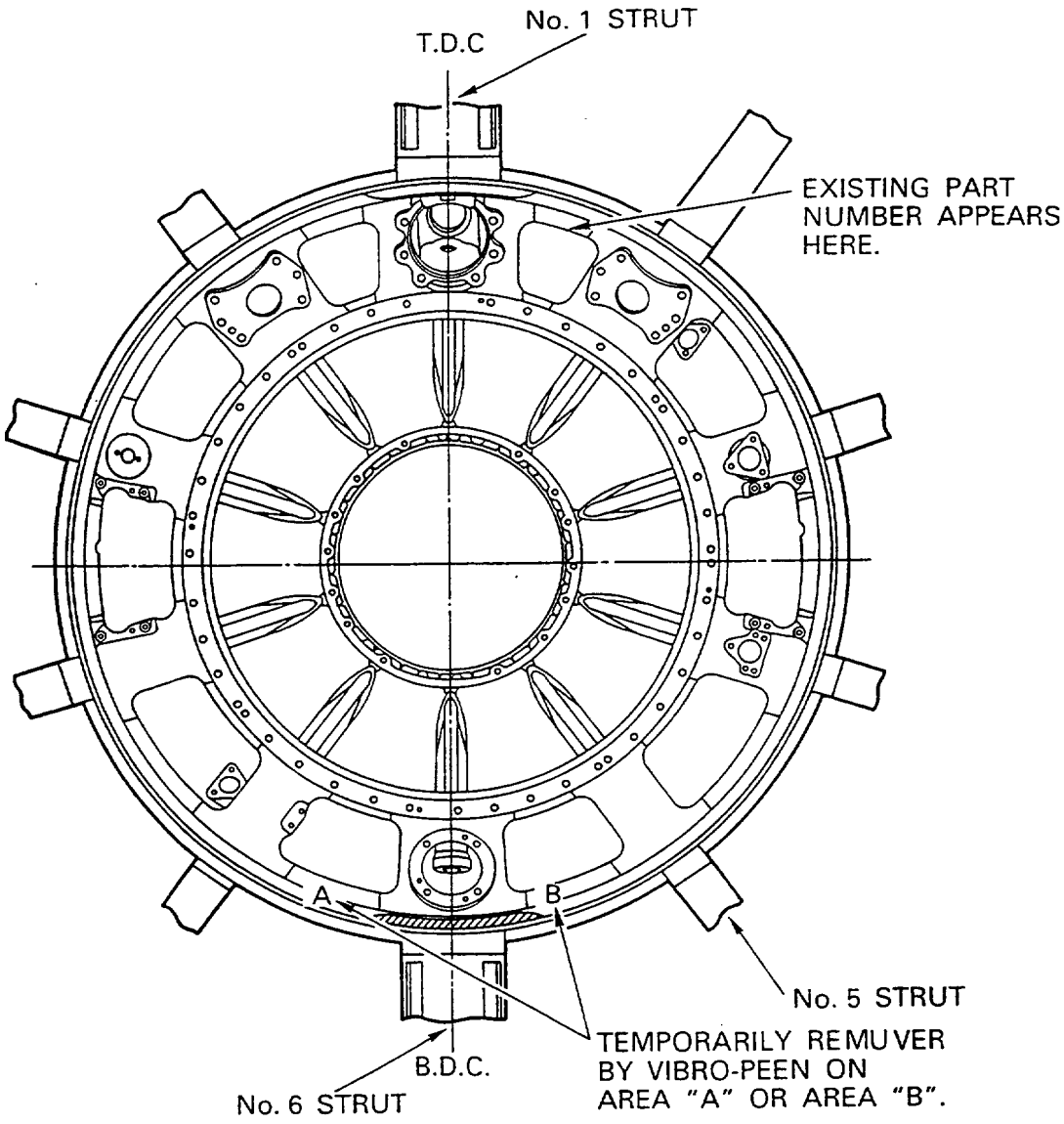
INSTRUCTIONS

REFER TO SHEET 3



SECTION AD – AD

Modification of the fan frame assembly
Fig.3(Sheet 5 of 5)



VIEW WHEN YOU LOOK FROM THE REAR OF THE ENGINE

ded0000463

Identification of new part number
Fig.4

3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits 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)	Instruction Disposition
Part 1 of IAE SB V2500-ENG-72-0009					
5A0365 (72-32-03)	1	--	.Frame, A/O Fan	5A6596 (03-100)	(A)(B) (S1)(1D)
Part 2 of IAE SB V2500-ENG-72-0009					
5A0362 (72-32-03)	1	--	.Frame, A/O Fan	5A0256 (03-100)	(A)(B) (S1)
5A0364 (72-32-03)	1	--	.Frame, A/O Fan	5A6592 (03-100)	(A)(B) (S1)
5A0363 (72-32-03)	1	--	.Frame, A/O Fan	5A0230 (03-100)	(A)(B) (S1)
5A0366 (72-32-03)	1	--	.Frame, A/O Fan	5A0267 (03-100)	(A)(B) (S1)

C. Instruction/Disposition Code Statements:

(A) New Part is a non-provisioning item.
(B) Old part will no longer be available for sale.
(S1) Old and New Parts are freely and fully interchangeable, both physically and functionally.
(1D) Old parts can be reworked and reidentified to the New Part Numbers.

D. Expendables Required to incorporate this Bulletin:

None

E. Consumables Required to incorporate this Bulletin:

(1) CoMat 01-031, Acetone or CoMat 01-060, Acetone or CoMat 01-076, Methylethylketone Alcohol, or CoMat 01-124, Isopropyl Alcohol.

(2) CoMat 08-006, Filler two pack (Part A 94 parts - White) (Part B 100 parts - Blue)

MODIFICATIONS

BASE LINE

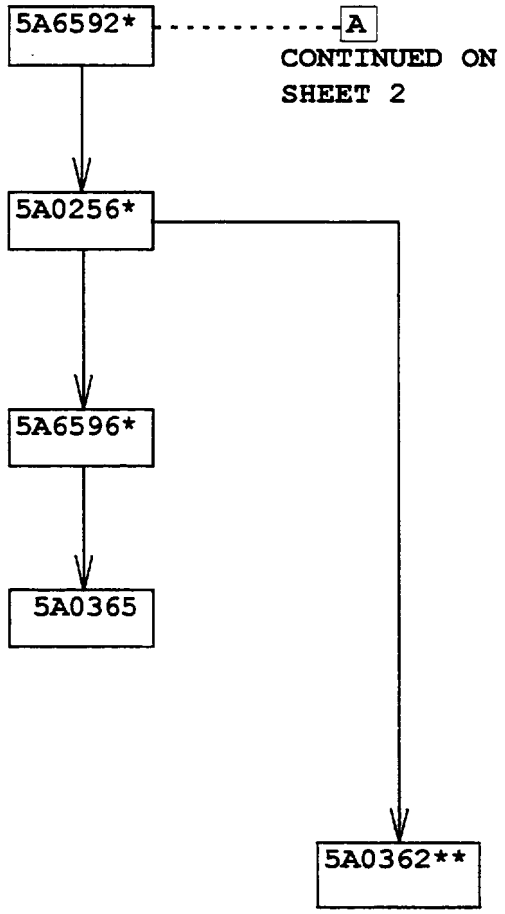
V2500-ENG-72-0002
PROVIDES AN INTERMEDIATE STRUCTURE THAT ELIMINATES FLIGHT TEST INSTRUMENTATION PROVISIONS

V2500-ENG-72-0077
PROVIDES A FAN FRAME ASSEMBLY WITH REVISED ATTACHMENT FEATURES

V2500ENG-72-0009 PART 1
ADDS FILLER COMPOUND TO THE FAN FRAME ASSEMBLY TO INCLUDE FILLER COMPOUND IN THE REAR INNER FLANGE AREA

V2500ENG-72-0009 PART 2
ADDS FILLER COMPOUND TO THE FAN FRAME ASSEMBLY TO INCLUDE FILLER COMPOUND IN THE REAR INNER FLANGE AREA

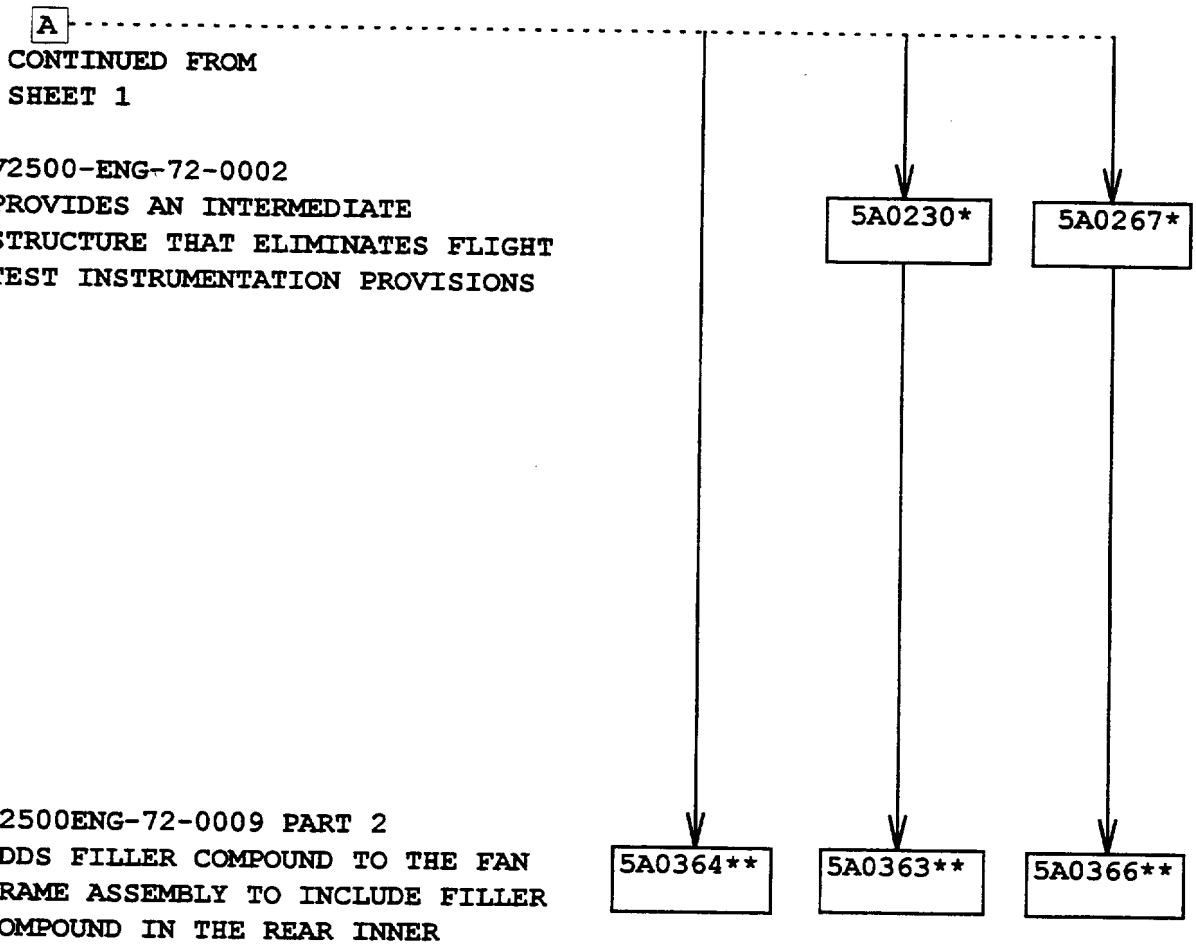
PART NUMBER



* Shows that part number is no longer in service
** Shows that fan frame has been reworked

ded0000464

Family Tree - Fan Frame Assembly Ref. Catalog Sequence No. 72-32-03, Fig. 03, Item 100
Fig.5(Sheet 1 of 2)



* Shows that part number is no longer in service
** Shows that fan frame has been reworked

ded0000465

Family Tree - Fan Frame Assembly Ref. Catalog Sequence No. 72-32-03, Fig. 03, Item 100
Fig.5(Sheet 2 of 2)