V2500 International Aero Engines

V2500 Propulsion System — Nacelle

SERVICE BULLETIN

Date: February 4, 1999

Subject: Transmittal of Revision 1 to Service Bulletin Number V2500-NAC-71-0210

Service Bulletin Revision History:

Event	Date
Basic Issue	Mar 17/98
Revision 1	Feb 04/99

Reasons for Issuance of Revision

(1) To add the V2500-A1 engines to the effectivity at Category 7.

(2) To revise the Compliance Category 3 statements for clarity.

(3) To add a reference to Aircraft Modification number 26506.

(4) To add re-identification of the Demountable Power Plant (DPP).

Effect on Past Compliance

(1) None.

List of Effective Pages:

Page No.	Rev. No.	Date
1 thru 18	1	Feb. 04/99

V2500 International Aero Engines

V2500 Propulsion System — Nacelle

SERVICE BULLETIN

NACELLE - POWER PLANT - LINKS, FORWARD ENGINE MOUNT - REPLACEMENT OF

MODEL APPLICATION

R V2500-A1
V2522-A5,V2524-A5,V2527-A5,
V2527E-A5,V2530-A5,V2533-A5

BULLETIN INDEX LOCATOR

71-00-00

Compliance Category Code
3 - V2500-A5
R 7 - V2500-A1

Internal Reference No.
JG 97VN013A

March 17, 1998
Revision 1 - February 4, 1999

V2500-NAC-71-0210

1. Planning Information

A. Effectivity

(1) Airplane: Airbus A319-131
Airbus A319-132
R Airbus A320-231
Airbus A320-232
Airbus A320-233
Airbus A321-131
Airbus A321-231

R (a) Engine: V2500-A1
V2522-A5
V2524-A5
V2527-A5
V2527E-A5
V2530-A5
V2533-A5

(b) Forward Engine Mount Assembly:

R 1 Forward engine mount assemblies with serial
R numbers prior to 6611001 that are or will be used
R on V2500-A5 engines and which do not have part
R number 745-2010-501.

R NOTE: The intent of this change has been incorporated
R prior to delivery on forward engine mount
R assemblies with serial numbers; 6571001, 6573001,
R 6575001, 6577001, 6579001, 6581001, 6583001,
R 6585001, 6593001, 6595001, 6597001, 6599001,
R 6603001, 6605001, 6607001, and 6609001.
R These forward engine mount assemblies were
R delivered as components of EBU serial numbers;
R 0295001, 0296001, 0297001, 0298001, 0299001,
R 0300001, 0301001, 0302001, 0303001, 0304001,
R 0306001, 0306001, 0307001, 0308001, 0309001, and
R 0310001.

B. Concurrency Requirements

(1) You must do Service Bulletin V2500-NAC-71-0135 prior to this Service Bulletin.

C. Reason

(1) Condition

A V2500 forward engine mount assembly link demonstrated insufficient life during testing under V2500-A5 load specifications.

(2) Background

Certification tests and analysis have proven the V2500 forward engine mount link (part numbers 740-2018-501 and 740-2018-502) does not meet the full aircraft life requirements for the V2500-A5 engine models (64,000 flight cycles).

(3) Objective

To ensure the links of all V2500 forward engine mounts which will be used on V2500-A5 engine models meet the thrust load specifications of the V2500-A5 engine models.

(4) Substantiation

Tests and analysis have proven that the solution given in this Service Bulletin is satisfactory.

(5) Impact of Bulletin on Workshop Procedures:

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

(6) Supplemental Information

None

D. Description

The forward engine mount assembly links are removed and replaced with the new standard of link. Links can be replaced on-wing with Airbus Industrie special tool 98D71203005000.

E. 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 engine model(s) listed.

F. Compliance

Category 3 -V2500-A5 Engine Applications

NOTE: The flight cycles shown below are conservative and based upon the worst, and unlikely, combination of aircraft and engine mount links. Operators that can show the engine mount links currently on the aircraft have not been replaced since entry of the aircraft into service can use the higher cycles shown in parenthesis.

For V2522-A5 applications -accomplish at the first opportunity within 5,950 (25,000) cycles.

For V2524-A5 applications -accomplish at the first opportunity within 5,950 (25,000) cycles.

For V2527-A5 applications -accomplish at the first opportunity within 8,400 (10,400) cycles.

For V2527E-A5 applications -accomplish at the first opportunity within 8,400 (10,400) cycles.

R For V2530-A5 applications -accomplish at the first opportunity
R within 10,400 cycles.

R For V2533-A5 applications -accomplish at the first opportunity
R within 2,592 (7,600) cycles.

R Category 7 -V2500-A1 Engine Applications

R Accomplish when the supply of superseded parts has been
R depleted.

G. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin on one engine mount:

VENUE		ESTIMATED MANHOURS
(1) In Service		
(a) To rework		1.5 M/Hrs
	Total	1.5 M/Hrs

VENUE		ESTIMATED MANHOURS
(2) In shop		
(a) To rework		0.5 M/Hrs
	Total	0.5 M/Hrs

H. Material Cost and Availability

R For A5 applications only (Compliance Category 3)- The parts to
R accomplish this Service Bulletin are available from the
R supplier and will be issued on receipt of a free of charge
R purchase order. The allocation will be one (1) V2571210-551 kit
R per customer V2500 engine, QEC kit, or spare engine mount.

R For A1 applications (Compliance Category 7) -The parts to
R accomplish this Service Bulletin are available from the
R supplier and will be issued on receipt of a charge purchase
R order.

R Direct Purchase order to:

R Rohr, Inc.
R 850 Lagoon Drive
R Chula Vista, CA 91910-2098
R U.S.A.
R Attn: Airline Account Manager -MZ 107A
R (Ref. Service Bulletin V2500-NAC-71-0210)

R NOTE: Please do not send purchase orders for service bulletin
R kits via Spec 2000 ordering system.

I. Tooling -Cost and Availability

TOOL NO.	QTY	DESCRIPTION	FUNCTION	AVAILABILITY
98D71203005000	1	Forward Engine Mount Link Change Tool	Support the engine during on-wing engine mount link change	(1)

(1) Refer to Airbus Industrie Service Bulletin A320-71-1020 for tool availability.

J. Weight and Balance

(1) Weight change ..... +2.8 lbs per nacelle

(2) Moment arm ..... No effect

(3) Datum ..... Engine Front Mount Centerline (Powerplant Station PPS 100.00)

K. Electrical Load Data

Not Affected

L. References

IAE V2500 Standard Practices/Processes Manual (SPP-V2500-1IA)	70-09-00
Airbus Industrie Service Bulletin	A320-71-1020
Aircraft Modification 26506	
IAE Service Bulletin V2500-NAC-71-0135	

M. Other Publications Affected

A320/V2500A1 Power Plant Illustrated Parts Catalog (PIP-V2500-1IA)	71-21-12
A320/A321/V2500A5 Power Plant Illustrated Parts Catalog (PIP-V2500-2IA)	71-21-12
A320/V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA)	71-21-12
A320/V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA)	71-21-12

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A320/V2500A1 Power Plant Build-Up Manual (PPB-V2500-1IA)	71-00-02
A320/A321/V2500A5 Power Plant Build-Up Manual (PPB-V2500-2IA)	71-00-02

2. Accomplishment Instructions

A. Pre-requisite Instructions

R (1) Do IAE service bulletin V2500-NAC-71-0135.

R (2) Inspect the forward engine mount part number. Refer to
R Figure 2.

R a. If the forward engine mount assembly part number is
R 745-2010-501, do not do this service bulletin.

R b. If the forward engine mount assembly part number is
R not 745-2010-501, you must do this service bulletin.

B. Replace the Forward Engine Mount Assembly Links

(1) For engine mounts that are installed on the aircraft, install the link change tool. Refer to Figure 1.

(a) Install the aft fitting on the pylon fitting with the washer and nut. Tighten the nut.

(b) Remove the screw (2) and the v-groove plate from the forward fitting assembly.

(c) Loosen the two screws (1) that hold the upper and lower plates together.

(d) Put the upper and lower plates on the engine flange between the 12 and 1 o'clock positions (R/H side of the engine when you look from the rear) and finger tighten the screws (1).

NOTE: Both links are changed with the tool installed on the R/H side of the engine.

(e) Put the v-groove plate in the v-groove on the engine flange and finger tighten the screws (2) and (3).

(f) Connect the aft end of the rod to the aft fitting with the pin.

(g) Connect the forward end of the rod to the forward fitting assembly with the pin.

(h) Make sure there is enough space between the rod and the pylon and engine components. Move the forward fitting assembly on the engine flange if necessary.

(i) Tighten the screws (1), (2), and (3) on the forward fitting assembly.

(j) Turn the rod until the forward engine mount links can move freely and the pins (01-250) move freely in the axial direction.

(2) For engine mounts that are installed on the engine, remove the nuts (01-020), bolts (01-050), washers (01-030 and 01-040), and retainers (01-060) from the engine bracket. Remove the pin (01-070)from the engine bracket. Refer to Figure 2.

(3) Remove the nuts (01-150), bolts (01-180), washers (01-160 and 01-170), and retainers (01-140) from the cross beam. Remove the pin (01-250) from the cross beam. Refer to Figure 2.

(4) Remove the 740-2018-501 (740-2018-502) link. Destroy the link. Refer to Figure 2.

(5) Put the 745-2018-501 (745-2018-502) link in the cross beam and the engine bracket. Refer to Figure 2.

(6) Attach the link to the cross beam with the pin (01-250), retainers (01-140), washers (01-160 and 01-170), bolts (01-180), and nuts (01-150). Torque the nuts (01-150)to 20-25 lbin (2,26-2,82 Nm). Refer to Figure 2.

(7) For engine mounts that are installed on the engine, attach the link to the engine bracket with the pin (01-070), retainers (01-060), washers (01-030 and 01-040), bolts (01-050), and nuts (01-020). Torque the nuts (01-020)to 20-25 lbin (2,26-2,82 Nm). Refer to Figure 2.

(8) For engine mounts that are installed on the aircraft, remove the link change tool.

(a) Turn the rod until the weight of the engine is on the forward engine mount, not the rod.

(b) Remove the pins and the rod from the forward and aft fitting assemblies.

(c) Remove the nut, washer, and aft fitting from the pylon.

(d) Loosen the screws (2) and (3) and remove the v-groove plate from the forward fitting assembly and the engine flange v-groove.

(e) Loosen the screws (1) and remove the upper and lower plates from the engine flange.

CAUTION: DO NOT USE METAL STAMP OR VIBROETCH METHOD TO MAKE A MARK ON THE ENGINE MOUNT ASSEMBLY.

(9) Change the identification of the forward engine mount assembly as follows. Use the electroetch method as instructed in the IAE V2500 Standard Practices/Processes Manual (SPP-V2500-1IA) chapter 70-09-00. Make the electroetch marks 0.002-0.003 inch (0.051-0.076 mm) deep. Do not use metal stamp or vibroetch methods to make a mark on the engine mount:

(a) Make "XXXX" marks over the old part number.

(b) Identify the forward engine mount assembly as 745-2010-501.

(c) Mark service bulletin number V2500-NAC-71-0210 on the mount assembly near the new part number.

R (10) Change the identification of the Demountable Power Plant
R (DPP) on the fan case as follows. Use a stencil or rubber
R stamp and ink (CoMat 06-073). Refer to the IAE V2500 Stan-
R dard Practices/Processes Manual, Chapter 70-09-00. Make a
R note of this in the applicable documentation.

R 745-6001-501 as the 740-6001-505
R 745-6001-503 as the 740-6001-507

R (11) Put a protective layer of clear polyurethane over the DPP
R marking on the fan case.

R WARNING: THINNER (COMAT 07-096), CATALYST (COMAT 07-097),
R AND CLEAR POLYURETHANE COATING (COMAT 07-098)
R ARE CLASSIFIED AS HAZARDOUS MATERIALS WHICH MAY
R CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED.
R THESE PRODUCTS SHOULD BE USED ONLY IN ACCORDANCE
R WITH THE MANUFACTURER'S SPECIFIC SAFETY AND
R HEALTH RECOMMENDATIONS. PRIOR TO USE OF THESE
R PRODUCTS, CAREFULLY READ THE APPLICABLE
R "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL
R LISTED SAFETY AND HEALTH PRECAUTIONS.

R (a) Mix the thinner (CoMat 07-096), catalyst (CoMat
R 07-097), and the clear ploy urethane coating (07-098).
R Refer to the manufacturer's instructions.

R (b) Apply a layer of clear polyurethane over the DPP
R marking on the fancase.

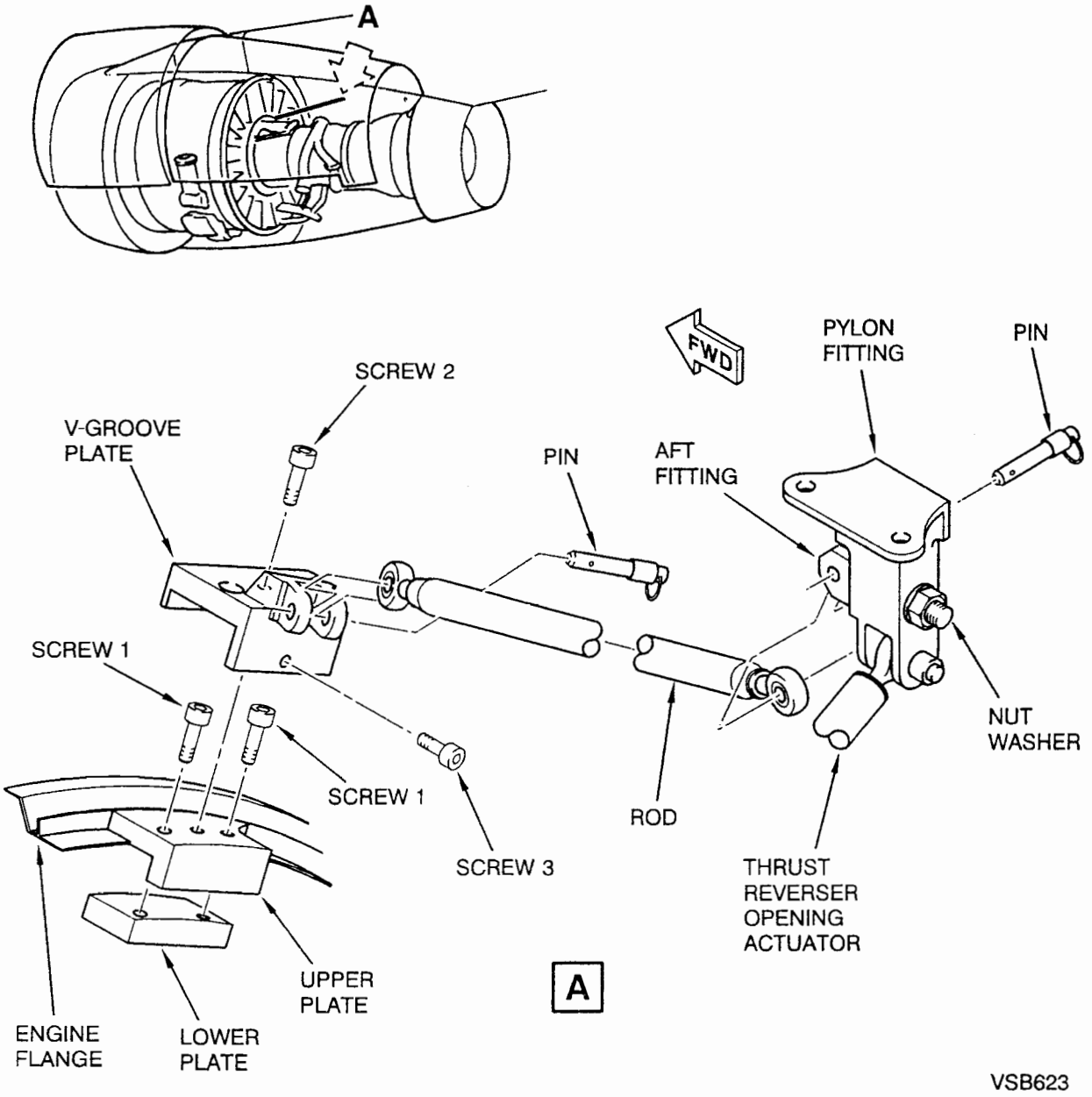
R (c) Cure the polyurethane. Refer to the manufacturer's
R instructions.

R (12) A record of accomplishment is required. Note in the aircraft log that Service Bulletin V2500-NAC-71-0210 has been incorporated.

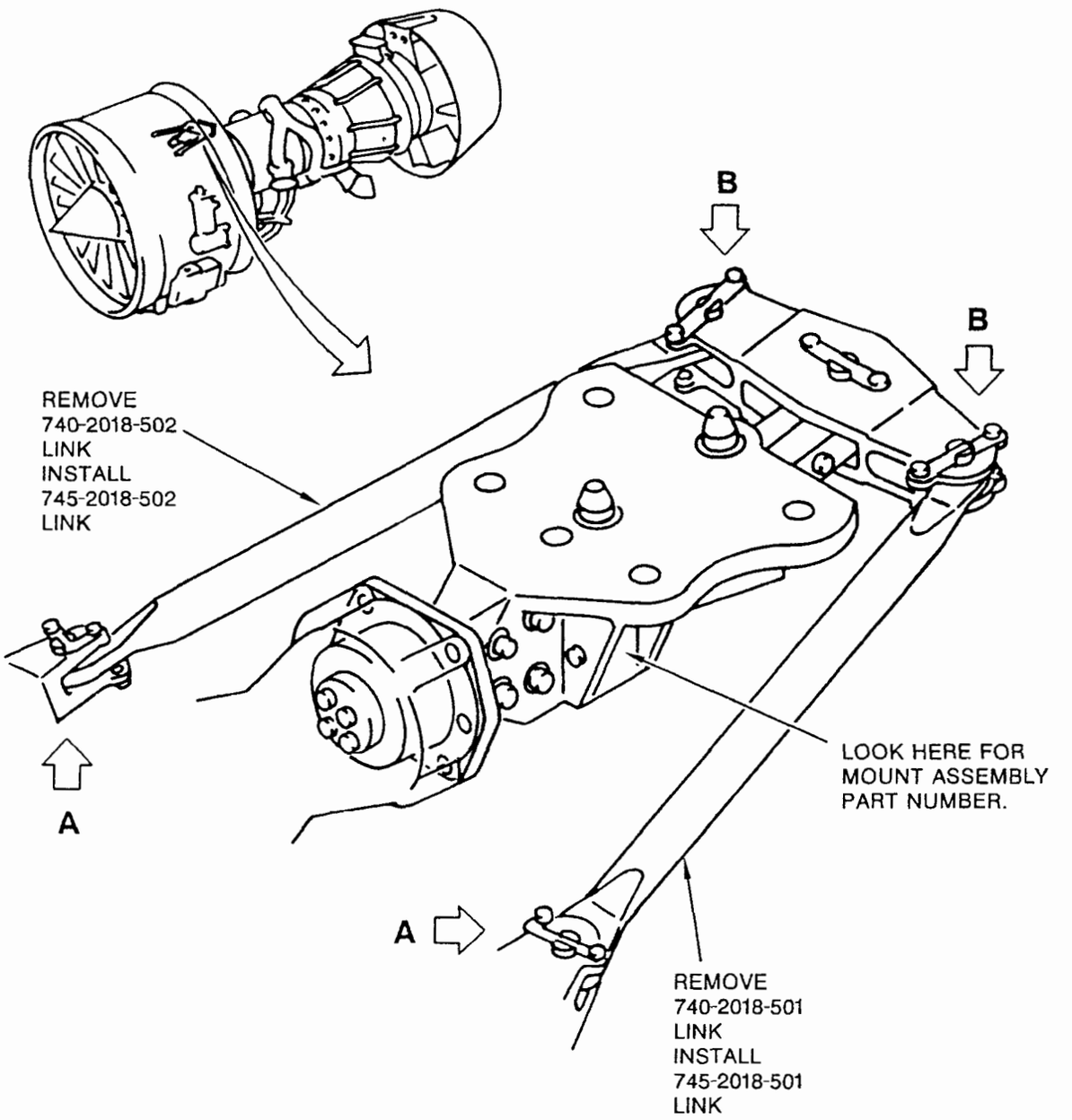
C. Quick Engine Change (QEC) Kits and Spare Forward Engine Mounts.

(1) For engine mounts which will or may be used on V2500-A5 engines, do the part number inspection, as instructed in Paragraph 2.A., and other relevant portions of this service bulletin.

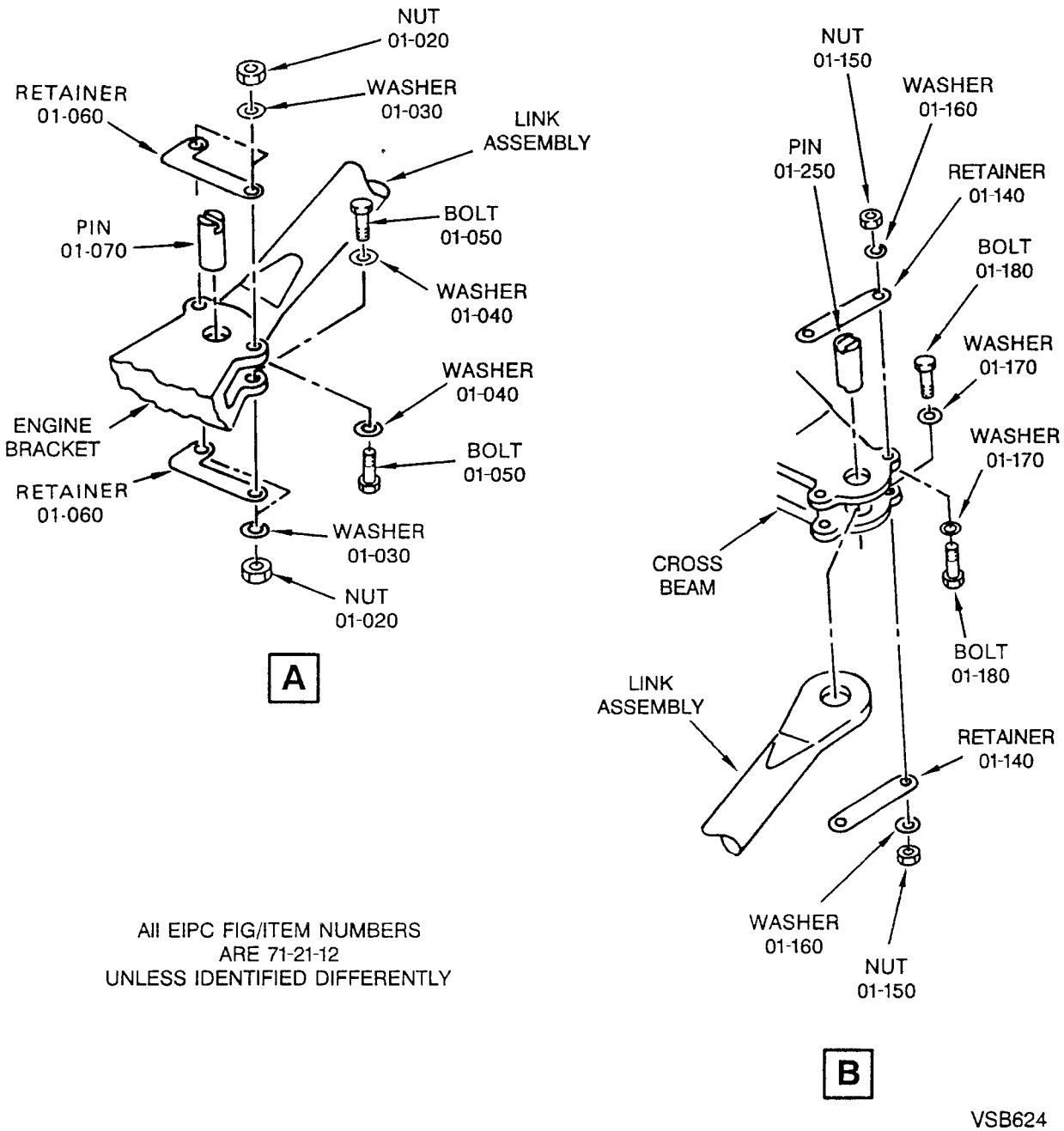
(2) Note in the QEC Kit log and/or other applicable records that Service Bulletin V2500-NAC-71-0210 has been done.



Engine Mount Links Change Tool Installation
Figure 1



Replacement of Engine Mount Links
Figure 2 (Sheet 1)



All EIPC FIG/ITEM NUMBERS
ARE 71-21-12
UNLESS IDENTIFIED DIFFERENTLY

Replacement of Engine Mount Links
Figure 2 (Sheet 2)

3. Material Information

Applicability: For each V2500 Nacelle to incorporate this Service Bulletin.

A. Kits associated with this Bulletin:

NEW PART NO. (ATA NO)	QTY	EST'D UNIT PRICE ($)	KEYWORD	OLD PART NO. (IPC NO.)	INSTR/ DISPOS
V2571210-551	1		Kit		(A)
Consisting of:					
745-2018-501	1		Link		
745-2018-502	1		Link		

B. Parts affected by this Bulletin:

NEW PART NO. (ATA NO)	QTY	EST'D UNIT PRICE ($)	KEYWORD	OLD PART NO. (IPC NO.)	INSTR/ DISPOS
745-2010-501 (71-21-12)	1		Mount Assy	740-2010-517 (01-010)	(C)(1D)(S2)
745-2018-501 (71-21-12)	1		Link	740-2018-501 (01-270)	(B)(C)(2D) (S1)(S2)
745-2018-502 (71-21-12)	1		Link	740-2018-502 (01-300)	(B)(C)(2D) (S1)(S2)

C. Instruction/Disposition Code Statements:

(A) Kit will be available March 1998.

(B) New part will be available March 1998.

(C) Old part will no longer be available.

(1D) Rework old part to the new configuration.

(2D) Destroy old part.

(S1) New parts coded S1 must replace old parts coded S1 as a complete set.

(S2) New part may be used in place of old part but not vice versa.

D. Materials Required to Incorporate This Bulletin:

CoMat 06-073	Metal marking ink
CoMat 07-096	Thinner
CoMat 07-097	Catalyst
CoMat 07-098	Clear polyurethane coating

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