International Aero Engines

SERVICE BULLETIN

ENGINE - INCORPORATION OF REDESIGNED ACC ACTUATOR REAR MOUNT BRACKET - CATEGORY CODE 4 - MOD.ENG-72-0074

1. Planning Information

A. Effectivity

(1) Aircraft: Airbus A320

(2) Engine: VC2500-A1 Engines, Serial No.V0014 through V0121

B. Reason

(1) Condition

Cracking could occur at the end of LVDT position indicating slit of the ACC actuator body.

(2) Background

Some operators have experienced above condition. Reinforcement for the actuator body have been provided. New ACC actuator rear mount bracket changes two points support to three points support, requiring a new stator rod installing bolt.

(3) Objective

To prevent possible cracking of the ACC actuator body.

(4) Substantiation

Substantiation test is not required.

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

Removal/Installation	Affected (See supplemental Information)
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

(a) The Post-Service Bulletin configuration requires revision of the manuals to add new Removal/Installation procedure for Post-Service Bulletin configuration to the existing procedures. Affected manuals are as follows:

Aircraft Maintenance Manual Chapter/Section 75-24-52
Removal/Installation

Engine Manual Chapter/Section 72-00-40 Removal and Installation

(b) Sevice Bulletin V2500-ENG-75-0008 must be done prior to or concurrently with this bulletin when 5W2164 ACC Actuator is installed on the engine. For the engines 5W2085 ACC Actuator installed, it is recommended to accomplish Service Bulletin V2500-ENG-75-0008 concurrently with this bulletin.

C. Description

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

(a) 5W2168 ACC Actuator Rear Mount Bracket supersedes old 5W2143 ACC Actuator Rear Mount Bracket.

(b) 5W2167 Bolt supersedes old 5W1093 and/or NAS6704DU20 Bolt.

(c) Quantity of 5W2061 Bush (75-24-51. 01-555) is reduced from two to one, (Pre S.B.V2500-ENG-75-0009 configuration).

(d) MS9359-10 Nut supersedes old AN310C4 Nut.

D. Approval

The part number changes 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.

E. Compliance

Category Code 4

Accomplish the first visit of an engine or module to a maintenance base capable of compliance with the accomplishment instructions regardless of the planned maintenance action or the reason for engine removal.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	TOTAL 2 hours 13 minutes
(a) To gain access	

(i) Open the fan cowl doors .. .. 17 minutes

(ii) Open 'C' duct panels .. 18 minutes

TOTAL 35 minutes

(b) To embody

(i) Remove defective bracket .. .. .. 18 minutes

(ii) Install re-designed bracket .. .. .. 40 minutes

TOTAL 58 minutes

(c) To return engine to flyable status

(i) Close 'C' duct panels .. .. .. 21 minutes

(ii) Close the fan cowls .. 19 minutes

TOTAL 40 minutes

(2) At overhaul Not applicable

Remarks: No additional time is required to maintain the new configuration.

G. Material - Price and Availability

See "Material Information" section for parts required to accomplish this Service Bulletin.

H. Tooling - Price and Availability

The following tool is required to accomplish Sub-Division 2 of this Bulletin:

Tool No.	Qty	Description	Function	Avail
IAE1J13504	1	Puller	Remove Bushes	(1)

I. Weight and Balance

(1) Weight change .. .. .. None

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

(3) Datum .. .. Engine front mount centerline
(Power Plant Station (P.P.S.)100)

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J. Electrical Load Data

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

K. References

(1) Internal Reference No.

89VJ085

(2) Other References

Aircraft Maintenance Manual

Engine Manual

Standard Practices/Processes Manual

Service Bulletin; V2500-ENG-75-0009

L. Other Publications Affected

(1) V2500 Engine Illustrated Parts Catalog; 72-40-00 and 75-24-51.

(2) Aircraft Maintenance Manual; 75-24-52 Removal/Installation.

(3) V2500 Engine Manual; 72-00-40 Removal and Installation.

2. Accomplishment Instructions

A. Prerequisite Instructions

(1) Open the Fan Cowls. (Refer to TASK 71-13-00-010-010), Aircraft Maintenance Manual).

(2) Open the Thrust Reverser Halves. (Refer to TASK 78-32-00-010-010, Aircraft Maintenance Manual).

B. Replacement Instructions, refer to figure 1 and2

(1) Disconnect the electrical connector of 2A1497 EEC Link Harness-core from the ACC actuator.

(2) Disconnect the three fuel tubes from the ACC actuator.

(a) Disconnect 740-5278-503 Fuel Drain Tube from the ACC actuator and drain the fuel into a container.

(b) Disconnect 6A2111 Fuel Pressure Tube from the ACC actuator and drain the fuel into a container.

(c) Remove and discard MS9967-012 Packing from the ACC actuator:

(d) Disconnect 6A2127 Fuel Return Tube from the ACC actuator and drain the fuel into a container.

(e> Remove and discard MS9967-011 Packing from the ACC actuator.

(3) Disconnect 5W2060 Actuator Rod from the ACC actuator.

(a) Remove MS24665-151 Cotter Pin, MS9364-10 Nut, 5W2091 Bolt and two 5W2061 Bushes.

(4) Disconnect 5W8232 or 5W2096 Stator Rod from the ACC actuator.

(a) Remove MS24665-151 Cotter Pin, AN310C4 Nut and NAS6704DU20 or 5W2093 Bolt.

(5) Remove 5W2085 or 5W2164 ACC actuator.

NOTE: Service Bulletin V2500-ENG-75-0008 must be done prior to or concurrently with this bulletin, when 5W2164 ACC actuator is installed on the engine. For the engines 5W2085 ACC actuator installed it is recommended to accomplish Service Bulletin V2500-ENG-75-0008 concurrently with this Bulletin.

(a) Remove two 4W0161 Bolts and two 4W0002 Nuts.

(b) Move the ACC actuator to release it from the 5W2060 Actuator Rod and the 5W8232 5W2096 Stator Rod.

(6) Remove 5W2061 Bush from the ACC actuator. (Pre S.B.V2500-ENG-75-0009 configuration only).

(a) Draw out the bush using the Puller, IAE1J13504.

(7) Make sure that there is no cracking on the ACC actuator body.

(8) Remove 5W2143 ACC Actuator Rear Mount Bracket.

(a) Remove two 4W0003 Nuts, two AS21114 Bolts and 5W2143 ACC Actuator Rear Mount Bracket.

(9) Install 5W2168 ACC Actuator Rear Mount Bracket.

(a) Attach 5W2168 ACC Actuator Rear Mount Bracket to the "J" flange.

(b) Install two AS21114 Bolts and two 4W0003 Nuts.

(c) Torque the two nuts to 180 to 220 1bfin (20,0 to 25,0 Nm).

(10) Install the 5W2085 or 5W2164 ACC Actuator.

NOTE: Service Bulletin V2500-ENG-75-0008 must be done prior to or concurrently with this bulletin, when 5W2164 ACC Actuator is installed on the engine. For the engines 5W2085 ACC Actuator installed, it is recommended to accomplish Service Bulletin V2500-ENG-75-0008 concurrently.

(a) Carefully attach the ACC actuator to the brackets and install two 4W0161 Bolts to the ACC actuator through the ACC actuator rear mount bracket.

(b) Torque the two bolts to 75 to 85 1bfin (8,47 to 9,6 Nm).

(c) Install two 4W0002 Nuts to the stud bolts of the ACC actuator.

(d) Torque the two Nuts to 75-to 85 1bfin (8,47 to 9,6 Nm).

(11) Put the stator rod between the clevis of the ACC actuator.

(12) Connect the stator rod.

(a) Align the holes of the stator rod and the clevis of ACC actuator. Install 5W2167 Bolt and MS9359-10 Nut.

(b) Torque MS9359-10 Nut to 32.5 to 42.5 1bfin (3,67 to 4,8 Nm).

(c) Safety the nut with a new MS24665-151 Cotter Pin.

(13) Connect the actuator rod.

(a) Align the holes of the rod end of the ACC actuator and the actuator rod. Install two 5W2061 Bushes, 5W2091 Bolt and AN310C4 Nut.

(b) Torque the nut to 22.5 to 30 1bfin (2,54 to 3,39 Nm).

(c) Safety the nut with a new MS24665-151 Cotter Pin.

(14) Connect 6A2127 Fuel Return Tube.

(a) Install a new MS9967-011 Packing to the fuel return fitting of the ACC actuator.

(b) Connect 6A2127 Fuel Return Tube to the ACC actuator.

(c) Torque the union nut to 330 to 360 1bfin (37,28 to 40,67 Nm).

(15) Connect 740-5278-503 Fuel Drain Tube.

(a) Connect 740-5278-503 Fuel Drain Tube to the ACC actuator.

(b) Torque the union nut to 195 to 212 1bfin (22 to 24 Nm).

(16) Connect 6A2111 Fuel Pressure Tube.

(a) Install a new MS9967-012 Packing to the fuel pressure fitting of the ACC actuator.

(b) Connect 6A2111 Fuel Pressure Tube to the ACC actuator.

(c) Torque the union nut to 425 to 475 1bfin (48,02 to 53,67 Nm).

(17) Connect the electrical connector of 2A1497 EEC Link Harness-core to the ACC actuator.

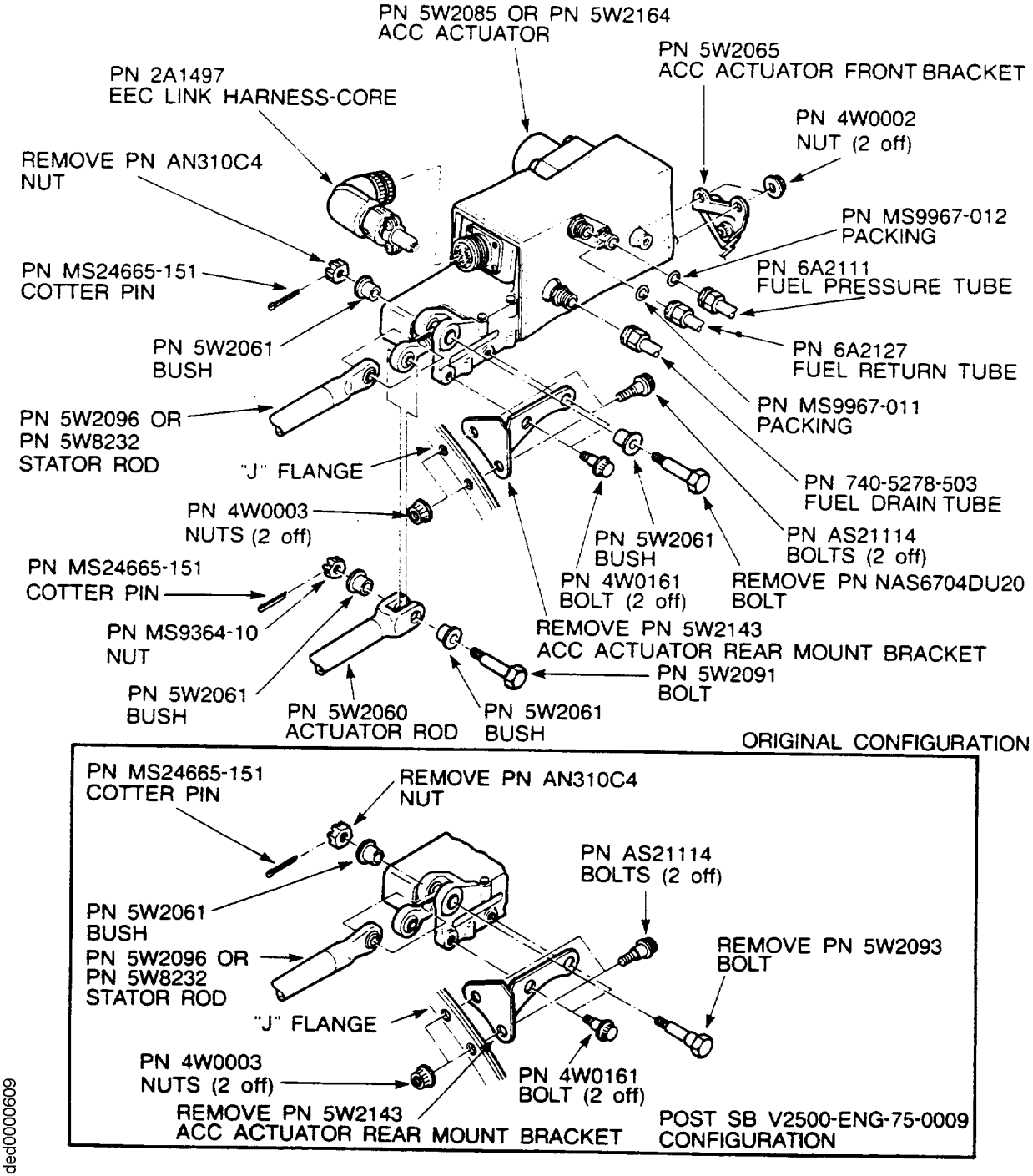
C. Postrequisite Instructions

(1) Close the Thrust Reverser Halves. (Refer to TASK 78-32-00-410-010, Aircraft Maintenance Manual).

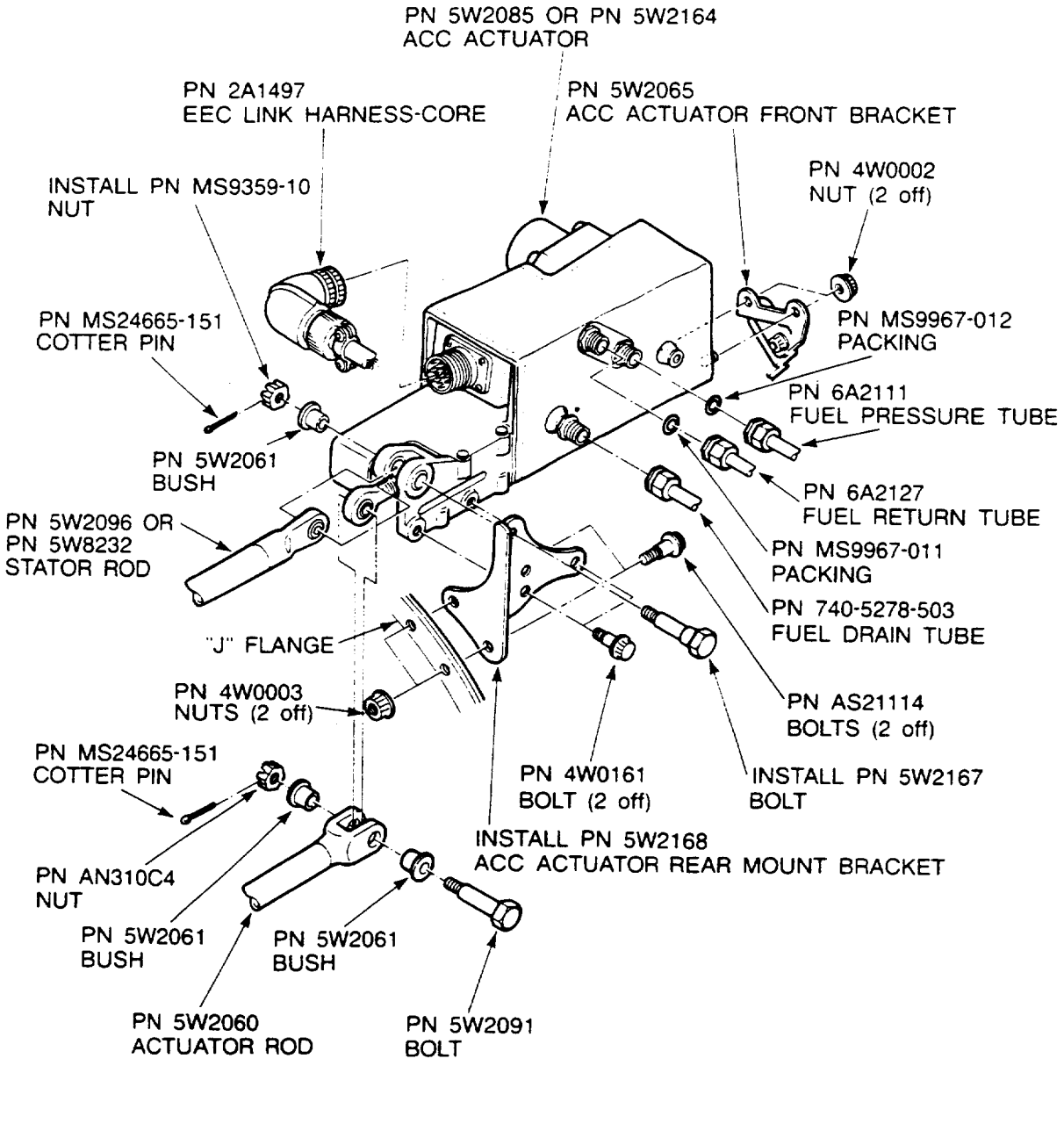
(2) Close the Fan Cowls. (Refer to TASK 71-13-00-410-010), Aircraft Maintenance Manual).

D. Recording Instructions

(1) A record of accomplishment is required.



Removal of old ACC actuator rear mount bracket (Before modification)
Fig.1



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Removal of old ACC actuator rear mount bracket (After modification)
Fig.2

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.)	Instructions Disposition
5W2167 (75-24-51)	1	30.10	Bolt, Reamer	5W0293 or NAS6704DU20 (01-505)	(S1)(A)
5W2168 (72-41-00)	1	151.00	Bracket	5W2143 (03-380)	(S1)(A)
5W2061 (75-24-51)	1	24.50	Bush	5W2061 (01-555)	(S1)(B)
MS9359-10 (75-24-51)	1	15.00	Nut	AN310C4 (01-500)	(S1)(A)

C. Instrucions/Disposition Code Statements:

(S1) New parts must be fitted as a set. Mixing of old and new parts is not permissible.
(A) New parts are currently available.
(B) Quantity of part No. decreased from 2 to 1. (Pre S.B.V2500-ENG-75-0009 configuration only).

D. Expendable parts required to incorporate this bulletin:

MS24665-151	2	0.18	Pin, Cotter
MS9967-011	1	2.64	Packing
MS9967-012	1	1.89	Packing

NOTE: The estimated 1991 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.