



POWER PLANT – ENGINE – EEC HARNESS – FAN AND EEC HARNESS – CORE – INTRODUCTION OF
ADDITIONAL SUPPORT FOR ELECTRICAL CONNECTORS – CATEGORY CODE 4 – MOD.ENG-71-0063

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engine Serial numbers prior to V0122

B. Reason

(1) Condition

Pins and sockets of electrical connectors at the variable stator vane actuator (VSVA) and the engine dedicated alternator (EDA) have a possible fretting caused by vibration.

(2) Background

Electrical connectors used at the VSA and the EDA have a small backlash of coupling ring latch mechanism under the fully engaged condition. Engine vibration and this backlash may vibrate the plug against the receptacle. Therefore fretting may occur between the pin and socket. Clipping of adjacent two connectors has been provided to prevent vibration of the plug.

(3) Objective

To prevent fretting of the pin and socket.

(4) Substantiation

Engineering assessment has concluded that the changes introduced by this Service Bulletin will reduce the possibility of fretting caused by vibration.

(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

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- (a) The Post-Service Bulletin configuration requires instructions for removal and installation procedures.

C. Description

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

- (a) Two EEC harness-fan connectors connected to the EDA are retained together with added two JM44LC39H109RG Clips, two 5W1086 Washers, 4W0104 Bolt and 4W0001 Nut.
- (b) Two harness-core connectors connected to the input side of VSVA are retained together with added 5W2166 Bracket, two JM44LC39H110RG Clips, two 4W0107 Bolts, four 4W2621 Washers and two 4W0001 Nuts.
- (c) Two EEC harness-core connectors connected to the side of VSVA are retained together with added two JM44LC39H106RG Clips, 4W0107 Bolt, two 5W1086 Washers and 4W0001 Nut.

D. Approval

The parts addition and modification 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 at the first visit of an engine 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 | |
| (a) To gain access | 16 minutes |
| (b) To embody | 16 minutes |
| (c) To return engine to flyable status | 21 minutes |
| TOTAL | 53 minutes |



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- (2) At overhaul Not applicable

G. Material - Price and Availability

- (1) Modification Kit not required.
- (2) See "Material Information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Special tools are not necessary

I. Weight and Balance

- (1) Weight change None
- (2) Moment arm No effect
- (3) Datum Engine front mount centerline
(Power Plant Station (PPS) 100)

J. Electrical Load Data

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

K. References

- (1) Internal Reference No.
89VJ029
- (2) Other References
Aircraft Maintenance Manual; 71-13-00 Maintenance Practices and 78-32-00 Maintenance Practices.

L. Other Publications Affected

- (1) V2500 Engine Illustrated Parts Catalog; 71-51-41 and 71-52-43.
- (2) V2500 Power Plant Illustrated Parts Catalog; 71-51-41 and 71-52-43.
- (3) V2500 Engine Manual; 72-00-40 Removal/Installation and 72-00-60 Removal/Installation.

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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. Assembly Instructions, refer to figure 1, 2, 3 and 4

NOTE: Make sure no looseness of connector before installing clips.

CAUTION: CONFIRM THE HARNESS IS FREE FROM INTERFERENCE WITH ADJOINING PARTS WHILE YOU INSTALL CLIPS. INTERFERENCE CAN CAUSE DAMAGE FOR HARNESS AND ADJOINING PARTS.

- (1) Retain the two fan harness connectors connected to the EDA.
 - (a) Install JM44LC39H109RG Clip to each connector backshell. Retain installed two clips together with 4W0104 Bolt, two 5W1086 Washers and 4W0001 Nut.
 - (b) Torque the nut to 36 to 46 lbfin (4 to 5 Nm).
- (2) Retain the two core harness connectors connected to the input side of the VSVA.
 - (a) Install JM44LC39H110RG Clip to each connector backshell. Retain each installed clip to the 5W2166 Bracket with 4W0107 Bolt, two 4W2621 Washers and 4W0001 Nut.
 - (b) Torque the nuts to 36 to 45 lbfin (4 to 5 Nm).
 - (c) Safety the bracket to the one of two connector backshells using CoMat 02-146 locking wire. Use locking wire hole of the bracket and one of locking wire hole on the backshell relief clamps.
- (3) Retain the two core harness connectors connected to the output side of the VSVA.
 - (a) Install JM44LC39H106RG Clip to each connector backshell. Retain installed two clips together with 4W0107 Bolt, two 5W1086 Washers and 4W0001 Nut.
 - (b) Torque the nut to 36 to 45 lbfin (4 to 5 Nm).

C. Postrequisite Instructions

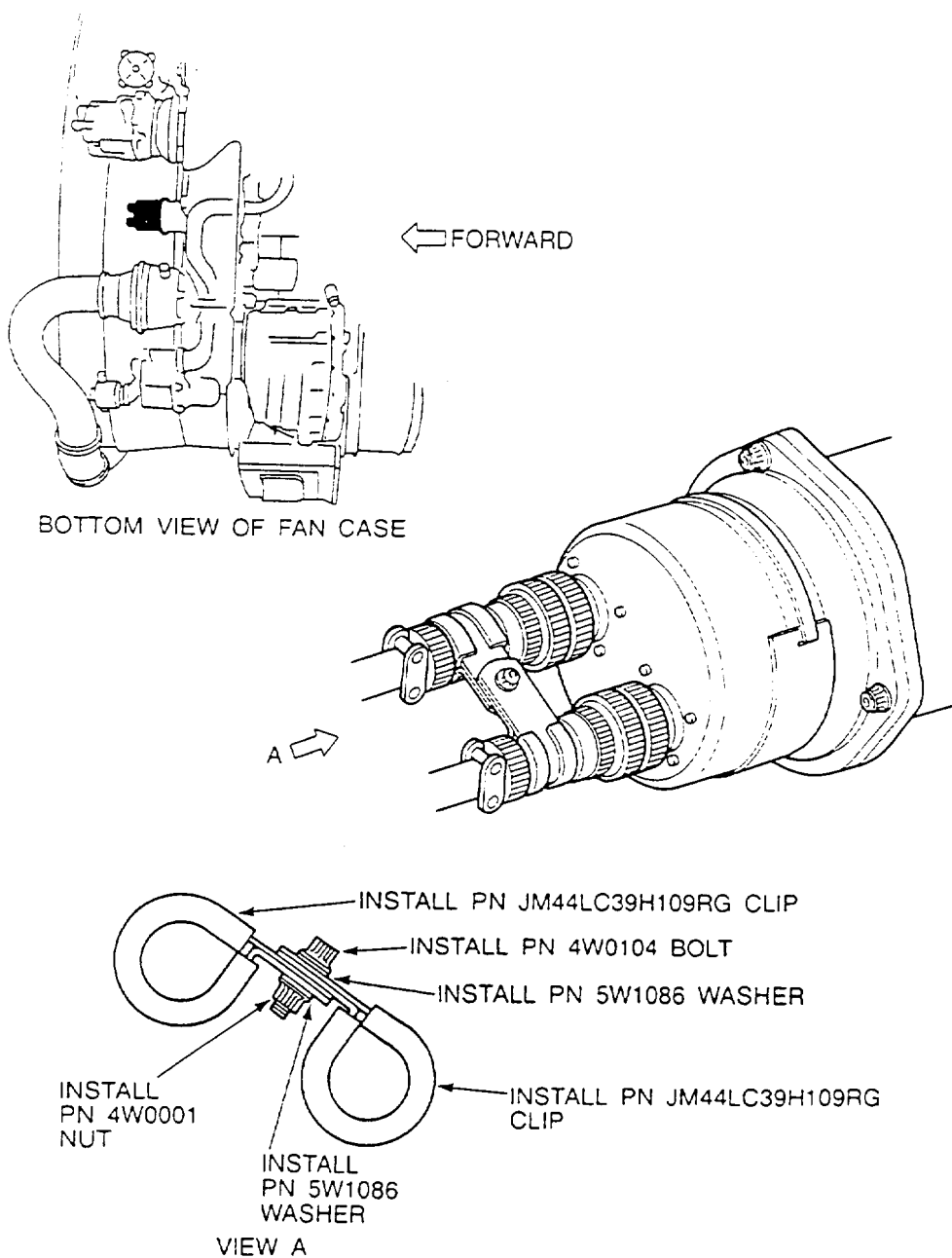
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- (1) Close the Thrust Reverser Halves (Refer to TASK 78-32-00-410-010, Aircraft Maintenance Manual).
- (2) Close the Fan Cowls (Refer to TASK 71-13-00-410-010, Aircraft Maintenance Manual).

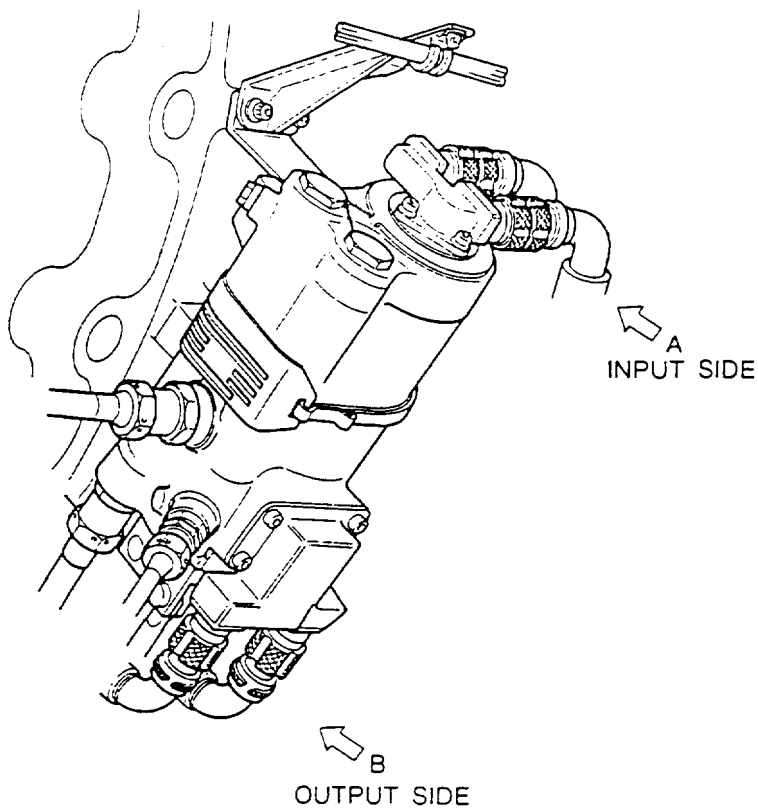
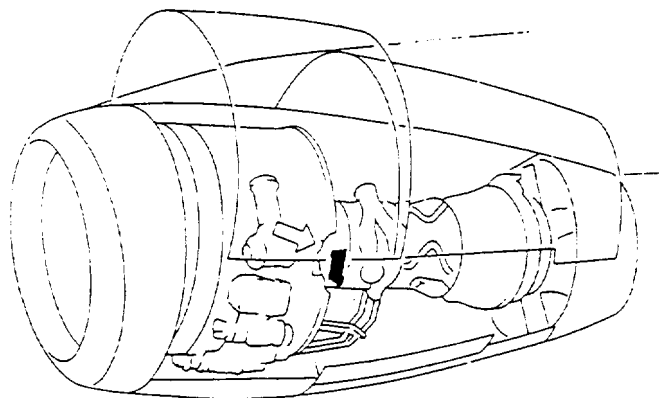
D. Recording Instructions

- (1) A record of accomplishment is required.



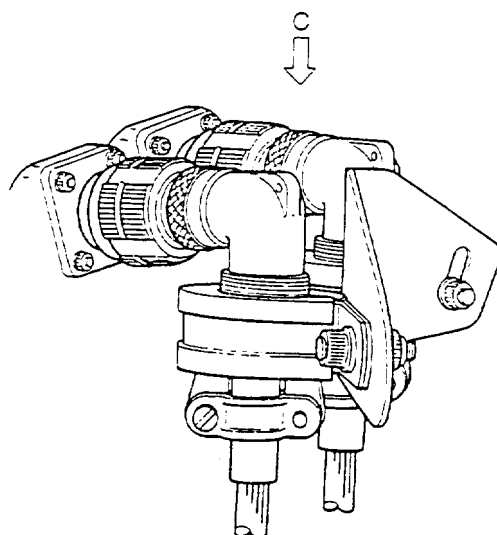
View showing support for electrical connectors
Fig.1

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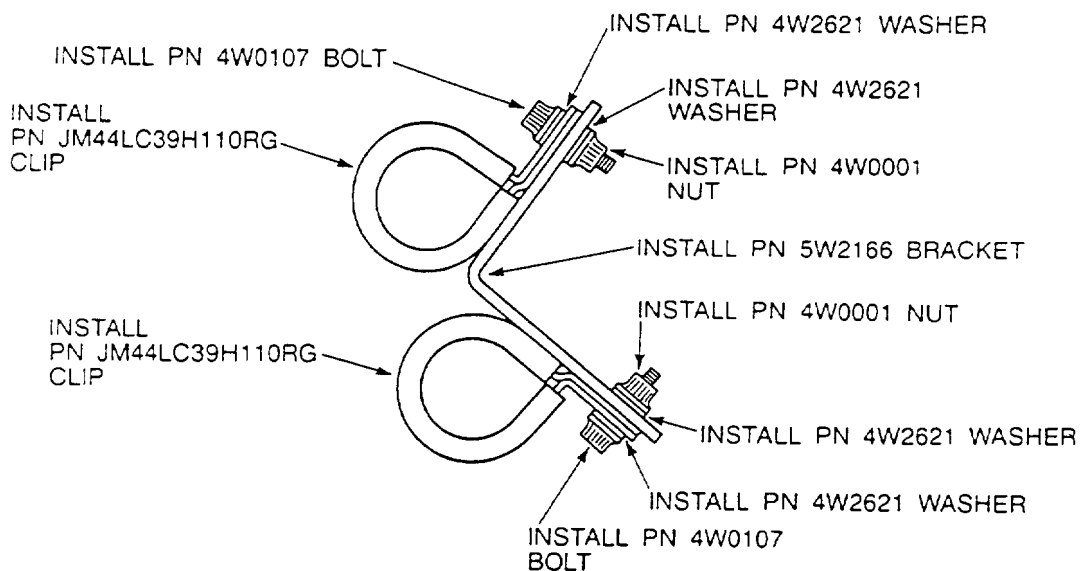


View of the variable stator vane actuator - Before alteration
Fig.2

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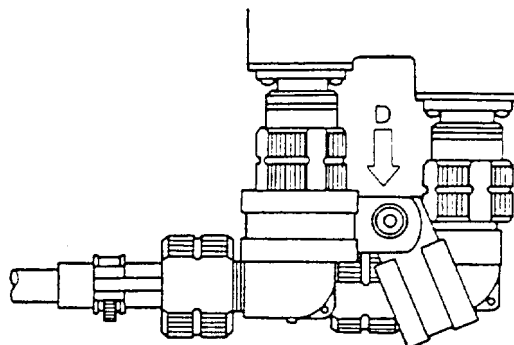
VIEW A



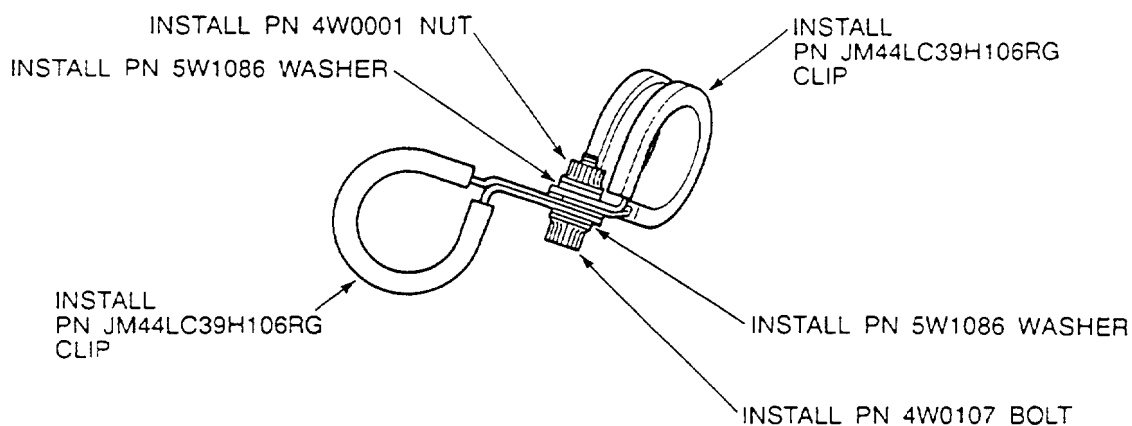
VIEW C

View showing support for electrical connectors
Fig.3

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VIEW B



VIEW D

View showing support for electrical connectors
Fig.4

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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 |
|----------------------------------|-----|-----------------------------|---------|------------------------------|-----------------------------|
| 4W0104 (71-51-41) | 1 | 3.30 | Bolt | - (02-405) | (S1)(A) |
| 5W1086 (71-51-41) | 2 | .29 | Washer | - (02-406) | (S1)(A) |
| JM44LC39H 109RG (71-51-41) | 1 | 3.36 | Clip | - (02-407) | (S1)(A) |
| JM44LC39H 109RG (71-51-41) | 1 | 3.36 | Clip | - (02-408) | (S1)(A) |
| 4W0001 (71-51-41) | 1 | 5.37 | Nut | - (02-412) | (S1)(A) |
| 4W0107 (71-52-43) | 1 | 3.59 | Bolt | - (01-486) | (S1)(A) |
| 5W1086 (71-52-43) | 2 | .29 | Washer | - (01-487) | (S1)(A) |
| JM44LC39H 106RG (71-52-43) | 1 | 3.20 | Clip | - (01-488) | (S1)(A) |
| JM44LC39H 106RG (71-52-43) | 1 | 3.20 | Clip | - (01-489) | (S1)(A) |
| 4W0001 (71-52-43) | 1 | 5.37 | Nut | - (01-493) | (A1)(A) |
| 4W0107 (71-52-43) | 1 | 3.59 | Bolt | - (01-502) | (S1)(A) |
| 4W2621 (71-52-43) | 2 | 2.51 | Washer | - (01-503) | (S1)(A) |
| JM44LC39H 110RG (71-52-43) | 1 | 3.41 | Clip | - (01-505) | (S1)(A) |
| 4W0001 (71-52-43) | 1 | 5.37 | Nut | - (01-509) | (S1)(A) |
| 4W0107 (71-52-43) | 1 | 3.59 | Bolt | - (01-510) | (S1)(A) |
| 4W2621 | 2 | 2.51 | Washer | - | (S1)(A) |

Printed in Great Britain

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| | | | | | |
|------------|---|------|---------|----------|---------|
| (71-52-43) | | | | (01-511) | |
| JM44LC39H | 1 | 3.41 | Clip | - | (S1)(A) |
| 110RG | | | | (01-513) | |
| (71-52-43) | | | | | |
| 4W0001 | 1 | 5.37 | Nut | - | (S1)(A) |
| (71-52-43) | | | | (01-517) | |
| 5W2166 | 1 | 8.53 | Bracket | - | (S1)(A) |
| (71-52-43) | | | | (05-940) | |

C. Instruction/Disposition Code Statements:

- (S1) New parts must be fitted as a set per Engine.
(A) Newly added parts are currently available.

D. Consumables required to incorporate this bulletin

CoMat 02-146 Locking wire

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.

