# OIL - REPLACE THE CLIPPING BRACKETS ON THE OIL TANK AT CPO787 AND CPO788 - CATEGORY CODE 3 - MOD.ENG-79-0004

#### 1. Planning Information

#### A. Effectivity

(1) Aircraft: Airbus A320

(2) Engine: V2500-A1 Engine, Serial No.'s V0014 through V0039

#### B. Reason

#### (1) Condition

Chaffing of the EEC Fan Harness may occur because of the excessive vibration of the EEC Fan Harness, which is held by the Clipping Brackets at CPO787 and CPO788 where the EEC Fan Harness is routed close to the Oil Quantity Transmitter on the Oil Tank.

The cause for the problem is the insufficiency of rigidity of the Clipping Brackets, which permit the excessive movement of the Harness due to resonances.

#### (2) Background

This condition has been noted during the shake test on a development engine. The resonances were observed at 33, 43 and 75 Hz where the motion of the two Clipping Brackets was too excessive; the Harness chaffing from the Transmitter resulted.

It has been recommended, as a result of the shake test., that the gusset reinforcement of the Clipping Brackets is necessary to prevent the resonances and the Harness chaffing from the Transmitter.

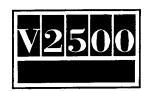
## (3) Objective

To replace the Clipping Brackets with new gusset-reinforced Clipping Brackets to maintain engine reliablility.

#### (4) Substantiation

Substantiation not required.

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



## SERVICE BULLETIN

Removal/Installation	Not	affected
Disassembly/Assembly	Not	affected
Cleaning	Not	affected
Inspection/Check	Not	affected
Repair	Not	affected
Testing	Not	affected

#### C. <u>Description</u>

- (1) The changes introduced by this Service Bulletin are as follows: (See Figures 1 and 2.).
  - (a) Two gussets are welded to each new Clipping Bracket, of which stock thickness is also changed from 0.047in. (1,2 mm.) to 0.063in. (1,6 mm.) to increase the rigidity of each Clipping Bracket at CP0787 and CP0788.
  - (b) At CPO787, the clip Bolt is changed to use a new longer Bolt to accommodate with the new thicker Bracket.
- (2) The existing Clipping Brackets at CPO787 and CPO788 must be replaced with the new Brackets.
- (3) New Clipping Brackets will be available for replacement purposes.

#### D. Approval

The Part number changes and/or part modifications 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 3

Accomplish prior to revenue service.

#### F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletins

Venue (1) In service	Estimated Manhours
(a) To gain access	
(b) To embody	
(c) To return engine to flyable status	



## SERVICE BULLETIN

TOTAL 28 minutes

(2) At Overhaul: Not applicable

#### G. Material - Price and Availability

- (1) Modification Kit not required. Parts supplied as single line items.
- (2) See 'Material Information' section for prices and availability of future spares.

#### H. <u>Tooling - Price and Availability</u>

Special tools are not required to accomplish this Service Bulletin.

#### I. Weight and Balance

- (1) Weight change .. .. None
- (2) Moment arm .. .. No effect
- (3) Datum .... .. Engine front mount centerline (Powerplant Station P.P.S.100)

#### J. Electrical Load Data

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

#### K. Reference

(1) Internal Reference No.

EC88VJ698

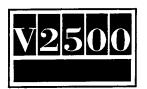
(2) Other References

V2500 Engine Illustrated Parts Catalog.

V2500 Aircraft Maintenance Manual.

#### L. Other Publications Affected

- (1) V2500 Illustrated Parts Catalog, Figure Numbers 71-51-41, 79-11-41 and 79-22-49.
- (2) V2500 Engine Manual, 72-00-60, Accessory Drives (External gearbox, Tubes and Harness Removal-02/Installation-03).



(3) V2500 Aircraft Maintenance Manual, 79-11-51, Oil Tank Pressurization Valve - Removal/Installation and 79-22-43, Oil Filter Housing Assembly - Removal/Installation.



#### 2. Accomplishment Instructions

- A. Prerequisite Instructions
  - (1) Open the Left Fan Cowl Door (Refer to Aircraft Maintenance Manual, MAINTENANCE PRACTICES, TASK 71-13-00-010-010) (Ref. 1.K.(2)).

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

- B. Rework Instructions (For Replacement Purposes)
  - (1) At CPO787, replace PN 5W8318, Clipping Bracket, on the Oil Tank Breather Tube, with new PN 5W0092, Clipping Bracket as follows: (See Figures 1 and 2).
    - (a) Remove PN 4W0103, Bolt, and PN 5W1086, Washer, which attach PN JM44LC3SH113, Clip to PN 5W8318, Clipping Bracket.
    - (b) Remove two PN 4W0165, Bolts and PN MS9321-10, Washers which attach PN 5W8318, Clipping Bracket, to PN 4B7200, Oil Tank Breather Tube flange.
    - (c) Remove 5W8318, Clipping Bracket, and remove PN 4W003, Clipnut.
    - (d) Atttach new PN 5W0092, Clipping Bracket, to PN 4B7200, Oil Tank Breather Tube flange with two PN 4W0165, Bolts and PN MS9321-10, Washers. Torque the Bolts to 85 to 105 lbfin (10 to 12 Nm).
    - (e) Attach PN 4W0043, Clipnut to PN 5W0092, Clipping Bracket.
    - (f) Attach PN JM44LC3SH113, Clip to PN5W0092, Clipping Bracket, with new PN 4W0104, Bolt and PN 5W1086, Washer. Torque the Bolt to 36 to 45 lbfin (4,00 to 5,00 Nm).
  - (2) At CP0788, replace PN 5W1992, Clipping Bracket, on the Oil Inlet Manifold, with new PN 5W0090, Clipping Bracket as follows: (See Figures 1 and 3).
    - (a) Remove PN 4W0104 Bolt, and PN 5W1086, Washer, which attach PN JM44LC3SH112, Clip to PN 5W1992, Clipping Bracket.
    - (b) Remove two PN 4W0165, Bolts and PN MS9321010, Washers which attach PN 5W1992, Clipping Bracket, to PN 4B7128, Oil Inlet Manifold flange.
    - (c) Remove PN 5W1992, Clipping Bracket and remove PN 4W0043, Clipnut.
    - (d) Attach new PN 5W0090, Clipping Bracket, to PN 4B7128, Oil Inlet Manifold flange with two PN 4W0165, Bolts and PN MS9321-10, Washers. Torque the Bolts to 85 to 105 lbfin (10 to 12 Nm).



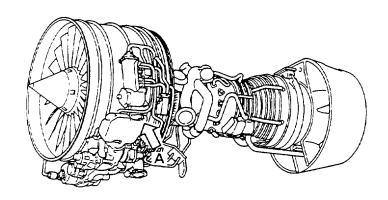
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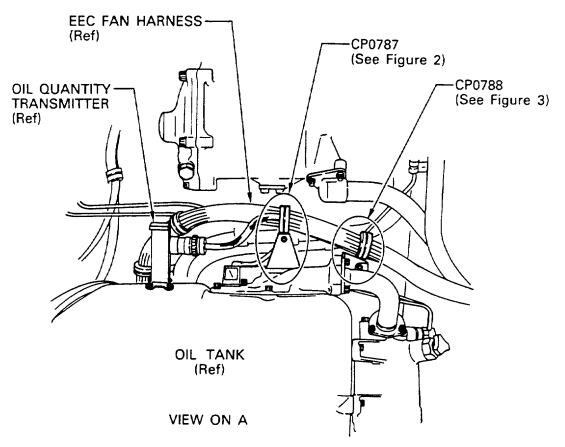
- (e) Attach PN 4W0043, Clipnut to PN 5W0090, Clipping Bracket.
- (f) Attach PN JM44LC3SH112, Clip to PN 5W0090, Clipping Bracket, with PN 4W0104, Bolt and PN 5W1086, Washer. Torque the Bolt to 36 to 45 lbfin (4,00 to 5,00 Nm).
- C. Post-Requisite Instructions
  - (1) Close the Left Fan Cowl Door (Refer to Aircraft Maintenance Manual, MAINTENANCE PRACTICES, TASK 71-13-00-410-010) (Ref.1.K.(2)).

NOTE: For unistalled engines (without the Fan Cowls), this step is not applicable.

- D. Recording Instructions
  - (1) A record of accomplishment is necessary.



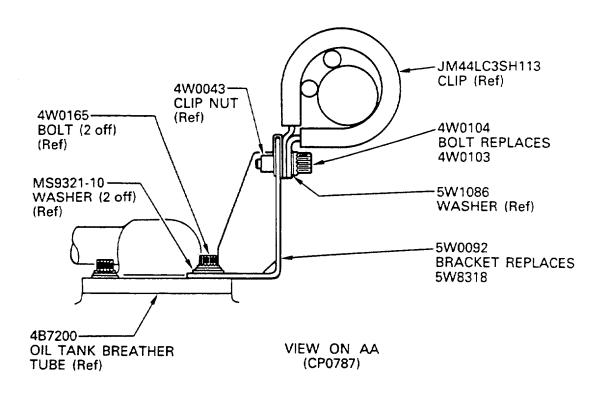


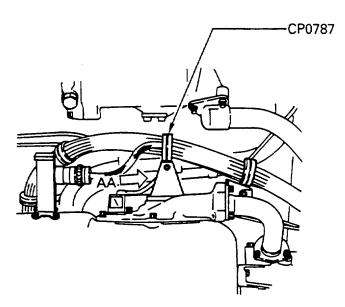


Location of the clipping brackets at CPO787 and CPO788 Fig.1  $\,$ 

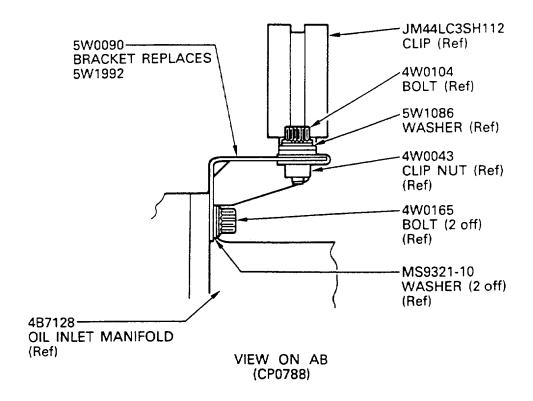
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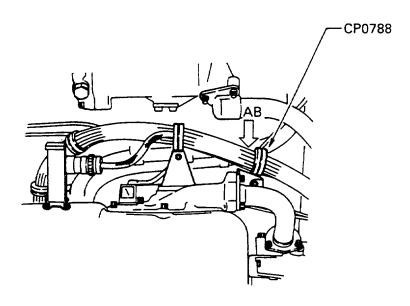
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Replacement of the clipping brackets at CPO787 Fig.2

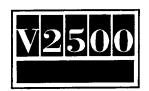




Replacement of the clipping bracket at CPO788 Fig.3

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## SERVICE BULLETIN

### 3. Material Information

New Est'd Old

Part No. Unit Part No. Instructions (ATA No.) Qty Price (\$) Keyword (IPC No.) Disposition

Applicability: For each V2500 Engine to incorporate this Bulletin.

#### A. <u>Kits associated with this Bulletin:</u>

None

#### B. Parts affected by this Bulletin:

4W0401	1	2.87	Bolt, CP0787	4W0103	(S1)(S2)
(71-51-41)				(01-854)	
5W0092	1	34.00	Bracket, Clipping	5W8318	(S1)(1D)(A)
(79-11-41)				(01-247)	(B)
5w0090	1	33.00	Bracket, Clipping	5W1992	(S1)(1D)(A)
(79-22-49)				(09-470)	(B)

#### C. <u>Instruction/Disposition Code Statements:</u>

- (S1) New Parts Coded (S1) must replace Old Parts Coded (S1) as a COMPLETE SET per Engine.
- (S2) Old part can be used up on other applications.
- (1D) Old part destroyed during rework.
- (A) New part is currently available.
- (B) Old part no longer available for sale.

NOTE: The estimated 1989 Unit Prices shown are provided for planning purposes only and do not constitute a firm quotation. Contact IAE's Spare Parts Sales Department for information concerning firm prices.