

ENGINE - FUEL AND CONTROL - REPLACE THE TUBE AT CLIPPING POINT 0306 - 4 -
MOD.ENG-73-0022

1. Planning Information

A. Effectivity

(1) Aircraft: Airbus A320

(2) Engine: V2500-A1 Engine prior to Serial No.V0122

(1) Condition

Fretting could occur on the fuel pump to fuel cooled oil cooler (F.C.O.C.) fuel tube in the area of clipping point 0306.

(2) Background

An instance of fretting between 'P' clip at clipping point 0306 and the fuel tube has been reported.

The fretting results from relative movement between the clip and tube, the metal clip eventually wearing through the rubber sleeve to fret directly on the tube. The movement is permitted due to too loose a fit of the clip on the tube.

(3) Objective

Incorporation of this Service Bulletin is designed to eliminate fretting.

(4) Substantiation

Vibration testing carried out has shown that introducing a 'saw tooth' clamp reduces the movement of the tube at the clipping position. The reduction in movement will significantly improve the integrity of the clipping at clipping point 0306.

(5) Effect of Bulletin on Workshop Procedures:

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

(6) Supplemental Information

None

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**C. Description**

The changes introduced by this Service Bulletin are as follows:

- (1) A tube clamp with a thicker rubber sleeve replaces the existing clip at clipping point 0306. The new clamp has a tighter fit with the tube compared to the existing clip.
- (2) A new mounting bracket is introduced at clipping point 0306 to provide increased clearance for the clamp. Existing brackets can be reworked.
- (3) the washer at clipping point 0306 is deleted to accommodate the new clamp and modified bracket.

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 4

Accomplish at 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
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(1) In service	TOTAL 48 minutes
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(a) To gain access

(i) Install the warning notices	3 minutes
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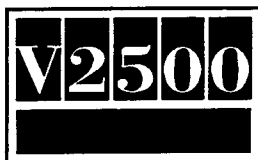
(ii) Open fan cowl door ..	17 minutes
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TOTAL	20 minutes
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(b) To embody

(i) Remove defective clip	3 minutes
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(ii) Fit manifold clip .. 3 minutes

TOTAL 6 minutes

(c) To return engine to flyable status

(i) Close Fan cowl door 19 minutes

(ii) Remove the warning
notice 3 minutes

22 minutes

G. Material - Price and Availability

(1) Modification kit is not required.

(2) See "Material Information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Special tools are not required.

I. Weight and Balance

(1) Weight change None

(2) Moment arm No effect

(3) Datum Engine front mount centreline
(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.

EC90VR013

(2) Other References

V2500 Standard Practices Manual.

A320 Aircraft Maintenance Manual.

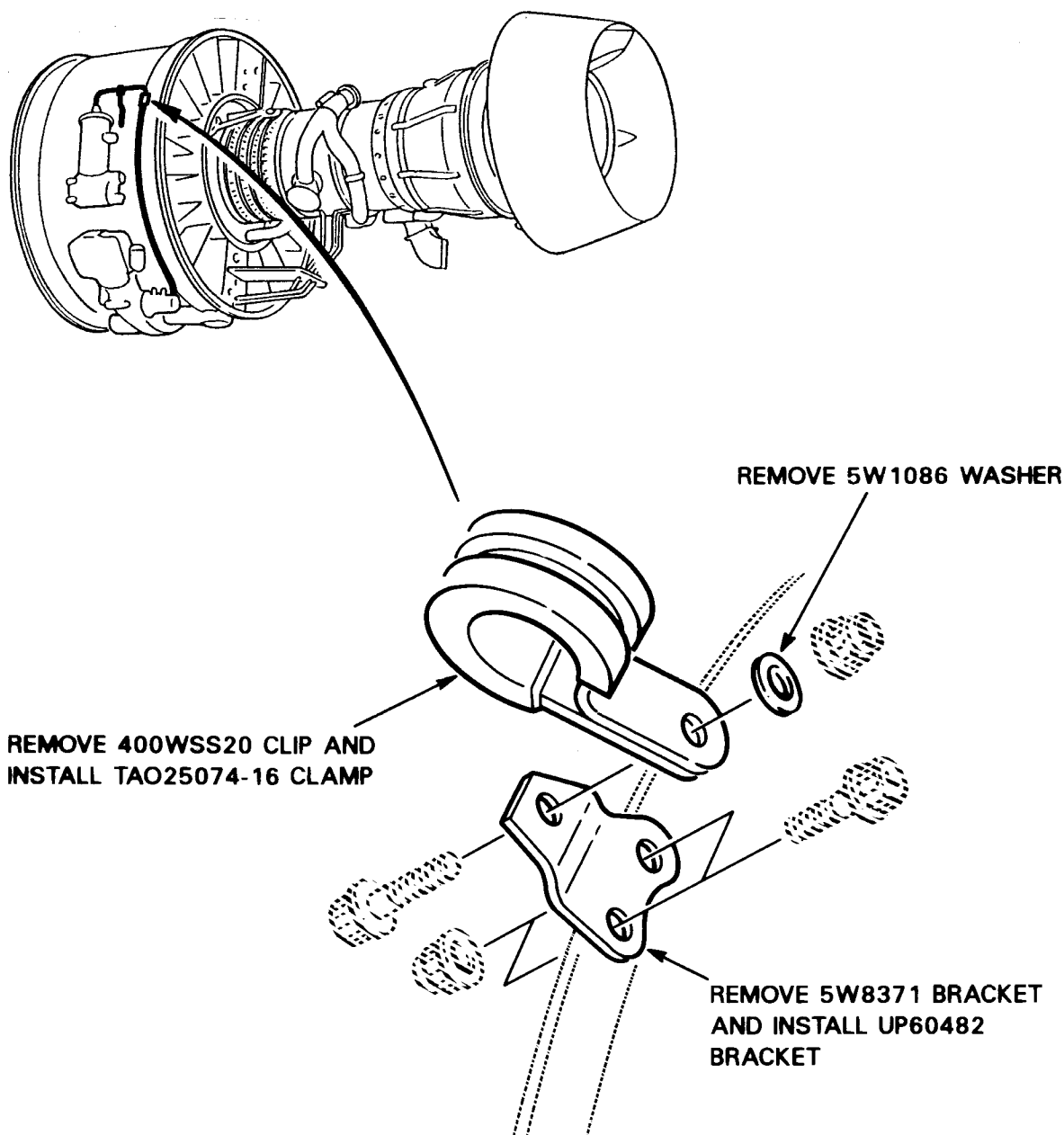
Service Bulletin V2500-ENG-70-0022.

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L. Other Publications Affected

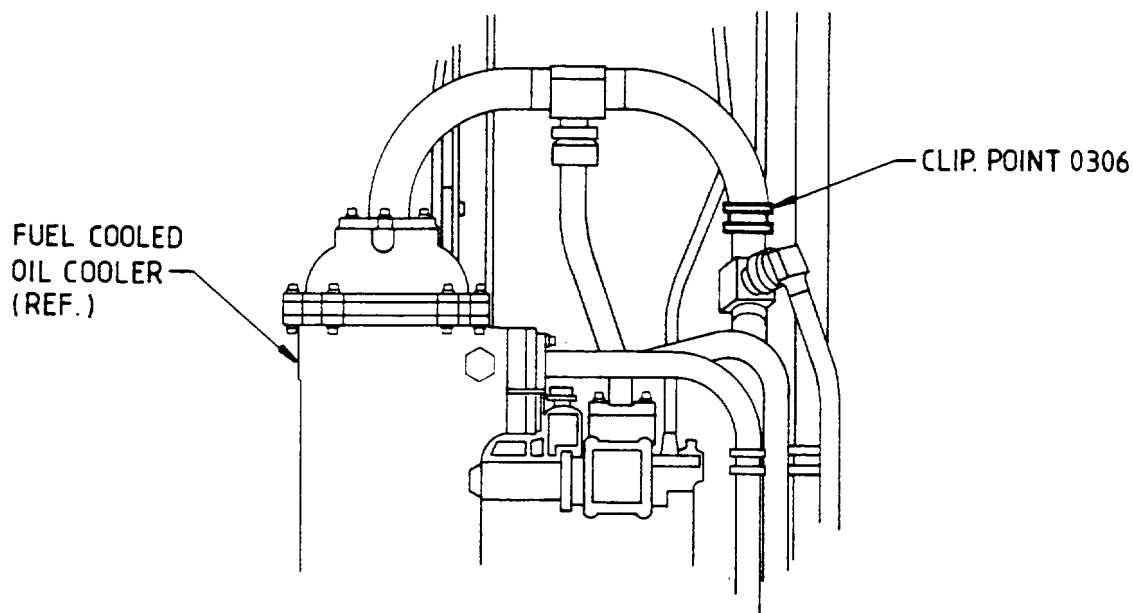
- (1) V2500 Illustrated Parts Catalog, 73-11-49.
- (2) V2500 Engine Manual, 72-00-32, Removal-03, Installation-03.
- (3) V2500 Component Maintenance Manual, Tubes, hoses and ducts, 73-11-49, Inspection/Check-04.
- (4) V2500 Component Maintenance Manual, Miscellaneous mechanical components, 73-11-49, Cleaning-00 and 01, Inspection/Check-00 and 01.



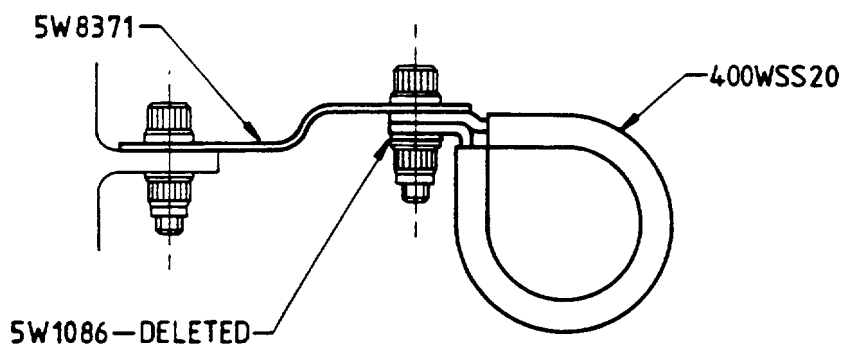
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Location at clipping point 0306
Fig.1

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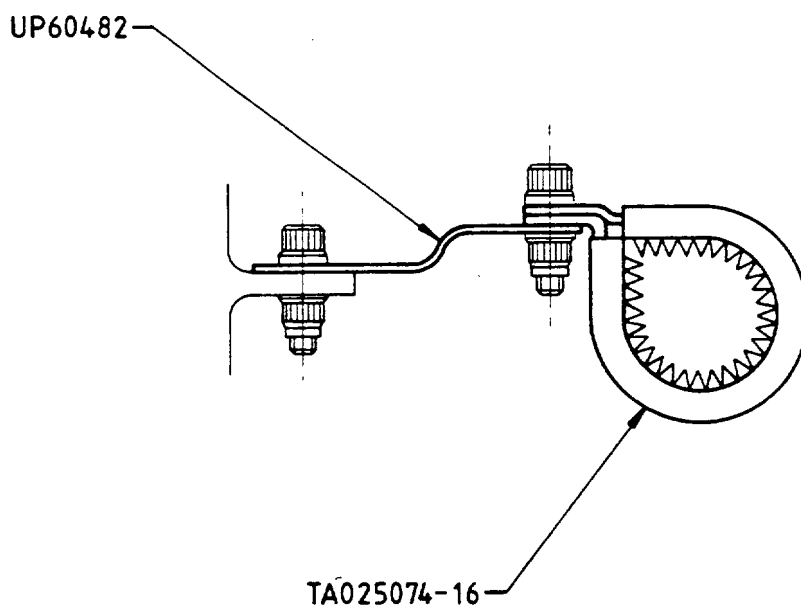
VIEW SHOWING LOCATION OF CLIPPING POINT 0306



CLIPPING POINT 0306 BEFORE ALTERATION

Location at clipping point CP0306 - Before alteration
Fig.2

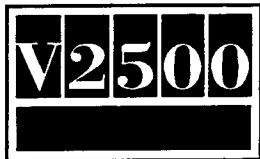
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CLIPPING POINT 0306 AFTER ALTERATION

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Location at clipping point CP0306 - After alteration
Fig.3



2. Accomplishment Instructions

A. Pre-requisite Instructions

- (1) On the panel 115VU put a warning notice to tell persons not to start the engine.
- (2) Make sure that the engine has been shutdown for at least 5 minutes.
- (3) On the panel 50VU install a warning notice and make sure that the ON legend of the ENG FADEC GND PWR pushbutton switch is off.
- (4) Open the left fan cowl door with the instructions in the A320 Aircraft Maintenance Manual, 71-13-00-010-010

B. Removal Instructions

- (1) Remove the bolt 4W0102, the washer AN960XC10L or 5W1086 and the nut 4W0001 from clipping point 0306.
- (2) Remove clip 400WSS20 from the fuel pump to F.C.O.C. tube.
- (3) Discard washer AN960XC10L or 5W1086 and clip 400WSS20.
- (4) Remove bolts 4W0163 (2 off), nuts 4W0002 (2 off), and bracket 5W8371 from flange FC.

C. Rework Instructions

Rework 5W8371, bracket as follows:

(1) Standard Equipment

Hand file
Penetrant crack test equipment
Vibro-engraving tool

(2) Consumable Materials

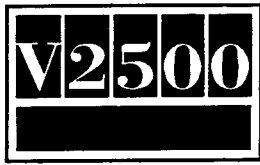
None

Procedure

Supplementary Information

- | | |
|------------------------------------|-------------------------------------|
| (a) Remove material from bracket | Refer to Figure 4.
Use hand file |
| (b) Remove burrs from bracket | Refer to Figure 4.
Use hand file |
| (c) Visually/dimensionally inspect | Refer to Figure 4 |

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(d) Test for crack indications Refer to SPM TASK 70-23-01-230-501.
Use penetrant crack test equipment

(3) Re-number adjacent to existing part number	Existing	Renumber
	5W8371	UP60482
	Use vibro-engraving tool	

D. Assembly Instructions

- (1) Secure bracket UP60482 to flange FC with bolt 4W0163 (2 off) and nuts 4W0002 (2 off).
- (2) Fit clamp TA025074-16 to the fuel pump to F.C.O.C. tube and secure at clipping point 0306 using bolt 4W0102 and nut 4W0001 (refer to Fig.3).

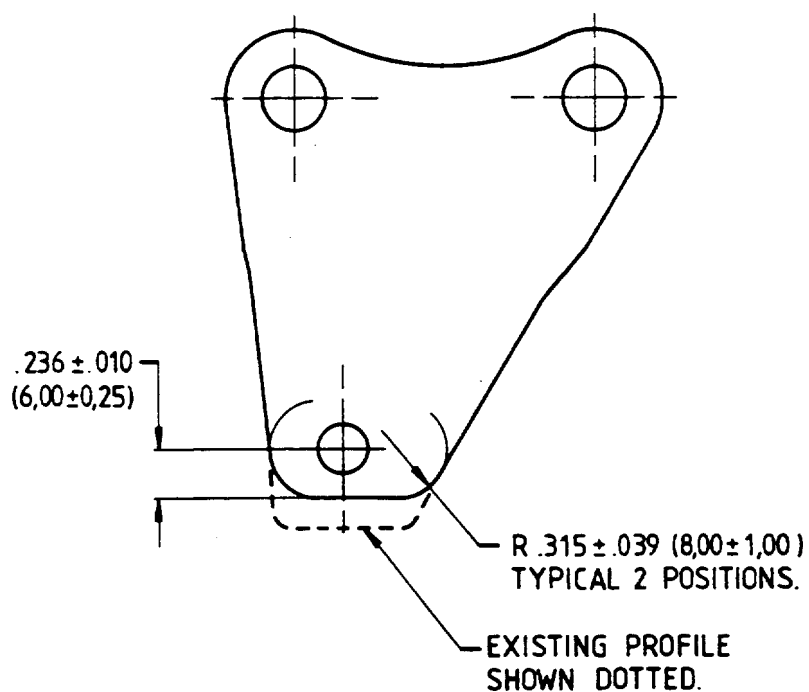
E. Post requisite Instructions

- (1) Close the left fan cowl door with the instructions in the A320 Aircraft Maintenance Manual, 71-13-00-410-010.
- (2) Remove the warning notices.

F. Recording Instructions

- (1) Record in the Engine Log that this Service Bulletin has been incorporated.

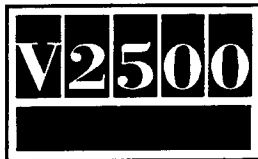
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REMOVE THE SHARP EDGES $.012 \pm .008$ (0,30 \pm 0,20).
DIMENSIONS ARE IN INCHES WITH MILLIMETRE CONVERSIONS IN PARENTHESES.

Rework existing mounting bracket
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
TA025074- 16 (73-11-49)	1		Clamp, loop style, cushion	400WSS20	(S1)(A)(B)
UP60482 (73-11-49)	1		Bracket	5W8371 (02-060)	(S1)(1D)(A) (C)
- (73-11-49)	1		Washer	5W1086 (02-158) or A0960XC10L	(E) (C)

C. Instructions/Disposition Code Statements:

- (S1) New parts coded (S1) must be fitted as a set.
- (1D) Old part coded (1D) can be reworked and re-identified to the new part number.
- (A) New part is currently available for sale.
- (B) Old part will continue to be available for sale for other applications.
- (C) Old part will no longer be available.
- (E) Old part 5W1086 will continue to be available for sale for other applications.

NOTE: The estimated 1990 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.

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