

# SERVICE BULLETIN

# POWER PLANT - ENGINE - INCORPORATION OF CLIPPING POINT 2449 AND BRACKET AT CLIPPING POINT 2587 - CATEGORY CODE 6 - MOD.ENG-71-0149

## 1. Planning Information

## A. Effectivity

(1) Aircraft: (a) McDonnell Douglas MD-90

(2) Engine: (a) V2500-D5 Engines prior to Serial No.V20009.

#### B. Concurrent Requirements

None

## C. Reason

#### (1) Condition

Clipping point 2449 and the bracket for clipping point 2587 have been omitted from the build of engines prior to V20009.

#### (2) Background

Engines prior to V20009 have been built with clipping point 2449 and the bracket for clipping point 2587 omitted, the parts involved will now be retrofitted by this Bulletin.

#### (3) Objective

This Bulletin is intended to give instructions to retrofit clipping point 2449 and the bracket for clipping point 2587 to engines prior to V20009.

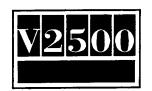
#### (4) Substantiation

The parts instructed by this Bulletin were assembled on both left and right hand mock-up installations with acceptable results.

# (5) Effect of Bulletin on Workshop Procedures:

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

#### (6) Supplemental Information



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The Removal/Installation will be revised to add the new configuration of this Bulletin.

#### D. <u>Description</u>

The changes introduced by this Bulletin are as follows:

- (1) Clipping Point 2449 is added.
- (2) The Bracket at clipping point 2587 is added and the washers at the bracket location deleted.

#### E. Approval

The part number changes and/or part modifications described in Section 2 and 3 of this bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model listed.

#### F. Compliance

Category Code 6

Accomplish when the sub-assembly (i.e. modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected parts and to all affected spare parts.

## G. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

Venue Estimated Manhours

(1) In Service Not applicable

(2) At Overhaul Not affected

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

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

# I. Tooling - Price and Availability

Special tools are not required.



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J. Weight and Balance

(1) Weight change T.B.A.

(2) Moment arm T.B.A.

(3) Datum Engine front mount centerline

(Power Plant Station (PPS) 100)

# K. Electrical Load Data

This Bulletin has no effect on the aircraft electrical load.

# L. References

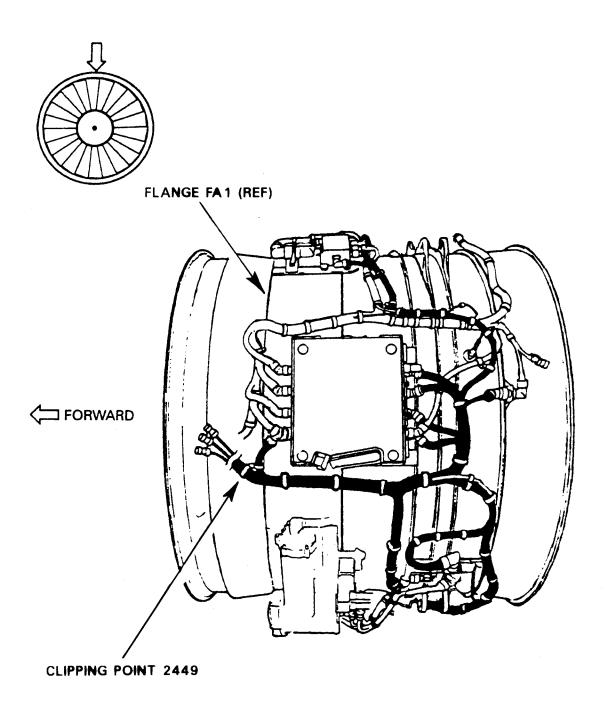
(1) Internal Reference No.

EC93VR088A

## M. Other Publications Affected

- (1) V2500 Engine Illustrated Parts Catalog (S-V2500-3IA), Chapter/Section 71-51-54 and 79-21-43.
- (2) V2500 Engine Manual (E-V2500-3IA), 72-00-32, Removal-02, -03 and -05, Installation-01, -03 and -04.
- (3) V2500 Component Maintenance Manual (CMM-MECH-V2500-3IA), 79-21-43 Cleaning and Inspection/Check.
- (4) V2500 Engine Maintenance Manual (M-V2500-3IA), 71-51-54, Removal/Installation.

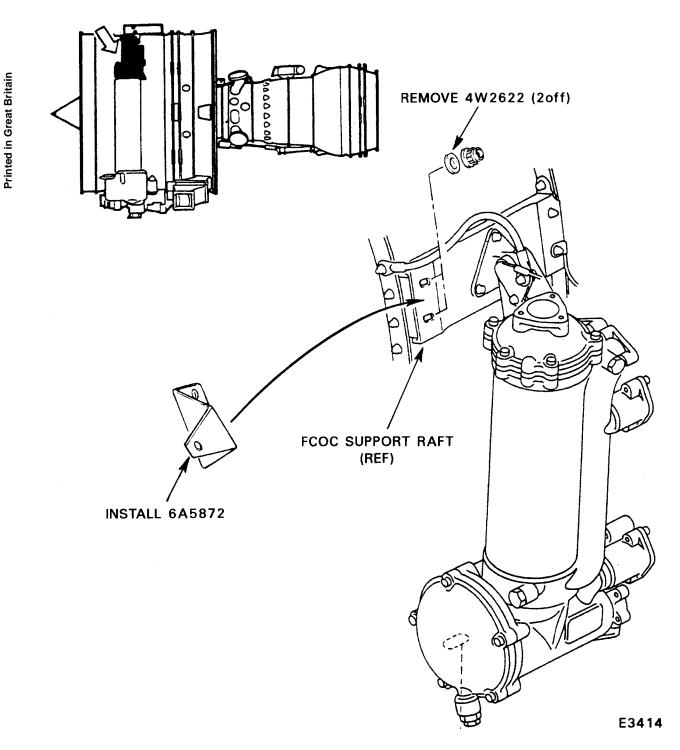




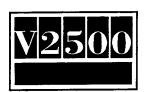
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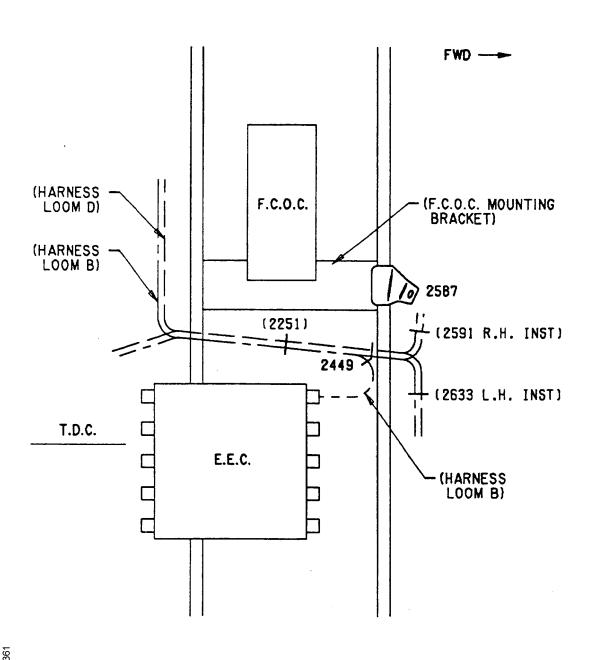
Location of clipping point 2449 and bracket for clipping point 2587 Fig.1 (Sheet 1 of 2)





Location of clipping point 2449 and bracket for clipping point 2587 Fig.1 (Sheet 2 of 2)



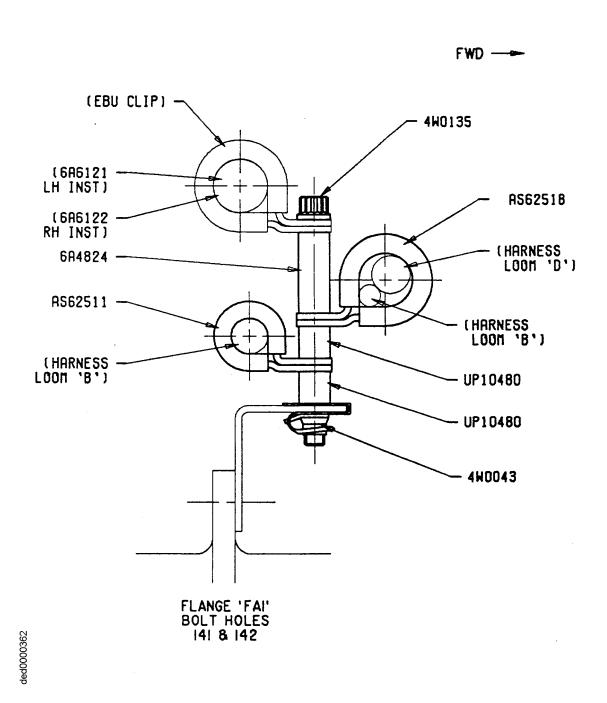


FLANGE 'FB'

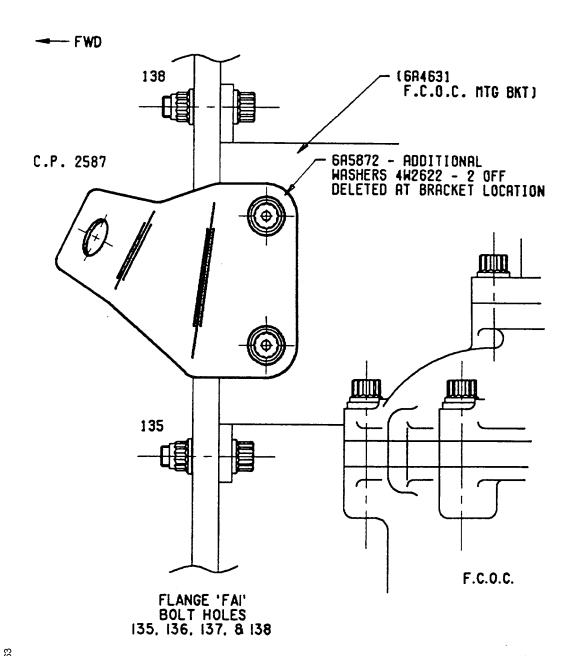
FLANGE 'FAI'

Schematic view showing locations of CP2449 and bracket for CP2587 Fig.2  $\,$ 





Clipping point 2449 - additional Fig.3



ed000036;

View on fuel cooled oil cooler mounting bracket showing bracket location of clipping point 2587
Fig.4



# 2. Accomplishment Instructions

#### A. Rework Instructions

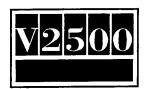
(1) There are no rework instructions neccesary to accomplish this Bulletin.

## B. Assembly Instructions

- (1) Find the support bracket for clipping point 2449 on flange FA1. Refer to Figure 1 and Figure 2.
- (2) Install the 4W0135 bolt, the 6A4824 spacer, the AS62518 clip, the UP10480 spacer, the AS62511 clip, the UP10480 spacer and the 4W0043 clipnut at clipping point 2449. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm). Refer to Figure 2 and Figure 3.
- (3) Find the 6A4631 fuel cooled oil cooler (FCOC) support raft. Refer to Figure 1.
- (4) Disassemble the bolts (2 off), washers (2 off) and nuts (2 off) that attach the 6A4631 support raft to the bracket on flange FA1. Discard the washers. Refer to Figure 1.
- (5) Install the new 6A5872 bracket on to the 6A4631 support raft, using the bolts and the nuts removed at step (4). Torque the nuts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figure 1 and Figure 4.

## C. Recording Instructions

(1) A record of accomplishment is necessary.



# 3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

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

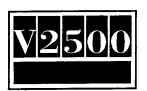
None

# B. Parts affected by this Bulletin:

New Part No. (ATA No.)		 Keyword			Instructions Disposition
4w0135 (71-51-54)	1	Bolt, bi-hex		- (01–865)	(A)(B)
AS62518 (71-51-54)	1	Clip	CP2449	- (01-868)	(A)(B)
6A4824 (71-51-54)	1	Spacer	CP2449	- (01-870)	(A)(B)
UP10480 (71-51-54)	2	Spacer	CP2449	- (01-871)	(A)(B)
4W0043 (71-51-54)	1	Nut, clip	CP2449	- (01-872)	(A)(B)
AS62511 (71-51-54)	1	Clip	CP2449	- (01-876)	(A)(B)
6A5872 (79-21-43)	1	Bracket	CP2587	- (01-745)	(A)(B)
- (79–21–43)	2	Washer		4W2622 (01-784)	(C)(1D)

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

- (A) New part currently available
- (B) Additional part
- (C) Old part can be used up on other applications
- (1D) Items coded 1D become redundant on embodiment of this Bulletin.



# **SERVICE BULLETIN**

NOTE: The estimated 1994 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.

