



ENGINE - DIFFUSER AND COMBUSTOR GROUP - PROVIDE A NEW BRACKET ASSEMBLY WHICH HAS
ADDITIONAL SUPPORT FOR THE FIRE DETECTION RAIL - CATEGORY CODE 3 - MOD.ENG-72-0206

1. Planning Information

A. Effectivity

- (1) Aircraft: McDonnell Douglas MD-90
- (2) Engine: V2525-D5 Engines before Serial No. V20009

B. Reason

(1) Condition

The original bracket did not give sufficient support to the fire detection rail.

(2) Background

During the flight test program it was determined that there was not sufficient support for the fire detection rail.

(3) Objective

To provide a stronger Loop Clamp Bracket Assembly that includes a reinforcing rib. This stronger Loop Clamp Bracket Assembly will give added support to the fire detection rail.

(4) Substantiation

This configuration was substantiated by analytical vibration testing.

(5) Effects of Bulletin on Workshop Procedures:

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

(6) Supplemental Information

None.

**C. Description**

- (1) The Loop Clamp Bracket that supports the No. 4 bearing tube and the the fire detection rail is replaced with a Loop Clamp Bracket Assembly. This Loop Clamp Bracket Assembly has a reinforcing rail and provides added support for the fire detection rail.

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 before engine entry into service.

F. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In service	TOTAL: 53 minutes
(a) To gain access	
1 Install the warning notices	5 minutes
2 Open the fan cowls	7 minutes
3 Open the thrust reverser halves	9 minutes
(b) To remove the loop clamp bracket	3 minutes
(c) To install the loop clamp bracket assembly ..	4 minutes
(d) To return to flyable status	
1 Close the thrust reverser halves.	12 minutes
2 Close the fan cowls	8 minutes
3 Remove the warning notices.	5 minutes
	TOTAL 53 minutes

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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 to accomplish this Service Bulletin.

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

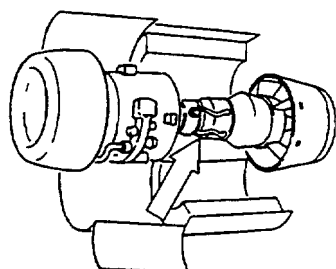
This Service Bulletin has no effect on the aircraft electrical load.

K. References

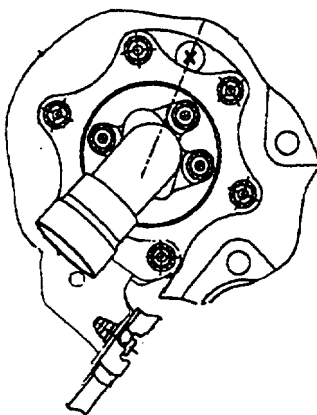
- (1) Internal Reference No.
94VA062
- (2) Other references
The V2500-D5 Engine Illustrated Parts Catalog.
The MD-90 Aircraft Maintenance Manual.
The V2500 Standard Practices Manual.

L. Other Publications Affected

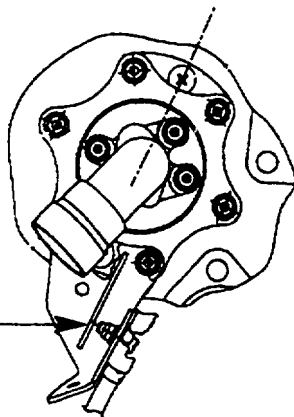
- (1) V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-42-20, Figure 2.



AREA BEING VIEWED



BEFORE



THE NEW BRACKET
ASSEMBLY HAS A
REINFORCING RIB

AFTER

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Before and after views of configuration changes that affect the loop clamp bracket assembly that supports the fire seal

Fig.1

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2. Accomplishment Instructions

A. Prerequisite Instructions

- (1) On the aircraft panel 115VU, put a warning notice to tell the persons not to start the engine.
- (2) On the aircraft panel 50VU make sure that the ON legend on the ENG FADEC GND PWR push button switch is OFF and install a warning notice.
- (3) Open the fan cowls by use of the approved procedure given in Reference (2), Chapter/Section 71-13-00.
- (4) Open the Thrust Reverser Halves by use of the approved procedure given in Reference (2), Chapter/Section 78-32-00.

B. Removal Instructions

- (1) Gain access to the 2A2533 Loop Clamp Bracket. Refer to Figure 1.
- (2) Remove the wire that safeties the bolts, which hold the No. 4 Bearing Sealing Sleeve in position.
- (3) Disconnect the nut and bolt that holds the loop clamp on the fuel manifold to the Loop Clamp Bracket.
- (4) Disconnect the nut and bolt that holds the loop clamp on the No. 4 Bearing Oil Scavenge Tube to the Loop Clamp Bracket.
- (5) Remove the bolts (2 off) that hold the Loop Clamp Bracket to the sealing sleeve.

C. Installation Instructions

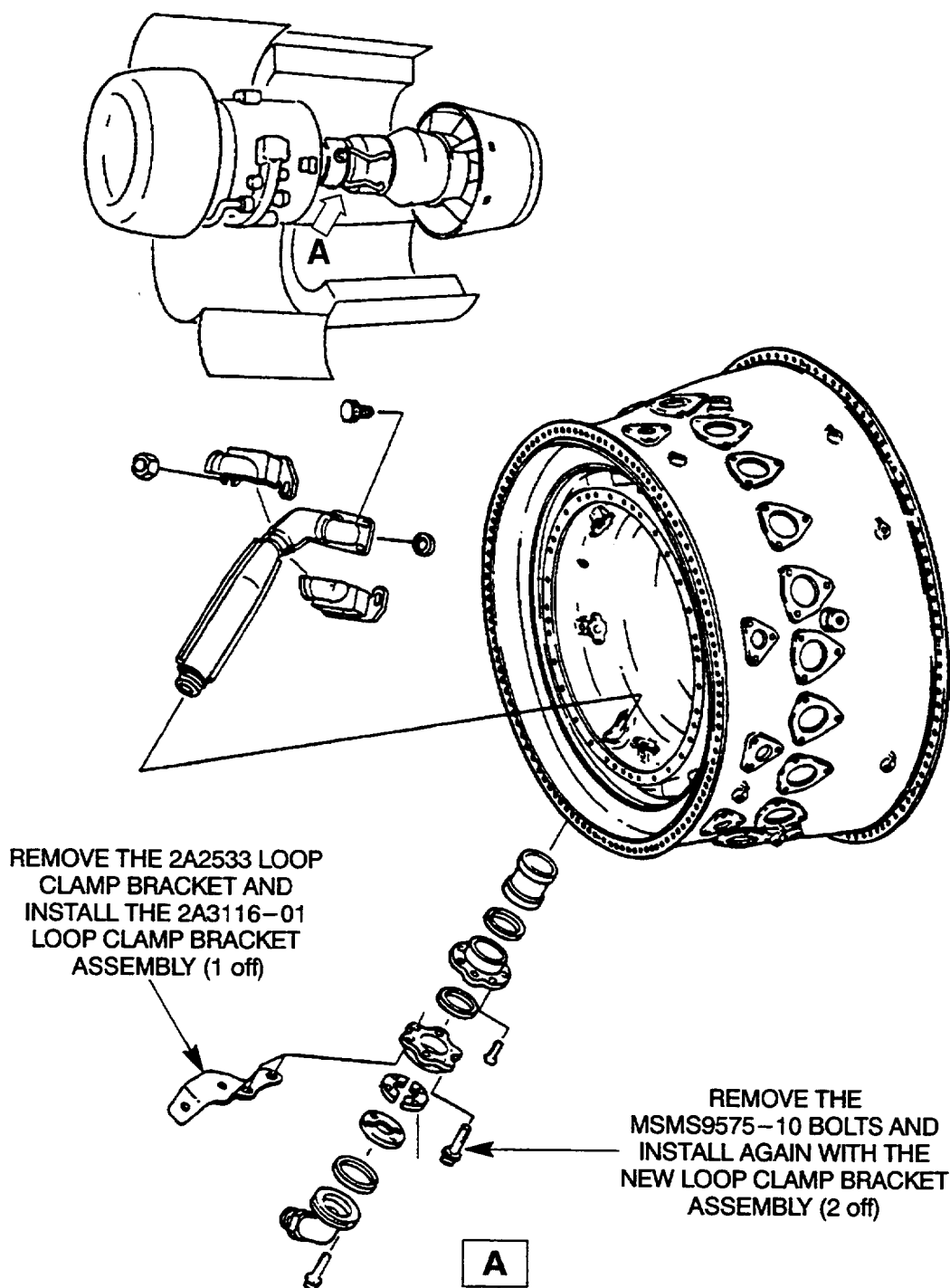
- (1) Lubricate the MS9575-10 Bolts (2 off) with CoMat 10-077 Approved Engine Oil.
- (2) Put the 2A3116-01 Loop Clamp Bracket Assembly (1 off) in position on the sealing sleeve.
 - (a) Align the two bolt holes in the bracket assembly with the two open holes in the sealing sleeve.
 - (b) Hold the loop clamp bracket assembly in position with your hand.
- (3) Install the MS9575-10 Bolts (2 off) with your hand and tighten them with your fingers.
- (4) Torque the bolts to 75 to 85 lbfin (8,474 to 9,604 Nm). See Reference (3), 70-41-00, Torque Tightening Technique.



- (5) Safety the bolts (6 off) with CoMat 02-141 Lockwire.
- (6) Attach the loop clamp on the 2A2411-01 Fuel Manifold Assembly to the Loop Clamp Bracket Assembly with the 4W0103 Bolt (1 off) and the 4W0001 Nut (1 off) as follows:
 - (a) Lubricate the 4W0103 Bolt (1 off) with CoMat 10-077 Approved Engine Oil.
 - (b) Install the bolt through the loop clamp and the loop clamp bracket assembly.
 - (c) Install the 4W0001 Nut (1 off) on the bolt and tighten it with your fingers.
 - (d) Torque the Nut to 36 to 45 lbfin (0,4 to 0,5 Nm). See Reference (3), 70-41-00, Torque Tightening Technique.
- (7) Attach the loop clamp on the No. 4 Bearing Scavenge Tube to the Loop Clamp Bracket Assembly with the 4W0103 Bolt (1 off) and the 4W0001 Nut (1 off) as follows:
 - (a) Lubricate the 4W0103 Bolt (1 off) with CoMat 10-077 Approved Engine Oil.
 - (b) Install the bolt through the loop clamp and the loop clamp bracket assembly.
 - (c) Install the 4W0001 Nut (1 off) on the bolt and tighten it with your fingers.
 - (d) Torque the Nut to 36 to 45 lbfin (0,4 to 0,5 Nm). See Reference (3), 70-41-00, Torque Tightening Technique.
- (8) Connect all of the components that you disconnected to gain access to the Loop Clamp Bracket.

D. Post-Requisite Instructions

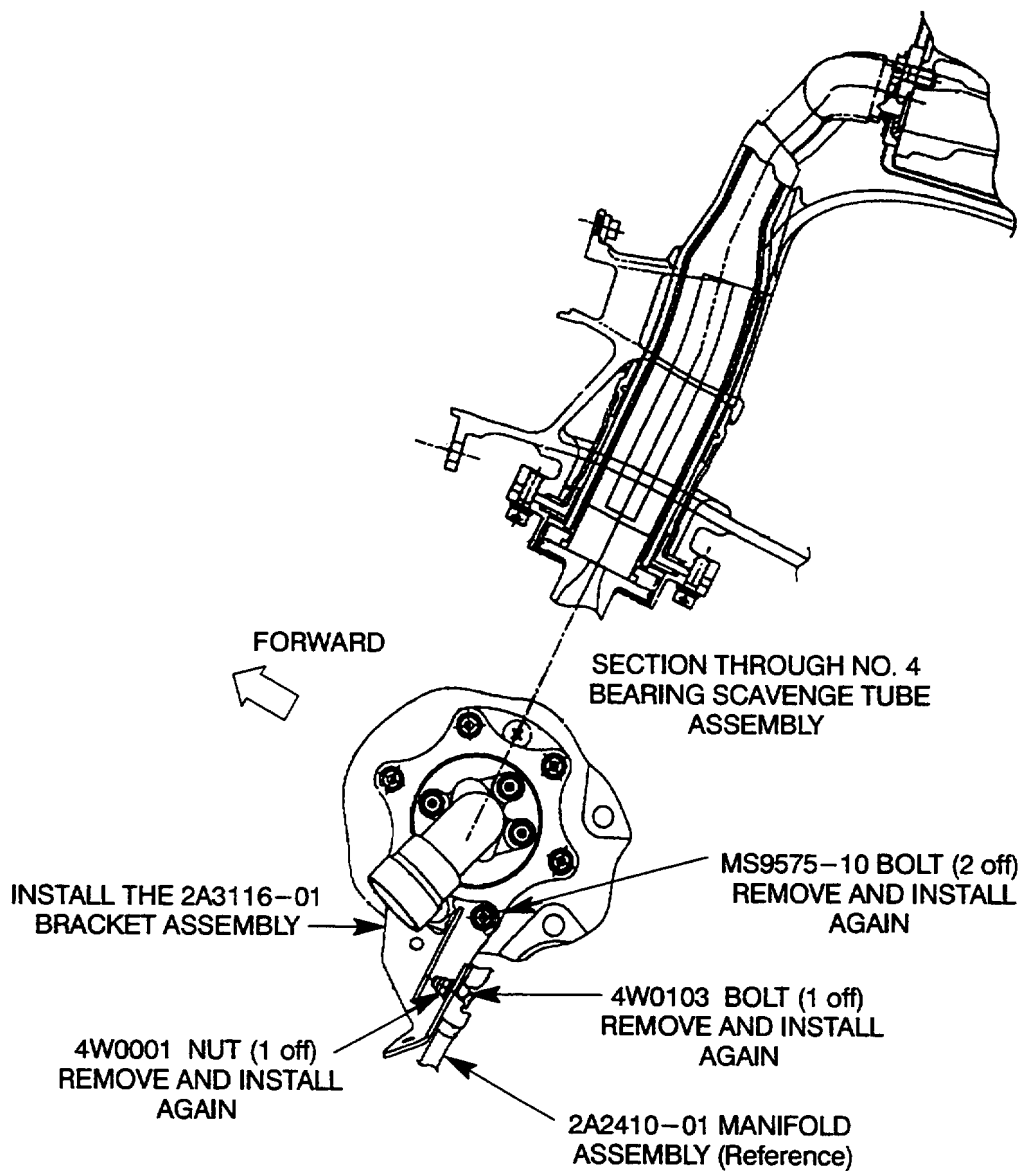
- (1) Close the Thrust Reverser Halves by use of the approved procedure in Reference (2) Chapter/Section 78-32-00.
- (2) Close the Fan Cowls by the approved procedure given in Reference (2), Chapter/Section 71-13-00.



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Location of the Loop Clamp Bracket Assembly
Fig.2

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Modification to incorporate the new Loop Clamp Bracket Assembly
Fig.3

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3. Material InformationA. Kit associated with this bulletin:

None

B. Parts affected by this bulletin:

NOTE: It is possible to use the Chapter/Section and Figure/Item reference number shown below the old part number to find the part in the Illustrated Parts Catalog.

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
2A3116-01 (72-42-20)	1	\$178.00	Bracket Assy -Loop Clamp	- (02-350)	(S1)(A)
- (72-42-20)			Bracket-Loop Clamp	2A2533 (02-350)	(S1)(B)

C. Consumable Materials

CoMat 10-077 Approved Engine Oils
CoMat 02-141 Lockwire

D. Instructions/Disposition Code Statements:

(S1) New parts coded (S1) must replace old parts coded (S1) in COMPLETE set per engine.

(A) The new part is currently available.

(B) The old part will no longer be supplied.

NOTE: The estimated 1995 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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