



International Aero Engines

RR-DERBY

400 MAIN STREET, MAIL STOP 121-10
EAST HARTFORD, CT 06108, USA.
TELEPHONE: 860 565 5515
FAX: 860 565 0600

P.O. BOX 31, DERBY
TELEGRAMS - 'ROYCAR' DERBY
TELEX - 37645
TELEPHONE - DERBY 242424

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V2500-A1 PROPULSION SYSTEMS SERVICE BULLETIN

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This document transmits Revision 1 to Service Bulletin EV2500-71-0110

Document History

Service Bulletin Revision Status
Initial Issue Apr.1/92

Supplement Revision Status

Bulletin Revision 1

Remove
All pages of the
Service Bulletin

Incorporate
Pages 1 to 34 of the
Service Bulletin

Reason for change
To add reference to SB
79-0025 in 1.B. Concurrent
Requirements

V2500-ENG-71-0110
Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
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LIST OF EFFECTIVE PAGES

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ENGINE – PROVIDE REROUTED OIL TUBES FOR THE ACOC AND THE OIL TANK ASSEMBLY

1. Planning Information

A. Effectivity

(1) Airbus A320

V2500-A1 Engines prior to Serial No. V0180

V2500-A1 Nacelles

(2) ATA Locator 71-00-00

B. Concurrent Requirements

(1) The following Service Bulletin must be installed before or at the same time as this Service Bulletin:

V2500-ENG-79-0025

Oil – Provide an Oil Tank Sight Glass Oil Level Indicator.

C. Reason

(1) Condition

The existing oil tubes which are installed behind the gearbox may have insufficient clearance between them. This can cause fretting on the oil tubes.

(2) Background

This condition has been noted during assembly of production engines. A review of the existing oil tube installation has shown the need for rerouting of the oil tubes to get sufficient clearance.

(3) Objective

The change in configuration recommended in this Service Bulletin is designed to maintain the engine reliability.

(4) Substantiation

Substantiation test is not required.



(5) Effect on Bulletin on workshop procedure:

(a) Removal/Installation

Affected (See Supplemental Information)

(b) Disassembly/Assembly

Not affected

(c) Cleaning

Affected (See Supplemental Information)

(d) Inspection/Check

Affected (See Supplemental Information)

(e) Repair

Not affected

(f) Testing

Not affected

(6) Supplemental Information

(a) The Removal/Installation of the Post-Service Bulletin configuration is affected due to a new configuration of oil tubes and clipping positions.

(b) The cleaning and inspection/check of the post Service Bulletin configuration are affected due to a new configuration of the oil tubes.

D. Description

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

(a) New oil tubes 5A8796, 5A8795, 5A8797 and 4B7263 are introduced in lieu of the existing oil tubes 5A8786, 5A9081, 5A8770 and 4B7200 (See Figures 1 and 6).

(b) With the changes described in 1.C.(1).(a), the following clipping positions and brackets have been changed:

(i) The existing clipping positions CP0331, CP0334, CP0333 and CP0318 which are used to hold the oil tubes are deleted (See Figure 1).



- (ii) The new clipping positions CP1116, CP1117, CP1110, CP1111, CP1109, CP1108, CP1107 and CP1105 are introduced to hold the new oil tubes (See Figure 6).
 - (iii) The existing brackets 4P7171 and 4B7172 which are used to hold the oil tubes at CP0331 are changed with new brackets 4P7266 and 4B7265 to hold the new oil tubes at CP1110 and CP1111 (See Figure 4).
 - (iv) The existing bracket 4P7169 which is used to hold the oil tubes at CP0333 is changed with a new bracket 4P7267 to hold the new oil tubes at CP1108 and CP1107 (See Figure 4).
 - (v) The existing clipping positions CP0846, CP1019, CP1020 and CP0786 which are used to hold the electrical harnesses are deleted (See Figure 2).
 - (vi) The existing clipping positions CP0845, CP0847 and CP0893 which are used to hold the electrical harnesses are changed to the new clipping configurations (See Figures 2 and 7).
 - (vii) The new clipping positions CP1113, CP1112 and CP1106 are introduced to hold the electrical harnesses (See Figure 7).
 - (viii) The existing brackets 740-5425-505 which is used to hold the electrical harnesses at CP0846 is deleted (See Figure 3 and 5).
 - (ix) The new bracket 5W8398 is introduced to hold the electrical harnesses at CP1112 and CP1113 (See Figure 5).
 - (x) The new bracket 5W8399 is introduced to hold the oil tubes at CP1116 and CP1117 (See Figure 4, Sheet 3).
- (c) The existing catalog sequence numbers of the raft assembly which is used to secure the case drain filter are changed to the new catalog sequence numbers (See Figures 3 and 5).

- (2) New oil tubes and clipping brackets will be available for future replacement purposes.

E. Approval

The part number changes and/or part modifications described in Sections 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.

F. Compliance

Category Code 7.

Accomplish when the supply of superseded parts has been depleted.



G. Manpower

Estimated Man-hours to incorporate the full intent of this bulletin:

(1) In service

Not applicable

(2) At overhaul

Not affected

H. Material Price and Availability

(1) Modification kit is not required. Parts supplied as single line items.

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

I. Tooling Price and Availability

Special tools are not required to accomplish this Service Bulletin.

J. Industry Support Information

None

K. Weight and Balance

(1) Weight Change

None

(2) Moment Arm

No effect

(3) Datum

Engine Front Mount Centreline (Power Plant Station - (PPS) 100)

L. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin

M. References

(1) Internal reference EC89VJ013, EC89VJ013A to H



(2) V2500 Engine Illustrated Parts Catalog, Chapter/Section 29-11-43, 71-51-41, 71-51-43, 72-60-10, 75-22-49, 79-11-41, 79-21-49, 79-22-48 and 79-22-49.

(3) V2500 Engine Manual, 72-00-32 Installation, and 72-00-60 Installation.

R (4) Service Bulletin V2500-ENG-79-0025

R Oil - Provide an Oil Tank Sight Glass Oil Level Indicator.

N. Other Publications Affected

(1) V2500 Power Plant Illustrated Parts Catalog, Chapter/Section 29-11-43, 71-51-41, 71-51-43, 72-60-10, 75-22-49, 79-11-41, 79-21-49, 79-22-48 and 79-22-49.

(2) V2500 Engine Illustrated Parts Catalog, Chapter/Section 29-11-43, 71-51-41, 71-51-43, 72-60-10, 75-22-49, 79-11-41, 79-21-49, 79-22-48 and 79-22-49.

(3) A320 Aircraft Maintenance Manual, 71-51-43, Removal/Installation.

(4) V2500 Engine Manual, 72-00-32, LP Compressor/Intermediate Case Module, Removal-02, -05, Installation-01, -04 and 72-00-60, External Gearbox Module, Removal-02, -04, -16, Installation-02, -03, -16.

(5) V2500 Component Maintenance Manual, 71-51-41, Fan EEC Harness, Inspection/Check-00, -01, -02, and 79-21-49, Pressure Oil Tubes - Engine, Cleaning-00, -02, Inspection/Check-00, -01, Repair 003, and 79-22-48, Scavenge Oil Tubes - Gearbox, Cleaning -00, -01m Inspection/ Check-00, -02, Repair 002.

**2. Material Information****A. Kits associated with this Bulletin:**

None

B. Parts affected by this Bulletin:

29-11-43

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01910	-	-	.Raft Assy	-	740-5601- 507	(S2)
01914	-	-	.Bolt	-	AS21508	(S1)(7D)
01930	-	-	.Angle, Attach	-	740-5622- 501	(S2)
01940	-	-	.Packing, Piece	-	740-5923- 501	(S2)
01941	-	-	.Nut	-	NAS1291 C4M or	(S2)
01941	-	-	.Nut	-	H42-4	(S2)
01942	-	-	.Washer	-	SP155E	(S2)
01944	-	-	.Bolt	-	NAS7204U6	(S2)

71-51-41

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01846	-	1	.Bolt, Machine CP0786	-	4W0104	(C)(S1)(1D)
01847	-	1	.Washer CP0786	-	5W1086	(C)(S1)(1D)
01849	-	1	.Clamp, Loop CP0786	-	JM44LC39 H113RG	(B)(S1)
01849	-	1	.Clamp, Loop	-	TA025074 -17 or	(C)(S1)(1D)
01849	-	1	.Clamp, Loop CP0786	-	AS61915	(C)(S1)(1D)
01853	-	1	.Nut, Option CP0786	-	4W0001	(C)(S1)(1D)
02103	-	1	.Bolt, Machine CP1019	-	4W0103	(C)(S1)(1D)
02104	-	1	.Washer CP1019	-	5W1086	(C)(S1)(1D)
02106	-	1	.Clamp, Loop CP1019	-	JM44LC39 H110RG	(B)(S1)
02106	-	1	.Clamp, Loop	-	TA0250 74-15 or	(C)(S1)(1D)
02106	-	1	.Clamp, Loop CP1019	-	AS61913	(C)(S1)(1D)



FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02110	-	1	.Nut, Option CP1019	-	4W0001	(C)(S1)(1D)
02111	-	1	.Bolt, Machine CP1020	-	4W0103	(C)(S1)(1D)
02112	-	1	.Washer CP1020	-	5W1086	(C)(S1)(1D)
02114	-	1	.Clamp, Loop CP1020	-	JM44LC39	(B)(S1)
02114	-	1	.Clamp, Loop	-	H110RG TA0250 74-15	(C)(S1)(1D)
02114	-	1	.Clamp, Loop CP1020	-	or AS61913	(C)(S1)(1D)
02118	-	1	.Nut, Option CP1020	-	4W0001	(C)(S1)(1D)
02432	TA0250 74-15	1	.Clamp, Loop	-	-	(A)(S1)
02432	or AS61913	1	.Clamp, Loop CP0893	-	-	(A)(S1)
02437	4W0103	1	.Bolt, Machine CP1106	-	-	(A)(S1)
02438	5W1086	1	.Washer CP1106	-	-	(A)(S1)
02440	TA0250 74-17	1	.Clamp, Loop	-	-	(A)(S1)
02440	or AS61915	1	.Clamp, Loop CP1106	-	-	(A)(S1)
02444	4W0001	1	.Nut, Option CP1106	-	-	(A)(S1)
02445	4W0103	1	.Bolt, Machine CP1112	-	-	(A)(S1)
02446	5W1086	1	.Washer CP1112	-	-	(A)(S1)
02448	TA0250 74-17	1	.Clamp, Loop	-	-	(A)(S1)
02448	or AS61915	1	.Clamp, Loop CP1112	-	-	(A)(S1)
02452	4W0043	1	.Nut, Self lock CP1112	-	-	(A)(S1)
02453	4W0117	1	.Bolt, Machine CP1113	-	-	(A)(S1)
02454	5W1086	1	.Washer CP1113	-	-	(A)(S1)
02456	TA0250 74-15	1	.Clamp, Loop	-	-	(A)(S1)
02456	or AS61913	1	.Clamp, Loop CP1113	-	-	(A)(S1)
02458	5W1032	1	.Spacer, Sleeve CP1113	-	-	(A)(S1)
02460	4W0043	1	.Nut, Self lock CP1113	-	-	(A)(S1)
05700	5W8398	1	.Bracket CP1112, CP1113	-	-	(A)(S1)(6D)
05710	740-5601 -507	1	.Raft Assy	-	-	(S3)
05714	4W0162	1	.Bolt, Machine	-	-	(A)(S1)(6D)
05715	4W0164	1	.Bolt, Machine	-	-	(A)(S1)(6D)
05720	740-5620 -503	1	.Angle, Attach	-	-	(S3)
05721	4W0002	1	.Nut, Self lock	-	-	(S4)
05724	4W0164	1	.Bolt, Option	-	-	(S4)
05730	740-5622 -501	1	.Angle, Attach	-	-	(S3)



FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
05731	NAS1291C4M	1	.Nut	-	-	(S3)
	or					
05731	H42-4	1	.Nut	-	-	(S3)
05732	SP155E	1	.Washer	-	-	(S3)
05733	740-5923	1	.Packing, Piece	-	-	(S3)
	-501					
05734	NAS7204U6	1	.Bolt, Csk	-	-	(S3)

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FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01214	-	1	.Bolt, Machine CP0845	-	4W0104	(C)(S1)(1D)
01215	-	1	.Washer CP0845	-	SP154D	(C)(S1)(1D)
01217	-	1	.Clamp, Loop	-	TA0250	(C)(S1)(1D)
					74-17	
					or	
01217	-	1	.Clamp, Loop CP0845	-	AS61915	(C)(S1)(1D)
01221	-	1	.Nut, Option CP0845	-	4W0001	(C)(S1)(1D)
01222	-	1	.Bolt, Machine CP0846	-	4W0104	(C)(S1)(1D)
01223	-	1	.Washer CP0846	-	SP154D	(C)(S1)(1D)
01225	-	1	.Clamp, Loop	-	TA0250	(C)(S1)(1D)
					74-17	
					or	
01225	-	1	.Clamp, Loop CP0846	-	AS61915	(C)(S1)(1D)
01229	-	1	.Nut, Option CP0846	-	4W0001	(C)(S1)(1D)
01233	TA0250	1	.Clamp, Loop	-	TA0250	(A)(C)
	74-18				74-05	(S1)(1D)
	or				or	
01233	AS61916	1	.Clamp, Loop CP0847	-	AS61903	(A)(C)
						(S1)(1D)
01481	TA0250	1	.Clamp, Loop	-	-	(A)(S1)
	74-04					
	or					
01481	AS61902	1	.Clamp, Loop CP1113	-	-	(A)(S1)
05850	-	-	.Angle, Attach	-	740-5620	(S3)
					-503	
05851	-	-	.Nut, Self lock	-	4W0002	(S3)
05854	-	-	.Bolt, Option	-	4W0164	(S3)
05970	740-5425	6	.Bracket	-	740-5425	(A)(S1)(2D)
	-505				0505	
05971	4W0002	10	.Nut, Self lock	-	4W0002	(A)(S1)(3D)
05974	4W0164	10	.Bolt, Option	-	4W0164	(A)(S1)(4D)

72-60-10

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FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01630	4P7266	1	.Bracket	-	4P7171	(A)(S1)
01632	4B7265	-	.Bracket, Assy	-	4B7172	(A)(S1)

75-22-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
16544	-	1	.Clip, Loop Type CP0846	-	400WSS8	(C)(S1)(1D)
16549	4W0103	1	.Bolt, Machine CP0845	-	-	(A)(S1)
16550	K8831	1	.Washer CP0845	-	-	(A)(S1)
16556	4W0001	1	.Nut, Option CP0845	-	-	(A)(S1)

79-11-41

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01056	4P7267	1	.Bracket, CP1107, CP1108	-	4P7169	(A)(S1)

79-21-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01100	5A8796	1	.Tube, Assy Oil	-	5A8786	(A)(S1)
01125	-	1	.Bolt, Machine CP0331	-	4W0103	(C)(S1)(1D)
01126	-	1	.Washer CP0331	-	5W1086	(C)(S1)(1D)
01128	-	1	.Clip, Loop Type CP0331	-	400WSS14	(C)(S1)(1D)
01132	-	1	.Nut, Self lock CP0331	-	4W0043	(C)(S1)(1D)
01144	400WSS14	1	.Clip, Loop Type CP1110	-	-	(A)(S1)
01149	4W0103	1	.Bolt, Machine CP1116	-	-	(A)(S1)
01150	5W1086	1	.Washer CP1116	-	-	(A)(S1)
01152	400WSS14	1	.Clip, Loop Type CP1116	-	-	(A)(S1)
01156	4W0043	1	.Nut, Self lock CP1116	-	-	(A)(S1)
01157	AS21407	1	.Bolt, Machine CP1109	-	-	(A)(S1)
01158	5W1086	1	.Washer CP1109	-	-	(A)(S1)
01160	400WSS12	1	.Clip, Loop Type CP1109	-	-	(A)(S1)
01164	4W0001	1	.Nut, Option CP1109	-	-	(A)(S1)
01514	4W0170	3	.Bolt, Machine	-	4W0170	(A)
01514	-	3	.Bolt, Machine	-	AS21516	(C)(7D)
02500	5A8795	1	.Tube, Assy ACOC	-	5A9081	(A)(S1)
02517	AS21407	1	.Bolt, Machine CP1105	-	-	(A)(S1)



FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02518	5W1086	1	.Washer CP1105	-	-	(A)(S1)
02520	400WSS12	1	.Clip, Loop Type CP1105	-	-	(A)(S1)
02524	4W0001	1	.Nut, Option	-	-	(A)(S1)
02536	-	1	.Clip, Loop Type CP0331	-	400WSS14	(C)(S1)(1D)
02541	-	1	.Bolt, Machine CP0334	-	4W0103	(C)(S1)(1D)
02542	-	1	.Washer CP0334	-	5W1086	(C)(S1)(1D)
02544	-	1	.Clip, Loop Type CP0334	-	400WSS14	(C)(S1)(1D)
02548	-	1	.Nut, Option CP0334	-	4W0001	(C)(S1)(1D)
02552	-	1	.Clip, Loop Type CP0333	-	400WSS14	(C)(S1)(1D)
02557	-	1	.Bolt, Machine CP0318	-	4W0103	(C)(S1)(1D)
02558	-	1	.Washer CP0318	-	5W1086	(C)(S1)(1D)
02560	-	1	.Clip, Loop Type CP0318	-	400WSS14	(C)(S1)(1D)
02564	-	1	.Nut, Option CP0318	-	4W0001	(C)(S1)(1D)
02573	4W0103	1	.Bolt, Machine CP1108	-	-	(A)(S1)
02574	5W1086	1	.Washer CP1108	-	-	(A)(S1)
02576	400WSS14	1	.Clip, Loop Type CP1108	-	-	(A)(S1)
02580	4W0043	1	.Nut, Self lock CP1108	-	-	(A)(S1)
02581	4W0103	1	.Bolt, Machine CP1111	-	-	(A)(S1)
02588	4W0043	1	.Nut, Self lock CP1111	-	-	(A)(S1)
02589	4W0103	1	.Bolt, Machine CP1117	-	-	(A)(S1)
02590	5W1086	1	.Washer CP1117	-	-	(A)(S1)
02592	400WSS14	1	.Clip, Loop Type CP1117	-	-	(A)(S1)
02596	4W0043	1	.Nut, Self lock CP1117	-	-	(A)(S1)
03100	5A8797	1	.Tube, Assy AC0C	-	5A8770	(A)(S1)

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FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04100	4B7263	1	.Tube, A/O Oil	-	4B7200	(A)(S1)
04122	5W8399	1	.Bracket CP1116, CP1117	-	-	(A)(S1)(6D)
04125	MS9321-10	1	.Washer	-	MS9321-10	(A)(S1)(5D)

NOTE: For prices of parts consult the IAE Price Catalogue or contact the IAE Spare Parts Sales Department.

C. Instructions disposition codes

(A) New part is currently available.

(B) Old part will no longer be available.

(C) Old part will continue to be supplied on other application.

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(S1) New parts coded (S1) must replace old parts coded (S1) as a COMPLETE SET per engine.

(S2) Is Chapter/Section 71-51-41 Fig.05.

(S3) Was Chapter/Section 29-11-43 Fig.01.

(S4) Was Chapter/Section 71-51-43 Fig.05.

(1D) Old part may be used up on other applications.

(2D) Quantity reduced from 7 to 6.

(3D) Quantity reduced from 12 to 10.

(4D) Quantity reduced from 12 to 10.

(5D) Quantity reduced from 3 to 1.

(6D) Additional.

(7D) Deleted part.



3. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

- (1) Install the Raft Assembly and the clipping Bracket as follows (Refer to Figure 5):
 - (a) Install 740-5622-501 Attachment Angle and 740-5923-501 Packing Piece at the holes 56 and 57 on the Flange FA with the two NAS7204U6 Screws, SP155E Washers and NAS1291C4M Nuts or H42-4 Nuts.

NOTE: It is not necessary to lubricate the bolt threads with the nuts as these nuts have a dry film lubricant on their threads.
 - (b) Install 740-5620-503 Attachment Angle at the hole 88 and 90 on the Flange FA1 with the two 4W0164 Bolts and 4W0002 Nuts.
 - (c) Torque the nuts installed in step (a) and step (b) to 85 to 105 lbfin. (10 to 12 Nm).
 - (d) Attach 740-5601-507 Raft Assembly and 5W8398 Bracket to the Attachment Angles, with the two 4W0162 Bolts and the two 4W0164 Bolts. Torque the bolts to 85 to 105 lbfin. (10 to 12 Nm).
- (2) Install the Brackets to the External Gearbox as follows (Refer to Figure 4):
 - (a) Install 4P7267 Bracket to the Oil Tank flange by the approved procedures in the Engine Manual, 72-00-60, Installation, TASK 72-00-60-420-001-002 (Refer to Figure 4, Sheet 1 and 1.K (2)).
 - (b) Install 4P7266 Bracket and 4B7265 Bracket Assembly to the PMA Drive Gear mount flange by the approved procedures in the Engine Manual, 72-00-60, Installation, TASK 72-00-60-450-012-A00 (Refer to Figure 4, Sheet 2 and 1.K (2)).
- (3) Install the Oil Tube (Oil Tank Breather Tube) to the External Gearbox as follows (Refer to Figure 6):
 - (a) Attach the two MS21919F12 Clips and 400WSS12 Clip on to 4B7263 Oil Tube (Oil Tank Breather Tube).
 - (b) Install 4B7263 Oil Tube (Oil Tank Breather Tube) to the External Gearbox by use of approved procedures in the Engine Manual, 72-00-60, Installation, TASK 72-00-60-420-002 (Refer to 1.K. (2)).



- (c) Together with 5W8399 Bracket, install the three bolts and one washer that attach 4B7263 Oil Tube (Oil Tank Breather Tube) to the De-oiler. Torque the bolts to 85 to 105 lbfin. (10 to 12 Nm) (Refer to Figure 4, Sheet 3).
- (d) At CP1107 install MS21919F12 Clip on 4B7263 Oil Tube (Oil Tank Breather Tube) to 4P7267 Bracket with 4W0103 Bolt, MS9321-09 Washer and AS41104 Clipnut. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm).
- (4) Install the Oil Tubes (ACOC to FCOC Oil Tubes and ACOC Oil Supply Tube) as follows (Refer to Figure 6):
 - (a) Put 5A8795 Oil Tube (ACOC to FCOC Oil Tube) to the External Gearbox.
 - (b) Attach the two 400WSS14 Clips on to 5A8795 Oil Tube (ACOC to FCOC Oil Tube).
 - (c) At CP1117 install 400WSS14 Clip on 5A8795 Oil Tube (ACOC to FCOC Oil Tube) to 5W8399 Bracket with 4W0103 Bolt, 5W1086 Washer and 4W0043 Clipnut.
 - (d) At CP1111 install the lug on 5A8795 Oil Tube (ACOC to FCOC Oil Tube) to 4B7265 Bracket Assembly with 4W0103 Bolt and 4W0043 Clipnut.
 - (e) At CP1108 install 400WSS14 Clip on 5A8795 Oil Tube (ACOC to FCOC Oil Tube) to 4P7267 Bracket with 4W0103 Bolt, 5W1086 Washer and 4W0043 Clipnut.
 - (f) At CP1105 install 400WSS12 Clip on 4B7263 Oil Tube (Oil Tank Breather Tube) to the lug on 5A8795 Oil Tube (ACOC to FCOC Oil Tube) with AS21407 Bolt, 5W1086 Washer and 4W0001 Nut.
 - (g) At CP1117, CP1111, CP1108 and CP1105 torque each bolt or nut to 36 to 45 lbfin (4 to 5 Nm).
 - (h) Put 5A8796 Oil Tube (ACOC Oil Supply Tube) to the External Gearbox.
 - (i) Attach the two 400WSS14 Clips on to 5A8796 Oil Tube (ACOC Oil Supply Tube) and MS21919F12 Clip and the two 400WSS12 Clips on to 4B7263 Oil Tube (Oil Tank Breather Tube).
 - (j) At CP1116 install 400WSS14 Clip on 5A8796 Oil Tube (ACOC Oil Supply Tube) to 5W8399 Bracket with 4W0103 Bolt, 5W1086 Washer and 4W0043 Clipnut.
 - (k) At CP1110 install 400WSS14 Clip on 5A8796 Oil Tube (ACOC Oil Supply Tube) and MS21919F12 Clip on 4B7263 Oil Tube (Oil Tank Breather Tube) to 4B7265 Bracket Assembly with 4W0104 Bolt, MS9321-09 Washer and AS41104 Clipnut.



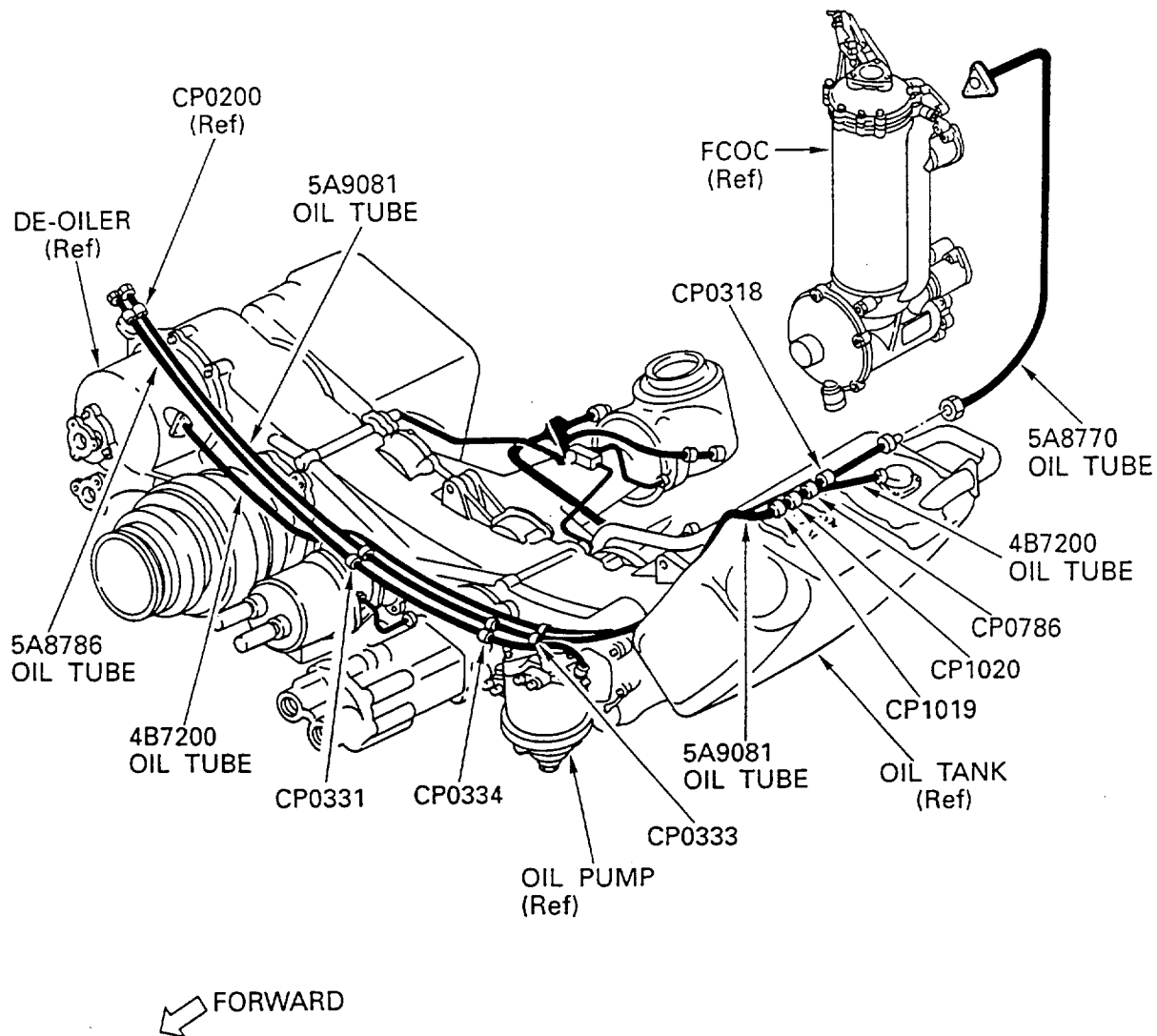
- (l) At CP1109 install 400WSS12 Clip on 4B7263 Oil Tube (Oil Tank Breathe Tube) to the lug on 5A8796 Oil Tube (ACOC Oil Supply Tube) with AS21407 Bolt, 5W1086 Washer and 4W0001 Nut.
 - (m) Install 5A8796 Oil Tube (ACOC Oil Supply Tube) to the Oil Pump by use of approved procedures in the Engine Manual, 72-00-60, Installation, TASK 72-00-60-420-002 (Refer to 1.K. (2)).
 - (n) At CP1116, CP1110 and CP1109 torque each bolt or nut to 36 to 45 lbfin (4 to 5 Nm).
 - (o) Install 5A8797 Oil Tube (ACOC to FCOC Oil Tube) to the FCOC by the approved procedures in the Engine Manual, 72-00-32, Installation, TASK 72-00-32-420-003 (Refer to 1.K. (2)).
- (5) Install the electrical harnesses to the LP Compressor/Intermediate Case Module as follows (Refer to Figure 7):
- (a) Install the EEC Fan Harness, the General Services Harness and the Ignition Supply Harness to the LP Compressor/Intermediate Case Module by use of approved procedures in the Engine Manual, 72-00-32, Installation, TASK 72-00-32-420-004 (Refer to 1.K.(2)).
 - (b) At the bottom and left hand side of the LP Compressor/Intermediate Case Module, assemble the following clipping positions (Refer to Figure 7):
 - (i) At CP1113, attach TA025074-15 Clip or AS61913 Clip on to the EEC Fan Harness and the Ignition Supply Harness, and TA025074-04 Clip or AS61902 Clip on to the General Service Harness and install them to 5W8398 Bracket with 4W0117 Bolt, 5W1086 Washer, 5W1032 Spacer and 4W0043 Clipnut. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm).
- NOTE:** The CP0845 with a new configuration is used to hold the Cooling Air Tube. Assemble this clipping position when 6A2156 is used, Cooling Air Tube Installation.
- (ii) At CP1112, attach TA025074-17 Clip or AS61915 Clip on to the EEC Fan Harness, the Ignition Supply Harness and the General Service Harness and install it to 5W8398, Bracket with 4W0103 Bolt, 5W1086 Washer and 4W0043 Clipnut. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm).
 - (iii) At CP0847 attach TA025074-18 Clip or AS61916 Clip on to the EEC Fan Harness, the Ignition Supply Harness and the General Service Harness and install it together with 400WSS8 Clip, on Cooling Air Tube to 740-5425-505 Bracket with 4W0104 Bolt, SP154D Washer and 4W0001 Nut. Torque the nut to 36 to 45 lbfin (4 to 5 Nm).



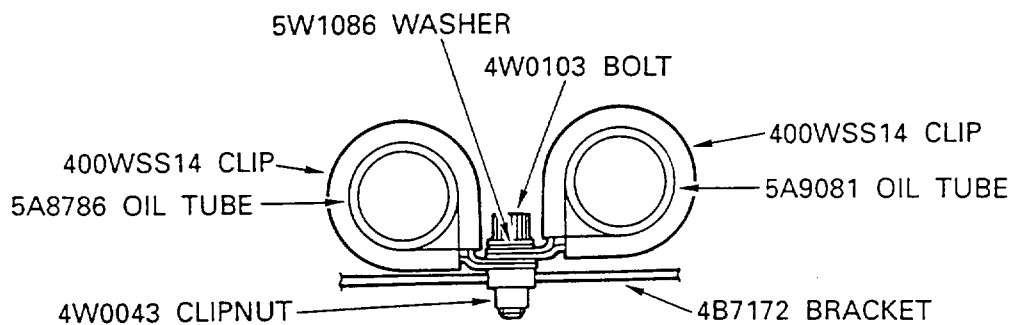
- (iv) At CP0893 attach TA025074-15 Clip or AS61913 Clip on to the EEC Fan Harness and the Ignition Supply Harness, and TA025074-02 Clip or AS61932 Clip, on to the General Service Harness and install them to the lug on 6A2156 Cooling Air Tube with 4W0104 Bolt, SP154D Washer and 4W0001 Nut. Torque the nut to 36 to 45 lbfin (4 to 5 Nm).
- (v) At CP1106 attach TA025074-17 Clip or AS61915 Clip, on to the EEC Fan Harness, the Ignition Supply Harness and the General service Harness and install it to the lug on 4B7263 Oil Tube (Oil Tank Breather Tube) with 4W0103 Bolt, 5W1086 Washer and 4W0001 Nut. Torque the nut to 36 to 45 lbfin (4 to 5 Nm).

C. Recording Instructions

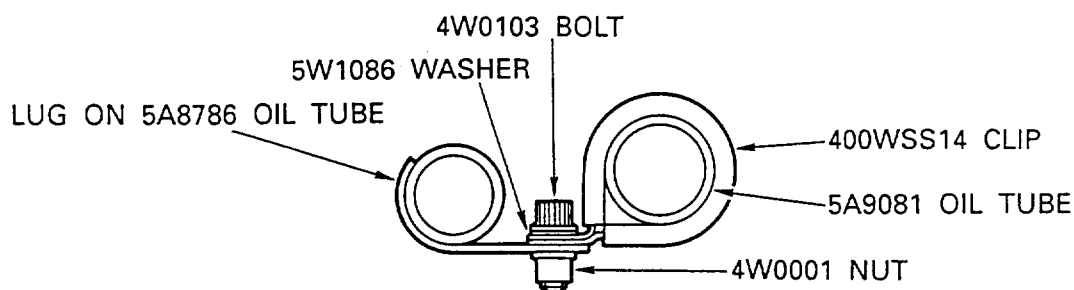
- (1) A record of accomplishment is necessary.



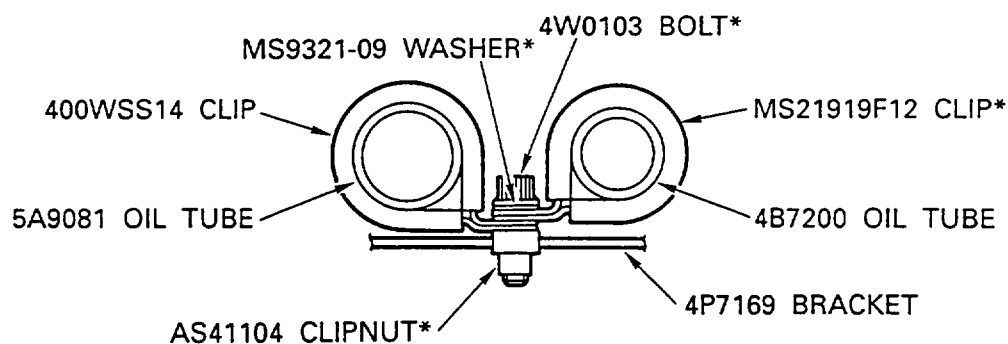
Pressure Oil Tubes and Tube Clipping Details - Before Alteration
Figure 1, Sheet 1 of 3



CLIPPING DETAIL AT CP0331 (Deleted)



CLIPPING DETAIL AT CP0334 (Deleted) (becomes CP1109)

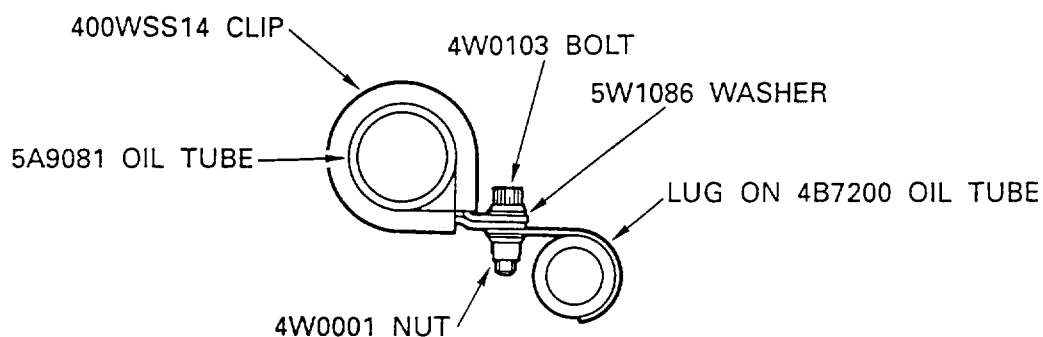


CLIPPING DETAIL AT CP0333 (Deleted)

*RE-USED AT CP1107 (AFTER ALTERATION)

Pressure Oil Tubes and Tube Clipping Details - Before Alteration
Figure 1, Sheet 2 of 3

ded0000302



CLIPPING DETAIL AT CP0318 (Deleted) (becomes CP1106)

ded00000303

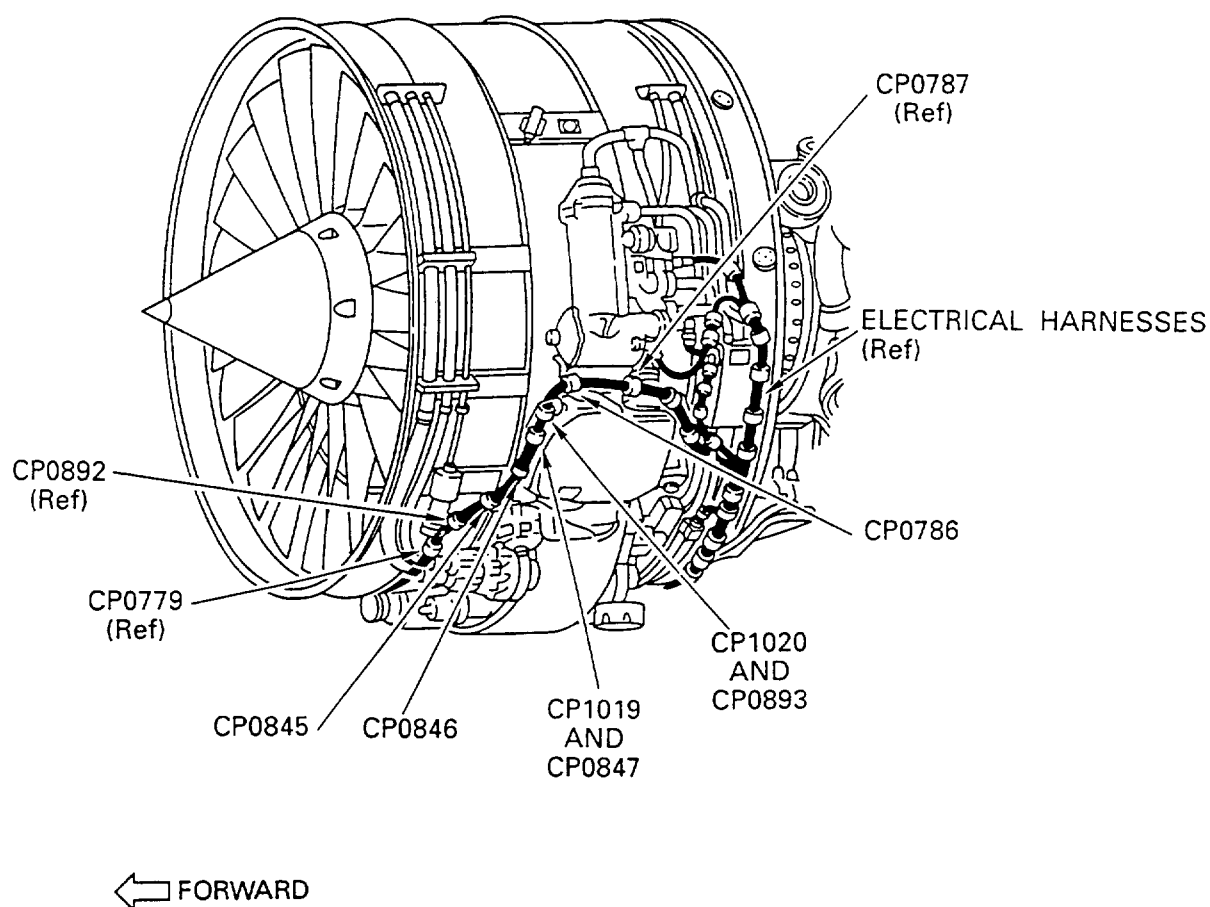
Pressure Oil Tubes and Tube Clipping Details - Before Alteration
Figure 1, Sheet 3 of 3

V2500-ENG-71-0110

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R Sep. 3/02

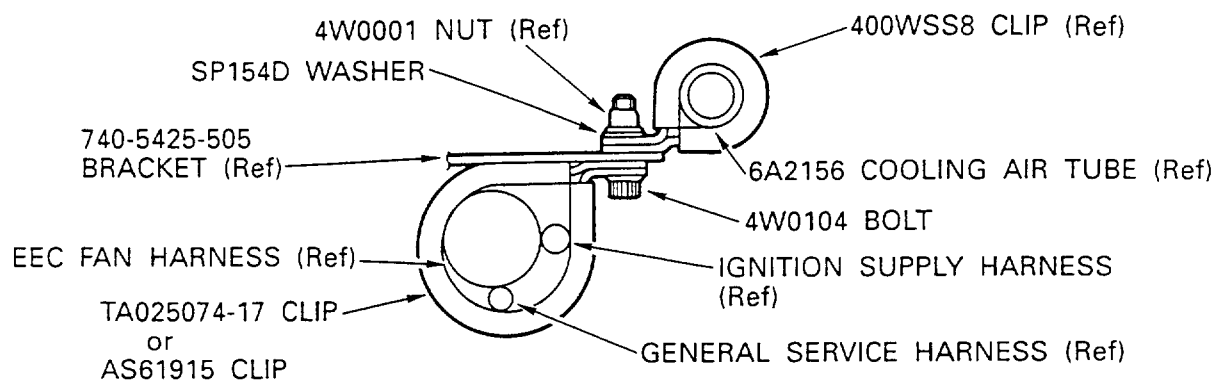
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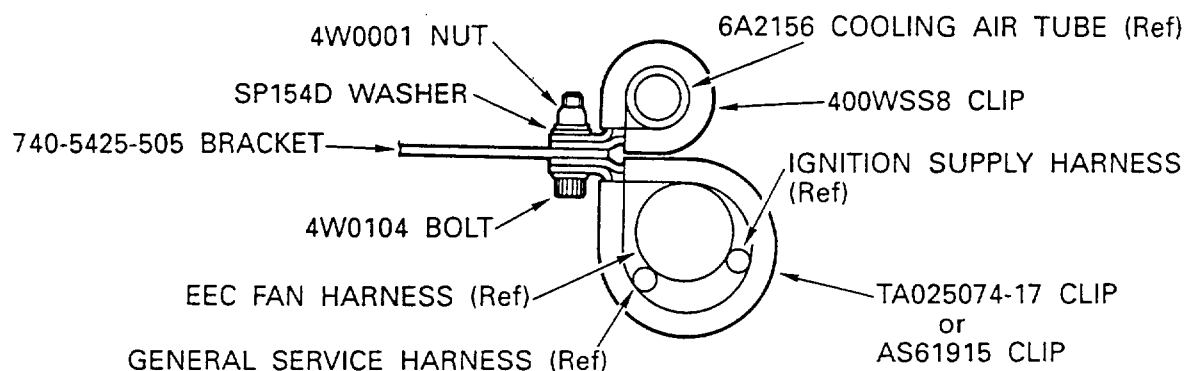


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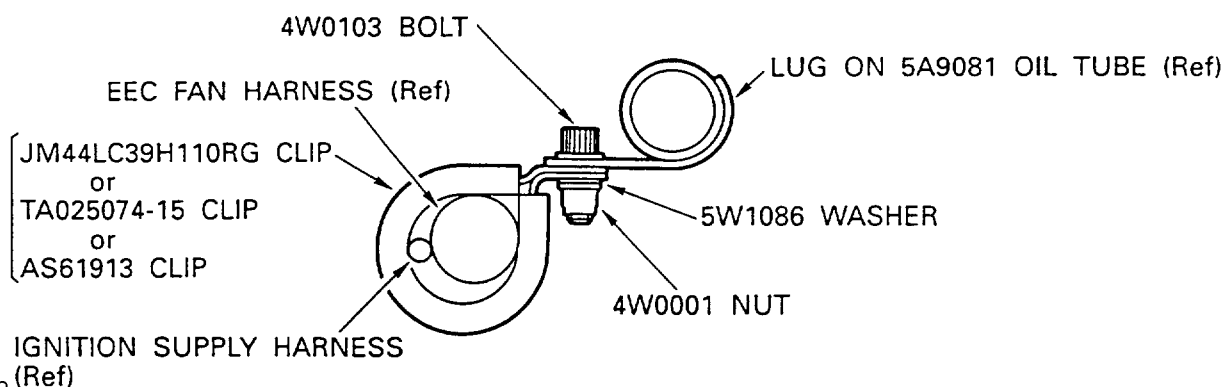
Clipping Details of the Electrical Harnesses - Before Alteration
Figure 2, Sheet 1 of 4



CLIPPING DETAIL AT CP0845 (Amended)



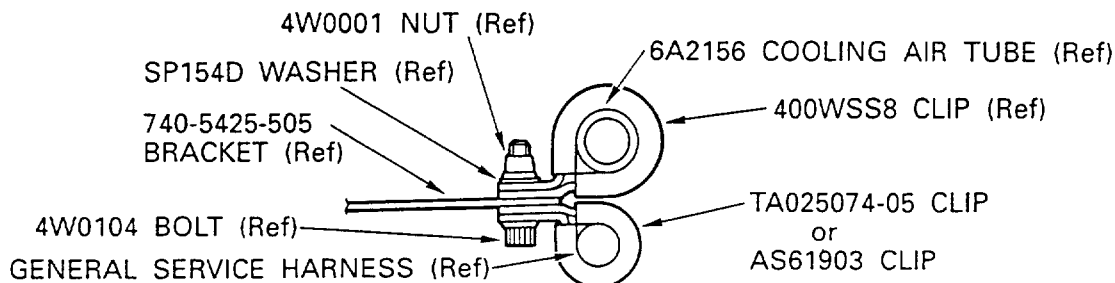
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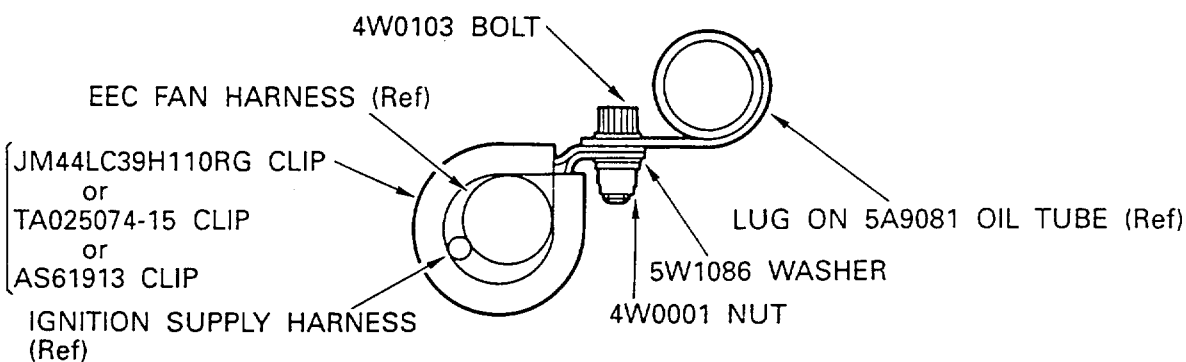
CLIPPING DETAIL AT CP1019 (Deleted)

Clipping Details of the Electrical Harnesses - Before Alteration
Figure 2, Sheet 2 of 4

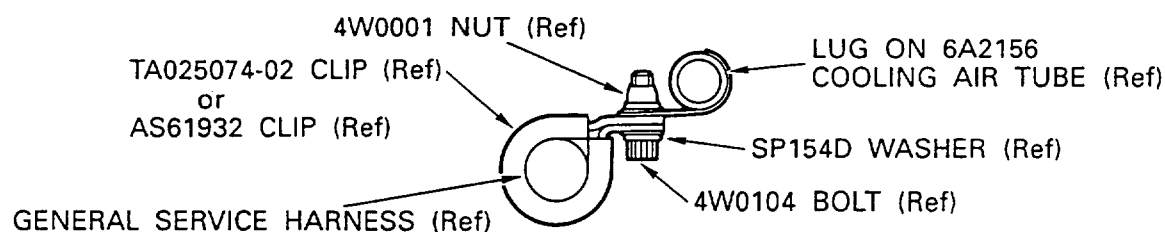
V2500-ENG-71-0110



CLIPPING DETAIL AT CP0847 (Amended)



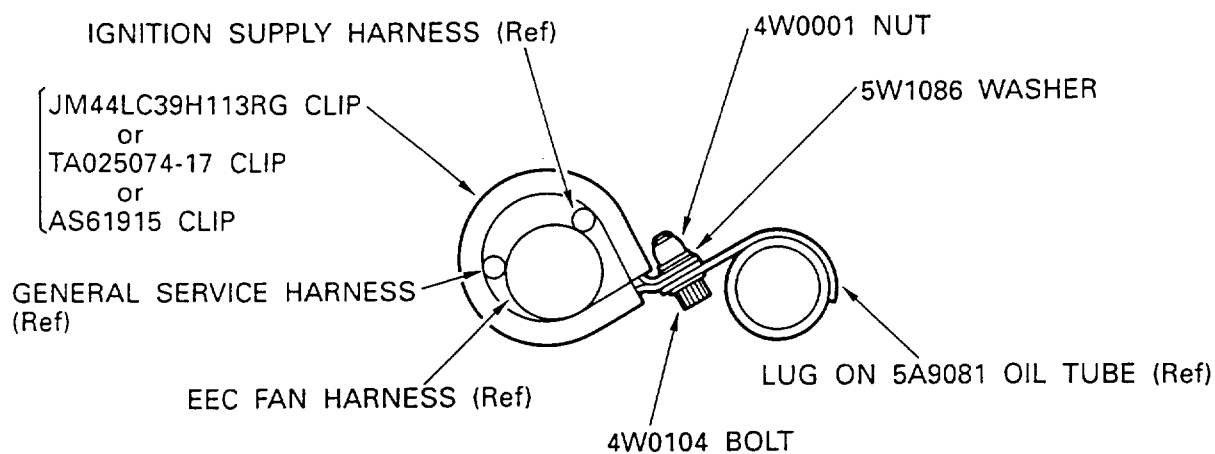
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CLIPPING DETAIL AT CP0893 (Amended)

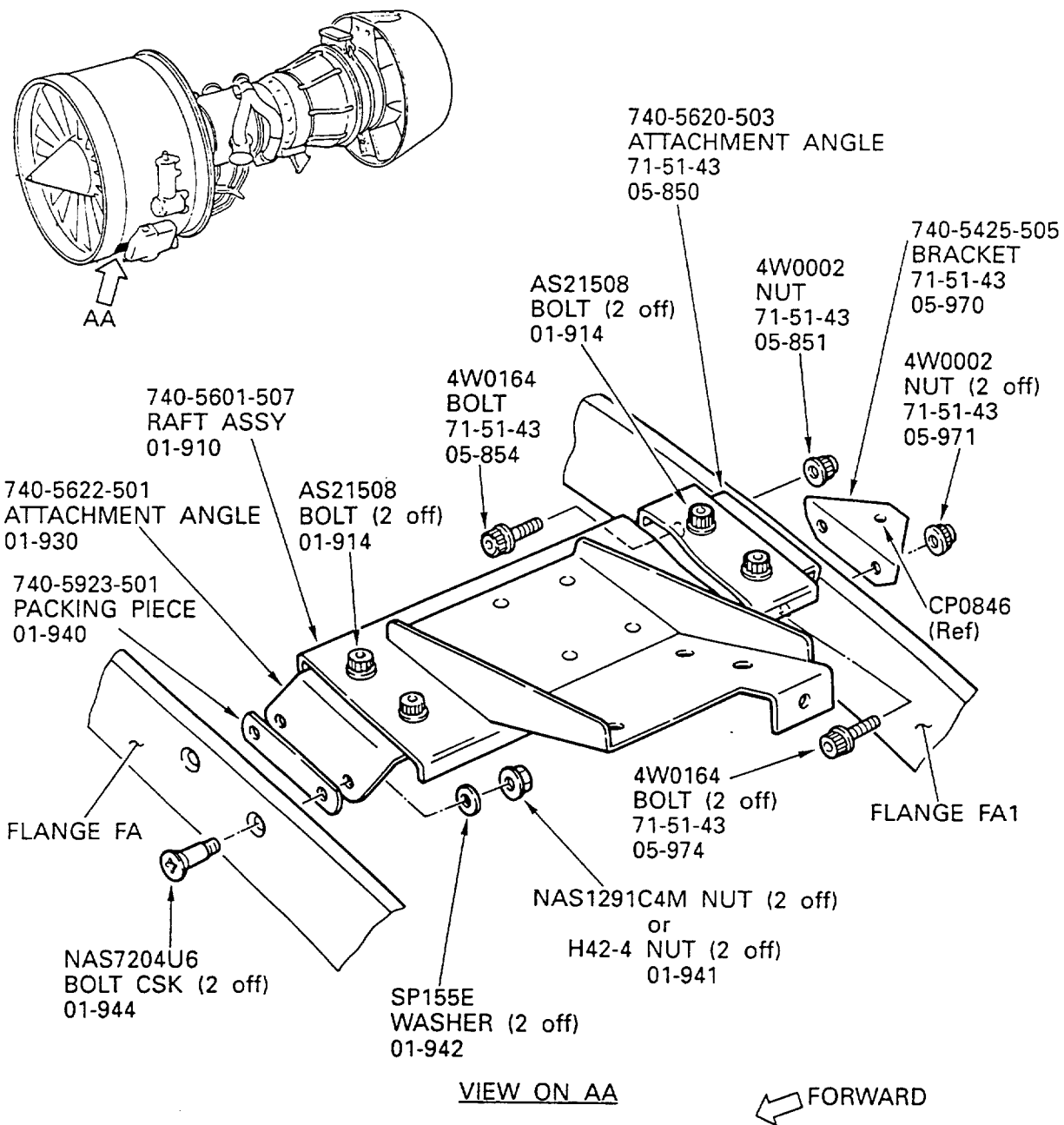
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Clipping Details of the Electrical Harnesses - Before Alteration
Figure 2, Sheet 3 of 4



CLIPPING DETAIL AT CP0786 (Deleted)

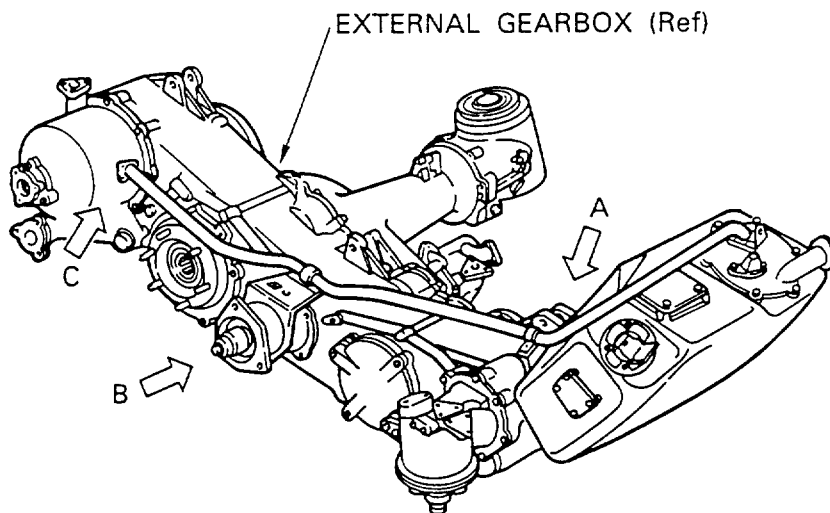
Clipping Details of the Electrical Harnesses - Before Alteration
Figure 2, Sheet 4 of 4



ALL EIPC FIG/ITEM NUMBERS ARE SHOWN BELOW PART NAMES
AND ARE 29-11-43 UNLESS IDENTIFIED DIFFERENTLY

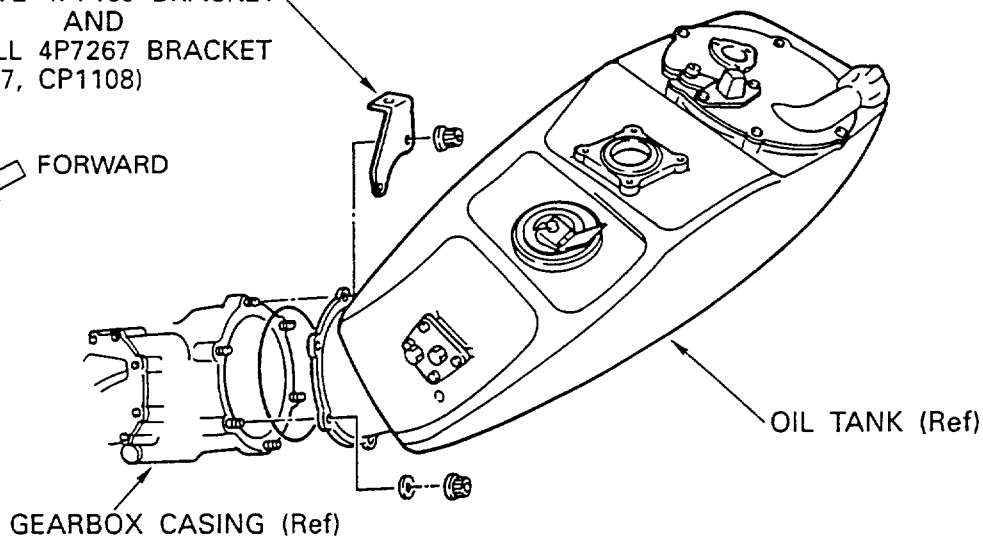
Raft and Brackets - Before Alteration
Figure 3

ded0000308



REMOVE 4P7169 BRACKET
AND
INSTALL 4P7267 BRACKET
(CP1107, CP1108)

FORWARD



VIEW ON A

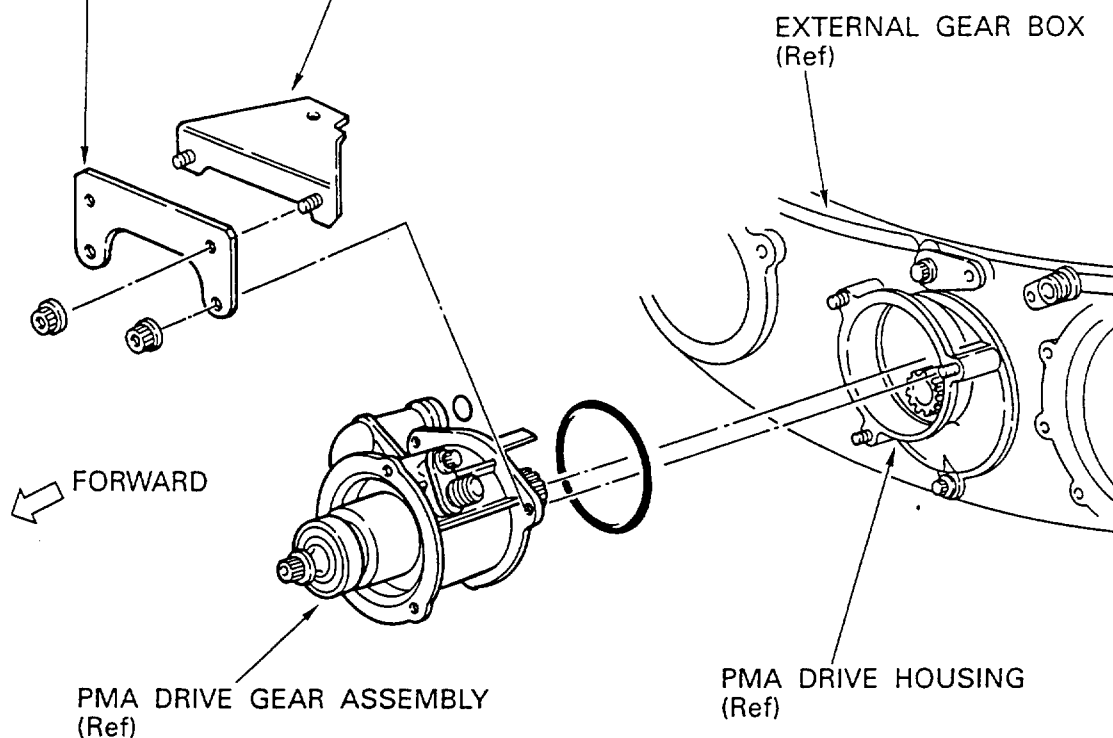
Location of Brackets on External Gearbox
Figure 4, Sheet 1 of 3

ded00000309



REMOVE 4P7171 BRACKET
AND
INSTALL 4P7266 BRACKET
(CP1110, CP1111)

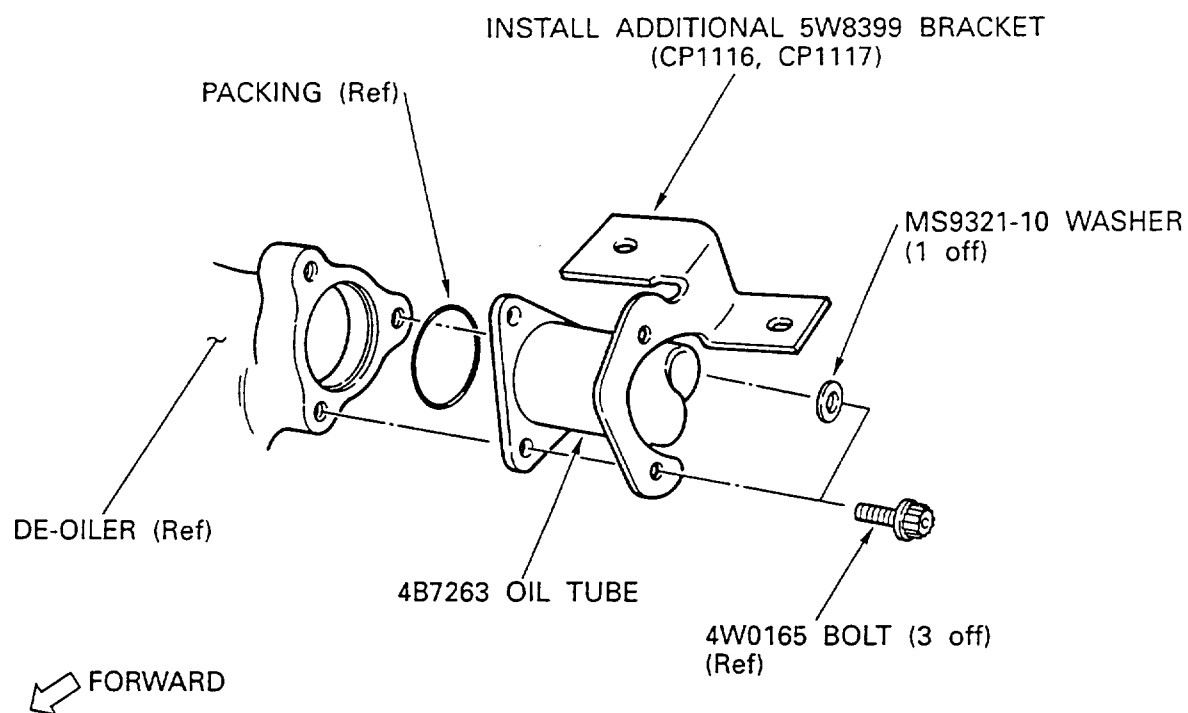
REMOVE 4B7172 BRACKET
AND
INSTALL 4B7265 BRACKET
(CP1110, CP1111)



VIEW ON B

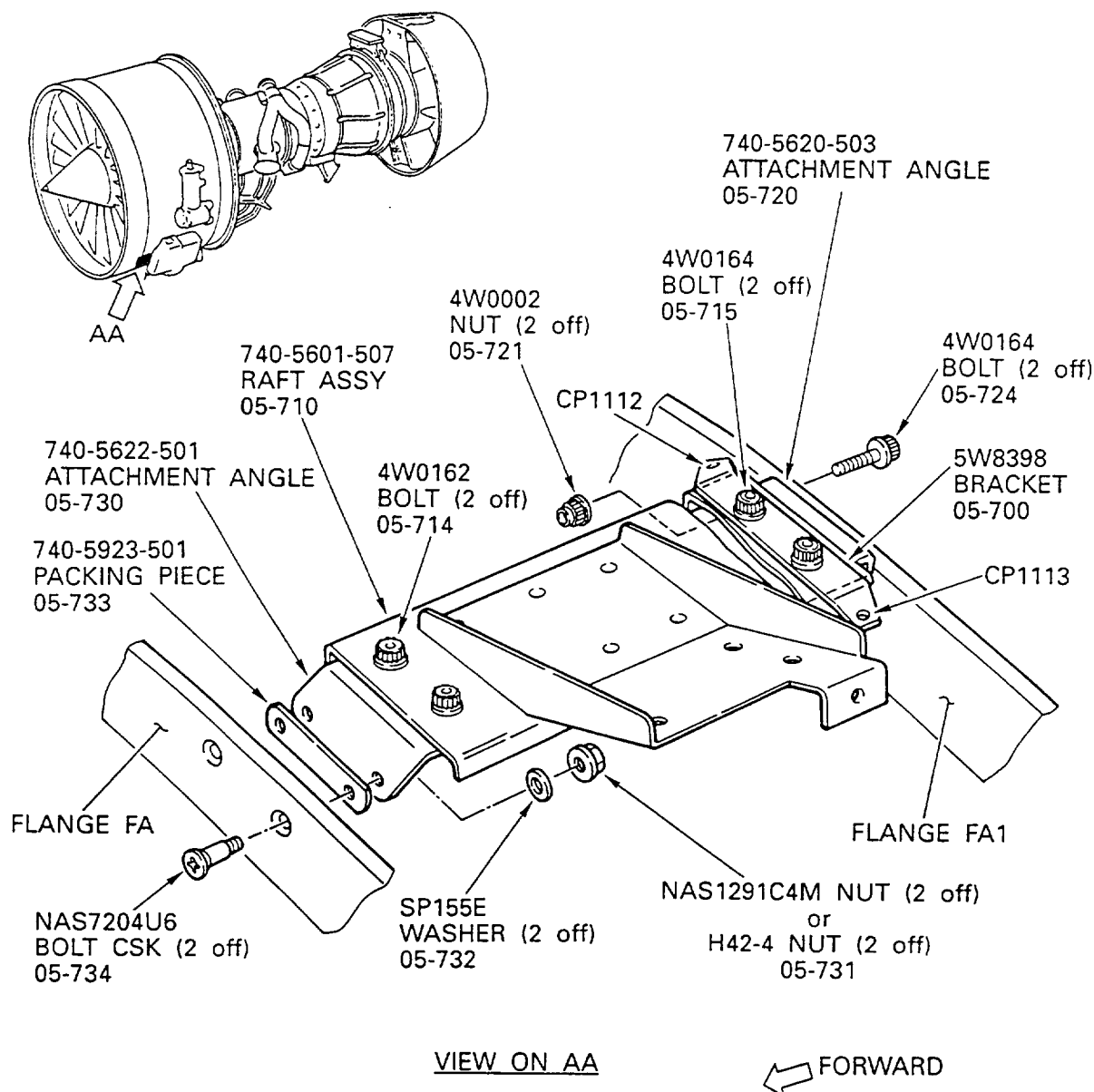
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Location of Brackets on External Gearbox
Figure 4, Sheet 2 of 3



VIEW ON C

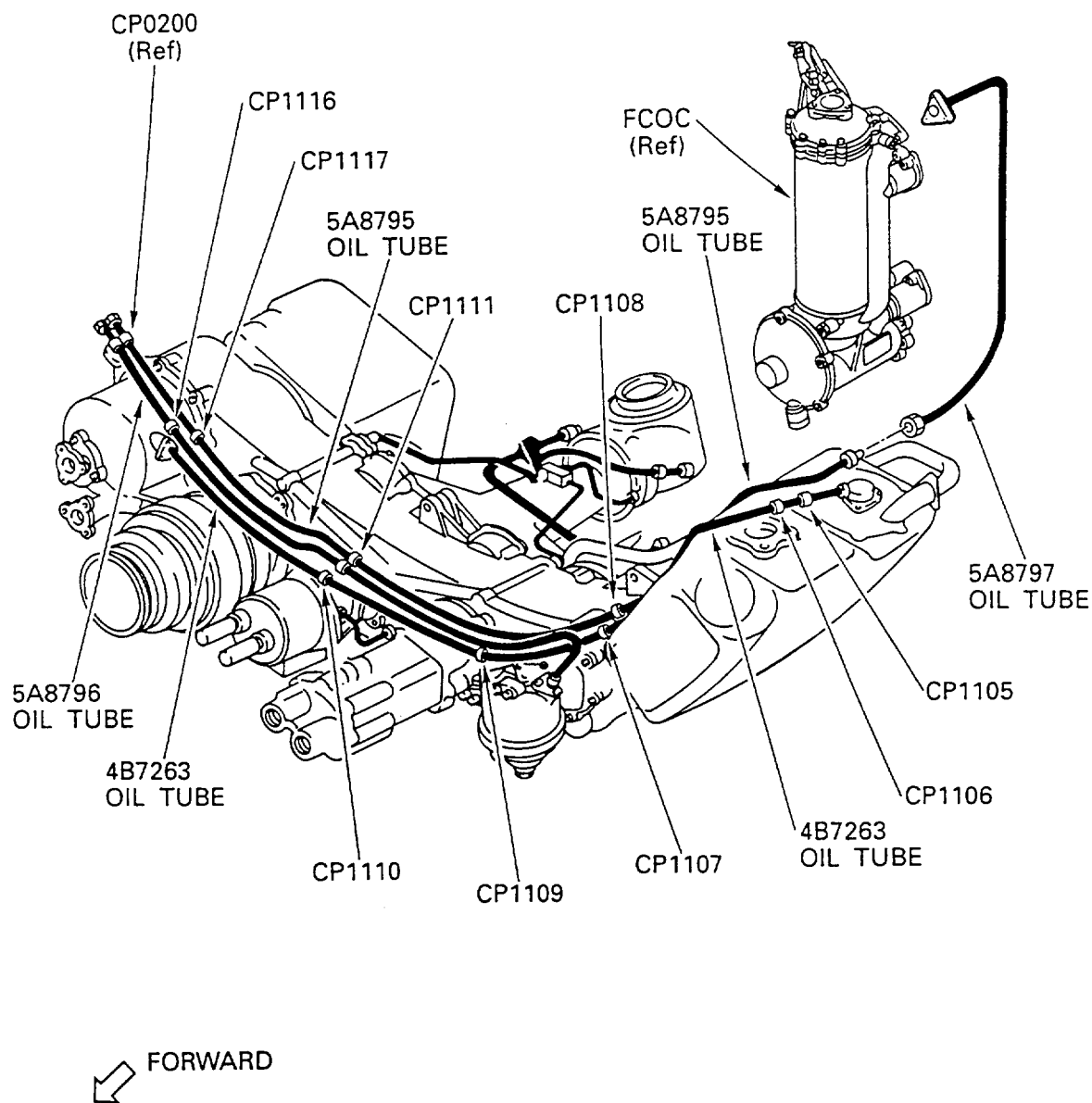
Location of Brackets on External Gearbox
Figure 4, Sheet 3 of 3



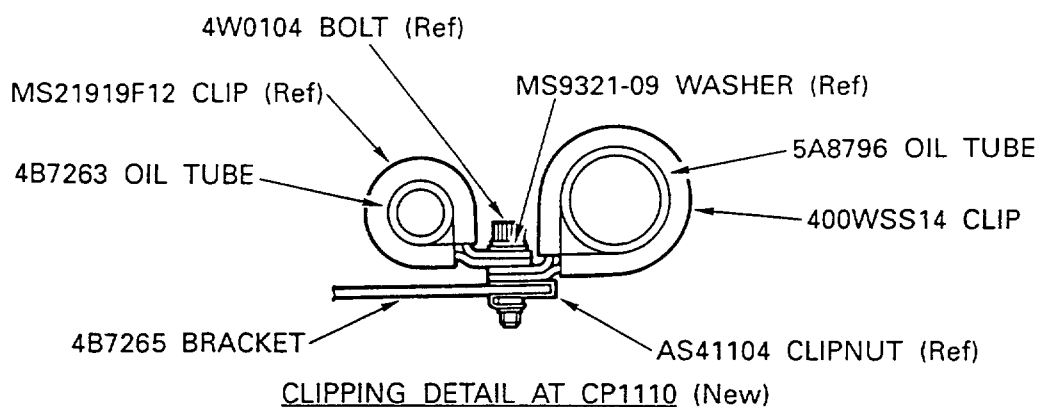
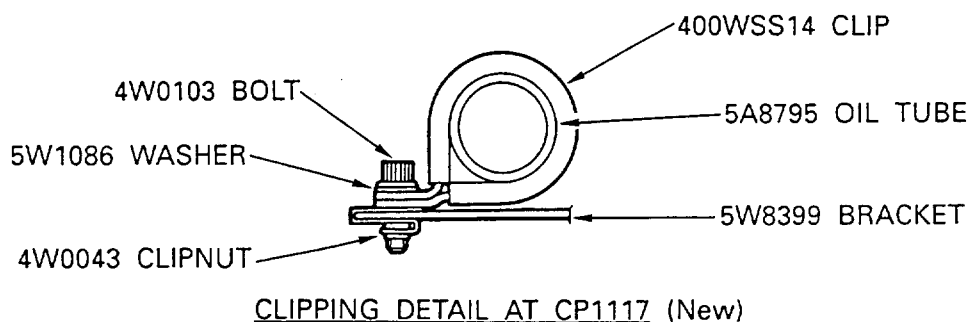
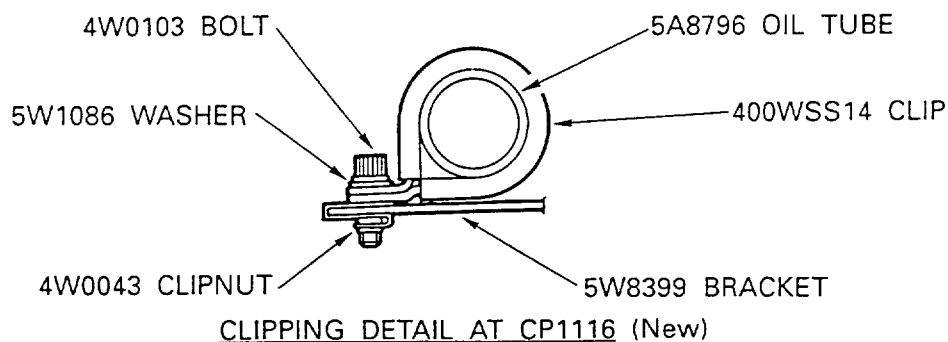
ALL EIPC FIG/ITEM NUMBERS ARE SHOWN BELOW PART NAMES
AND ARE 71-51-41 UNLESS IDENTIFIED DIFFERENTLY

Raft and Brackets - After Alteration
Figure 5

ded0000312

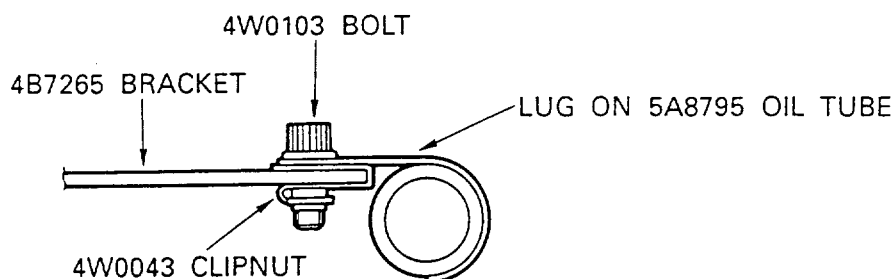


Pressure Oil Tubes and Tube Clipping Details - After Alteration
Figure 6, Sheet 1 of 4

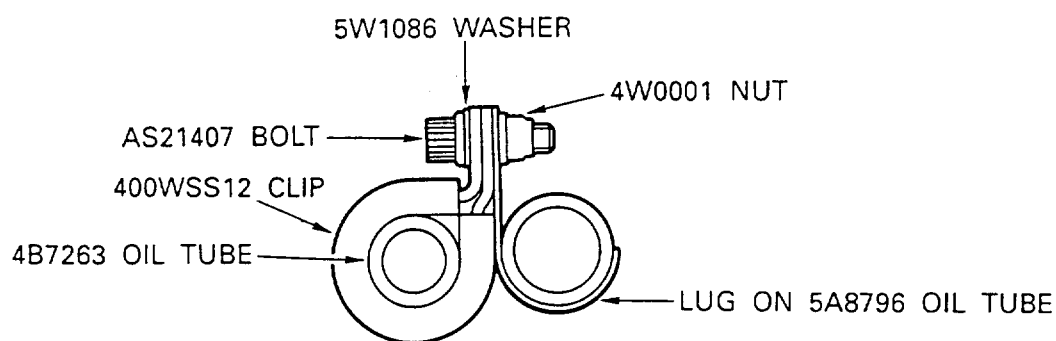


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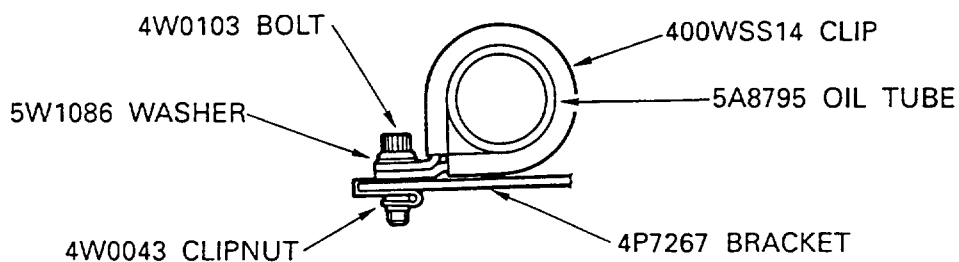
Pressure Oil Tubes and Tube Clipping Details - After Alteration
Figure 6, Sheet 2 of 4



CLIPPING DETAIL AT CP1111 (New)

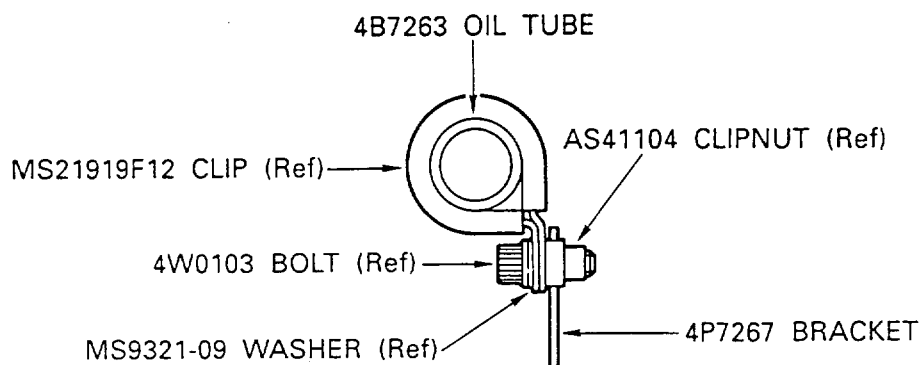


CLIPPING DETAIL AT CP1109 (New) (Replaces CP0334)

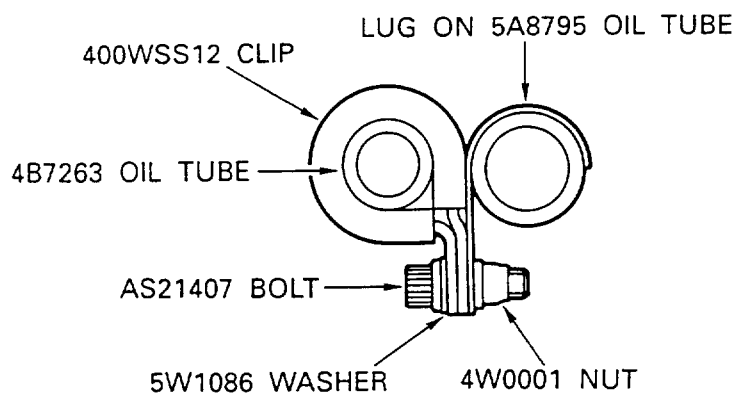


CLIPPING DETAIL AT CP1108 (New)

Pressure Oil Tubes and Tube Clipping Details - After Alteration
Figure 6, Sheet 3 of 4



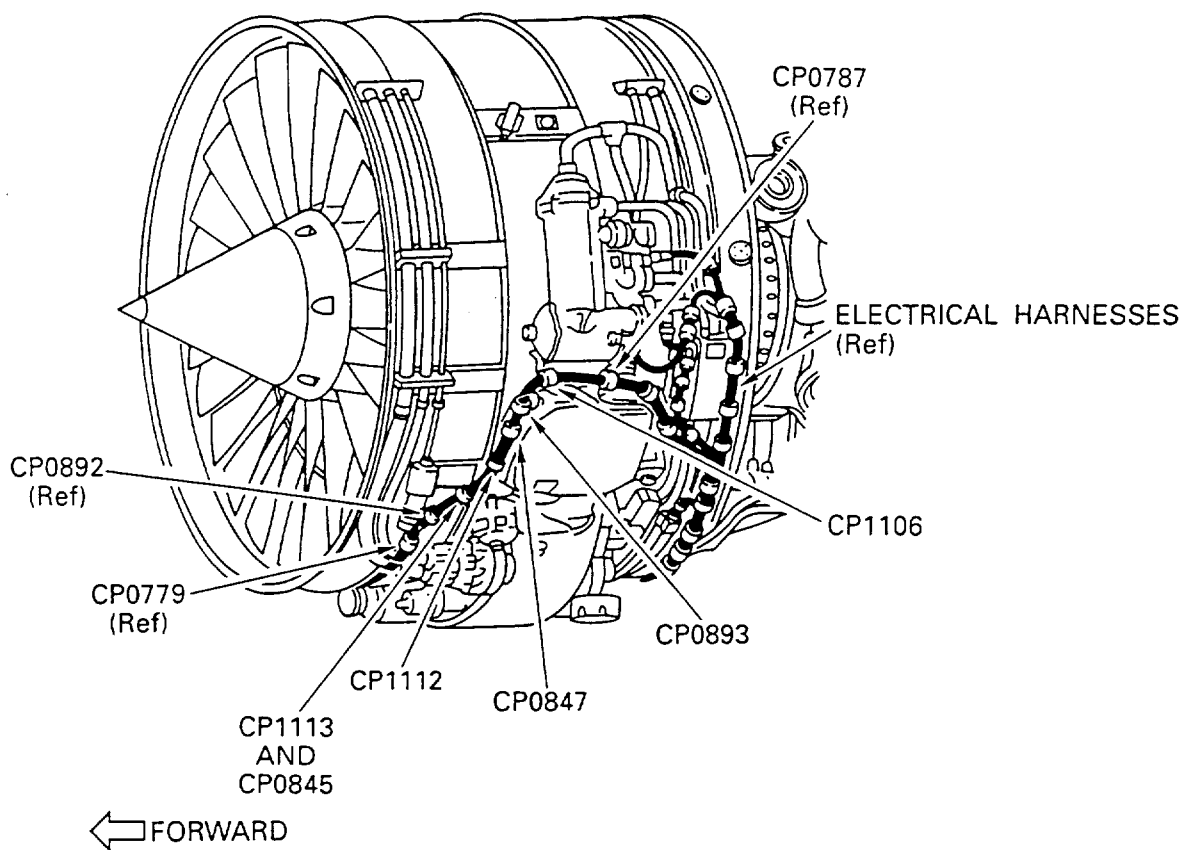
CLIPPING DETAIL AT CP1107 (New)



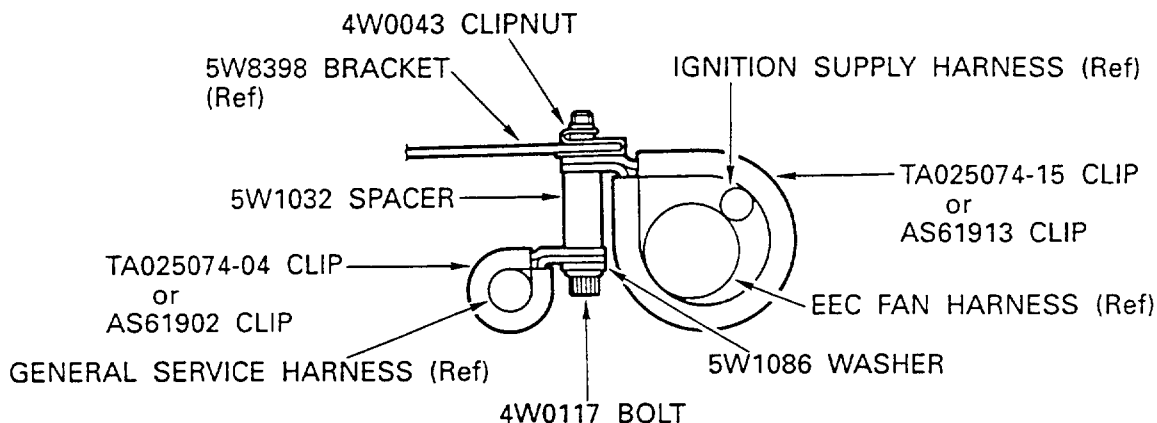
CLIPPING DETAIL AT CP1105 (New)

ded0000316

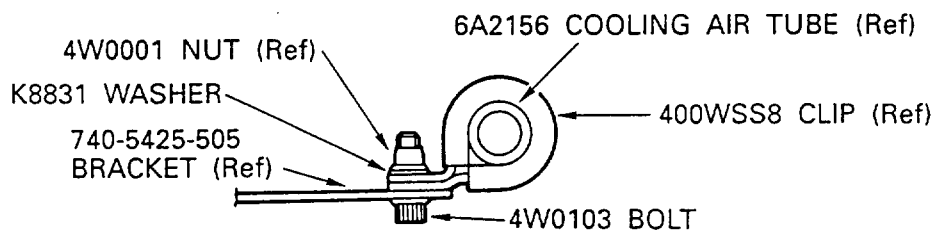
Pressure Oil Tubes and Tube Clipping Details - After Alteration
Figure 6, Sheet 4 of 4



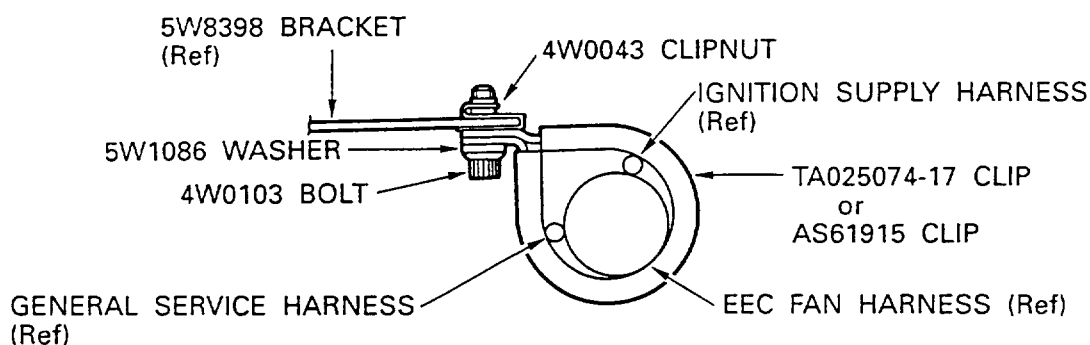
Clipping Details of the Electrical Harnesses - After Alteration
Figure 7, Sheet 1 of 3



CLIPPING DETAIL AT CP1113 (New)

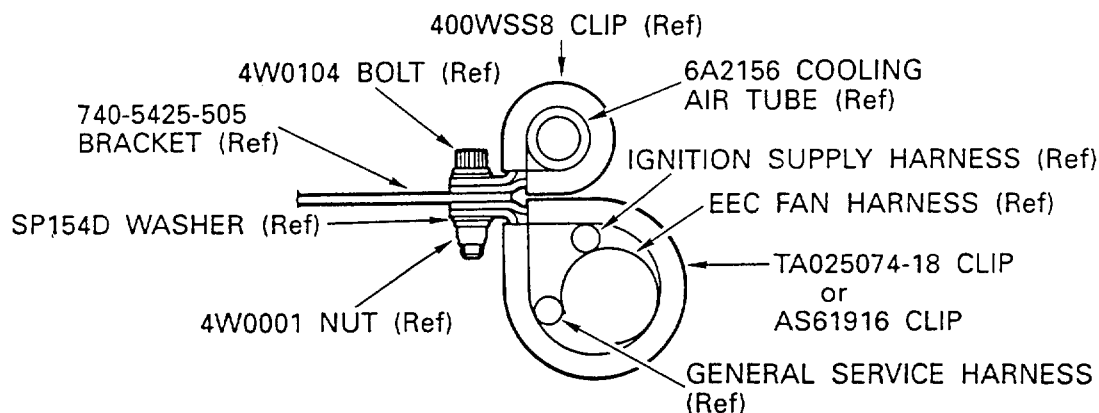


CLIPPING DETAIL AT CP0845 (Amended)

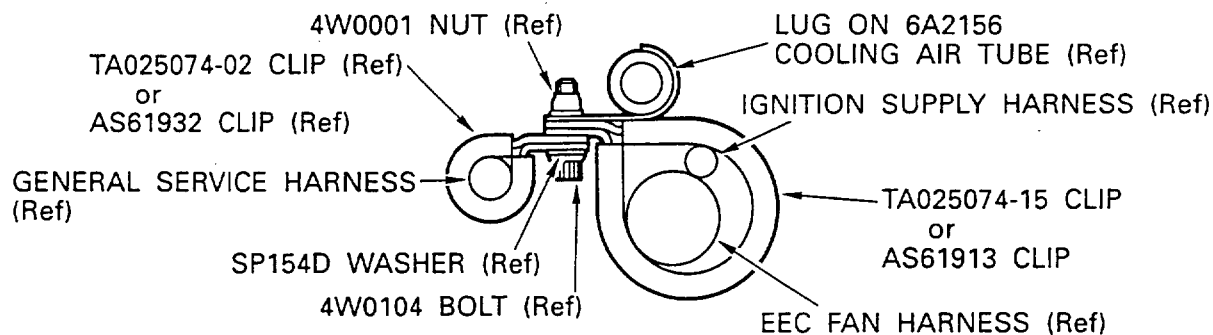


CLIPPING DETAIL AT CP1112 (New)

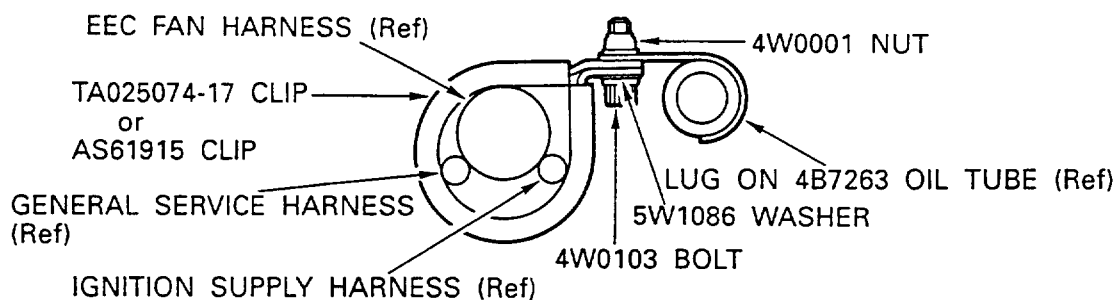
Clipping Details of the Electrical Harnesses - After Alteration
Figure 7, Sheet 2 of 3



CLIPPING DETAIL AT CP0847 (Amended)



CLIPPING DETAIL AT CP0893 (Amended)



CLIPPING DETAIL AT CP1106 (New) (Replaces CP0318)

Clipping Details of the Electrical Harnesses - After Alteration
Figure 7, Sheet 3 of 3