POWER PLANT - ENGINE - RESET EDUCTOR SYSTEM WITH REVISED HARNESS AND CLIPPING - CATEGORY CODE 6 - MOD.ENG-71-0150

1. Planning Information

A. Effectivity

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

(2) Engine: (a) V2500-A1 Engines prior to serial No.V20009.

B. Concurrent Requirements

None

C. Reason

(1) Condition

See 'Background'

(2) Background

Improved to the existing eductor system have been identified during the MD-90/V2500-D5 flight test programme.

(3) Objective

This Service Bulletin introduces a revised eductor system with improved operation capabilities and reliability.

(4) Substantiation

A kit of run-to-engine pipes were incorporated on a DAC suction feed climb capability rig-test, following testing DAC deemed this new eductor system to be acceptable.

(5) Effect of Bulletin on Workshop Procedures:

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

(6) Supplemental Information

(a) The Removal/Installtion will be revised to add the new configuration of this Service Bulletin.

D. Description

This Service Bulletin introduces the following changes:

(1) A new eductor valve assembly.

The new eductor valve assembly is identical to the existing valve except for internal revisions to provide improved capability.

(2) A new pipe assembly which runs from the fuel bridle pipe to the L.P. pump inlet to replace the existing pipe assembly. The new pipe assembly has been rerouted to accomodate the new eductor system hardware and an end fitting altered.

The new pipe assembly is supported by a new clipping point 2647 on a new bracket fitted on the rear face of flange FE at the bolt holes 183.75 degrees and 186.25 degrees clockwise from TDC. The existing bracket for clipping point 2520 at this position is deleted.

(3) A new pipe assembly which runs from the eductor outlet to a tapping on the new end fitting on the pipe assembly above to replace the existing pipe assembly.

The new pipe assembly is supported by an amended clipping point 2359 which is supported on a new raceway and new clipping point 2648 which is supported by an inline clipping lug on the pipe assembly below and 2649 which is supported from a modified bracket fitted off the end fitting on the L.P. fuel pump of the pipe assembly above, this bracket also supports clipping point 2381. Clipping points 2364 and 2365 which supported the old pipe assembly are deleted.

(4) A new pipe assembly which runs from the fuel bridle pipe to the eductor inlet to replace the existing pipe assembly. The new pipe assembly is similar to the existing except for slight rerouting and an additional inline clipping lug for clipping point 2648.

The new pipe assembly is supported by an amended clipping point 2368.

(5) A new pipe assembly which runs from the No.8 strut to the oil scavenge pump to replace the existing tube assembly.

The new pipe assembly is identical to the existing except for the deletion of the J-blade for clipping point 2440 which has been deleted and an additional J-blade for new clipping point 2650 for support.

(6) A new raceway which runs from clipping point 2351 to clipping point 2363 to replace the existing raceway.

The new raceway has been rerouted to accomodate the new eductor system and 4 off additional J-blades to support new clipping points to give a total of 13 clipping lugs.

(7) The clipping point changes are as follows:-

a) Existing clipping points 2360, 2361, 2364, 2365 and 2520 are deleted.

b) Existing clipping points 2351, 2359, 2363, 2368, 2374, 2376, 2381 and 2515 are amended.

c) New clipping points 2647, 2648, 2649, 2651, 2652, 2653, 2654, 2655, 2656 and 2657 are added.

(8) A new harness loom 'A' assembly to replace the existing assembly.

The new harness assembly is identical to the existing harness except for the break out position for the FMU connector. The distance from the datum position D2358 to the new break-out position is reduced from 15.250 in. (387,35mm) to 8.250 in. (209,55mm).

Existing harness assemblies can be reworked as instructed in the accomplishment instructions to the revised break point and re-identified to the modified standard.

(9) A new harness loom 'B' assembly to replace existing assembly.

The new harness assembly is identical to the existing harness except for the breakout position for the FMU connector. The distance from the datum position D2378 to the new break-out position is reduced from 13.000in. (330,20mm) to 7.000in. (117,80mm). Existing harness assemblies can be reworked as instructed in the accomplishment instructions to the revised break point and re-identified to the modified standard.

(10) A new LP/HP fuel pump assembly

The new LP/HP fuel pump is identical to the existing pump except for a fuel tube nipple, previously connected to the eductor system, which is replaced by a plug.

E. 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.

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 Mamhours
(1) In Service	Not applicable
(2) At Overhaul	Not applicable

H. Material - Price and Availability

(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.

J. Weight and Balance

(1) Weight Change	Plus 0.81b (0,36kg)
(2) Moment Arm	3.5 in (89 mm) forward of datum
(3) Datum	Engine front mount cCenterline (Power Plant Station (PPS) 100)

K. Electrical Load Data

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

L. References

(1) Internal Reference No.

93VR098

93VR098B

93VR098C

(2) Other References

Overhaul Processes and Consumables Index (PCI-V2500-1IA)

M. Other Publications Affected

(1) V2500 Illustrated Parts Catalog (S-V2500-3IA), Chapter/Section 71-51-50, 71-51-51, 71-51-54, 71-51-61, 73-11-49, 73-12-41, 73-13-04, 75-22-49 and 79-22-49.

(2) V2500 Engine Manual (S-V2500-3IA), 72-00-32, Removal-02 and -03, Installation-03 and -04.

(3) V2500 Engine Manual (E-V2500-3IA), 72-00-60, Removal-01 and -02, Installation-03 and -04.

(4) V2500 Component Maintenance Manual (CMM-EHC-V2500-3IA), 71-51-51, Cleaning, Inspection/Check and Testing.

(5) V2500 Component Maintenance Manual (CMM-EHC-V2500-3IA), 71-51-54, Cleaning, Inspection/Check and Testing.

(6) V2500 Component Maintenance Manual (CMM-MECH-V2500-3IA), 73-11-49, Cleaning and Inspection/Check.

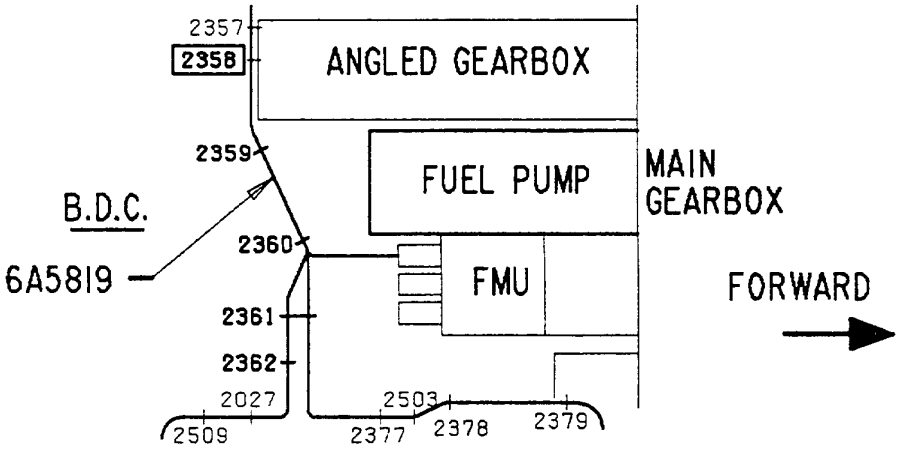
(7) V2500 Component Maintenance Manual (CMM-THD-V2500-3IA), 73-11-49, Cleaning, Inspection/Check and Testing.

(8) V2500 Component Maintenance Manual (CMM-THD-V2500-3IA), 79-22-49, Cleaning, Inspection/Check and Testing.

(9) V2500 Engine Maintenance Manual (M-V2500-3IA), 72-60-00, Removal/Installation.

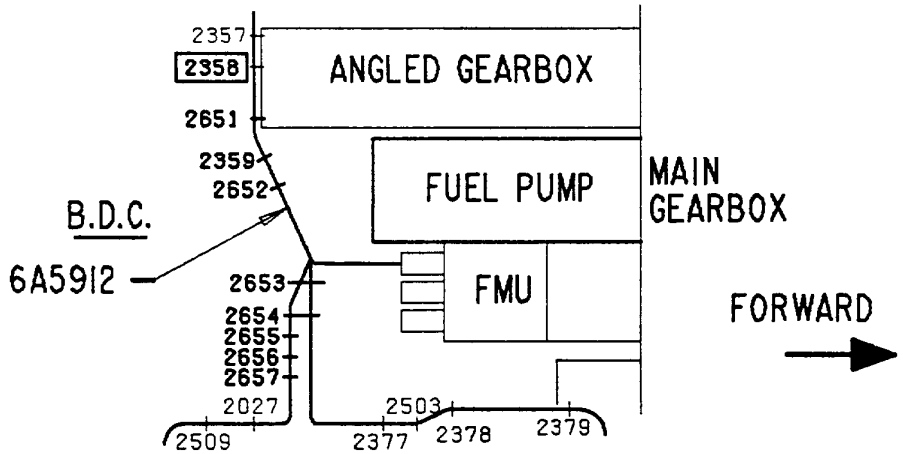
(10) V2500 Engine Maintenance Manual (M-V2500-3IA), 71-51-51, Removal/Installation.

(11) V2500 Engine Maintenance Manual (M-V2500-3IA), 71-51-54, Removal/Installation.



PART SCHEMATIC VIEW
OF HARNESS LOOM A

BEFORE ALTERATION



PART SCHEMATIC VIEW
OF HARNESS LOOM A

AFTER ALTERATION

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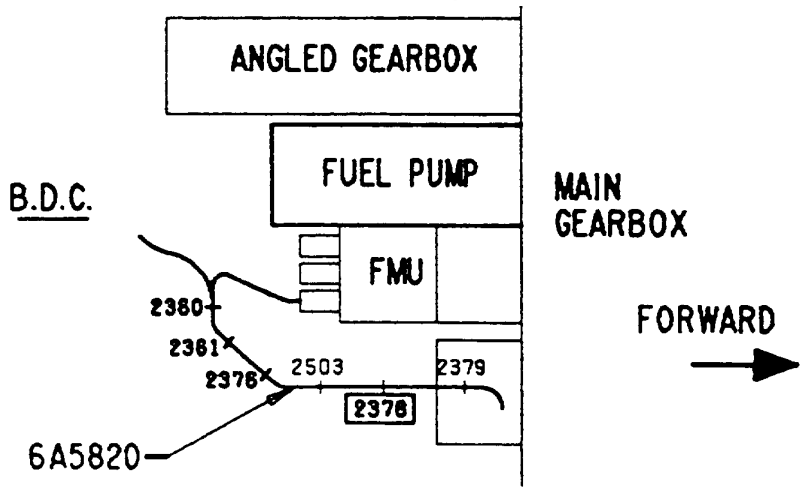
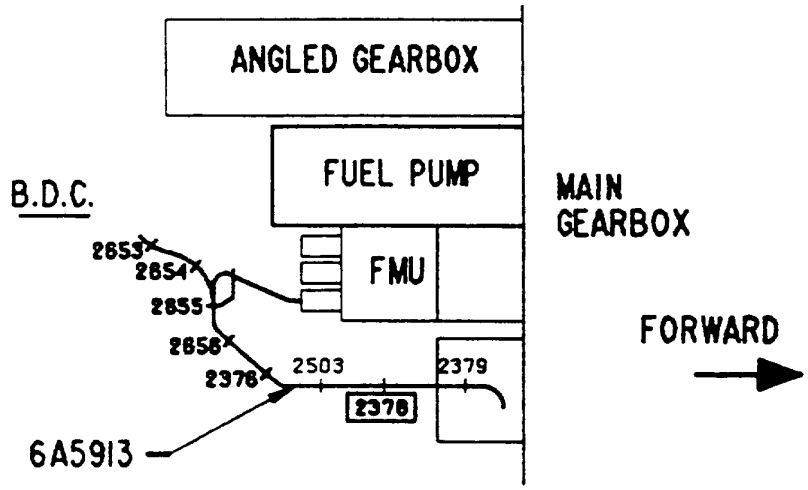
Part schematic view of harness loom A - Before and after alteration
Fig.1



PART SCHEMATIC VIEW
OF HARNESS LOOM B

BEFORE ALTERATION



PART SCHEMATIC VIEW
OF HARNESS LOOM B

AFTER ALTERATION

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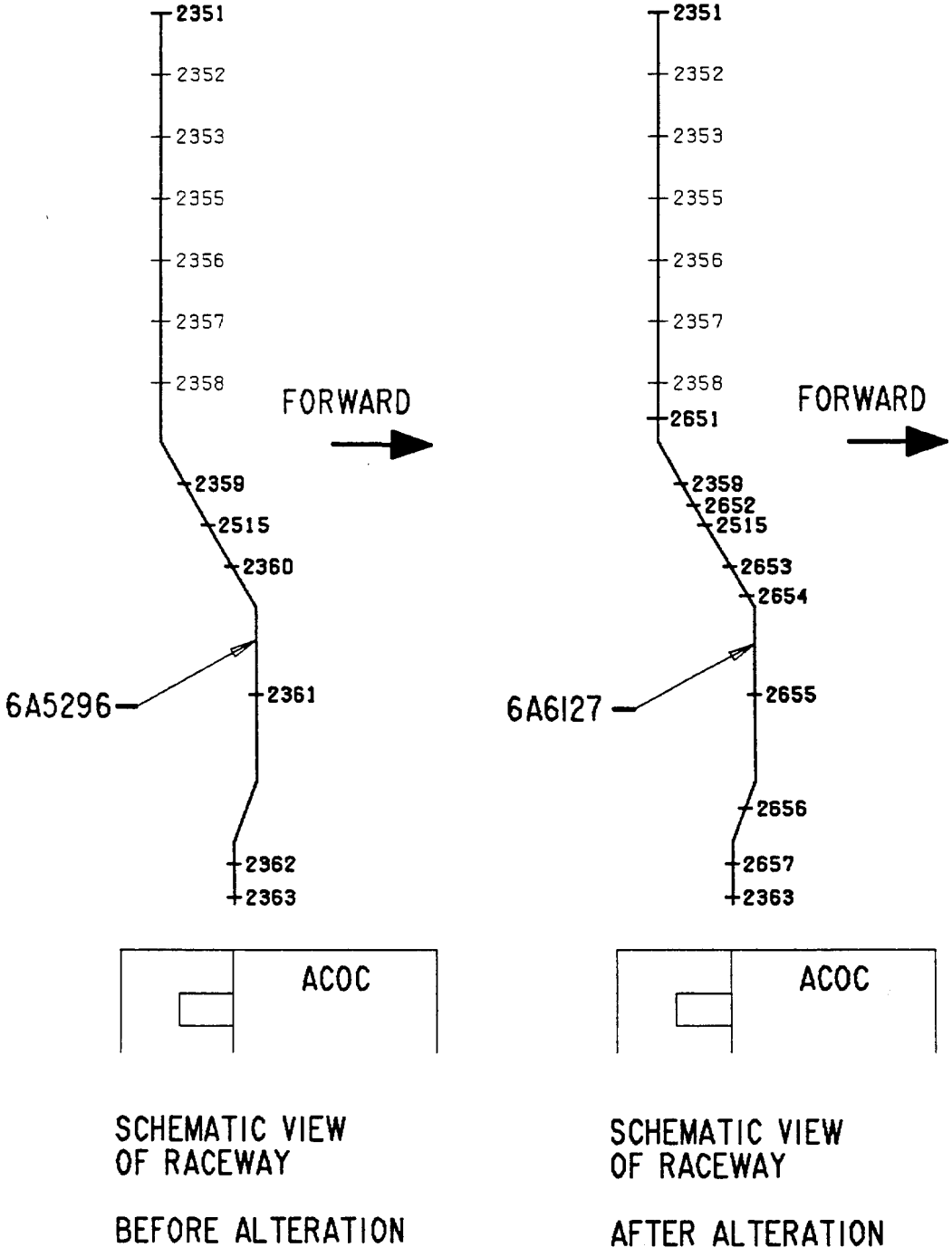
Part schematic view of harness loom B - Before and after alteration
Fig.2



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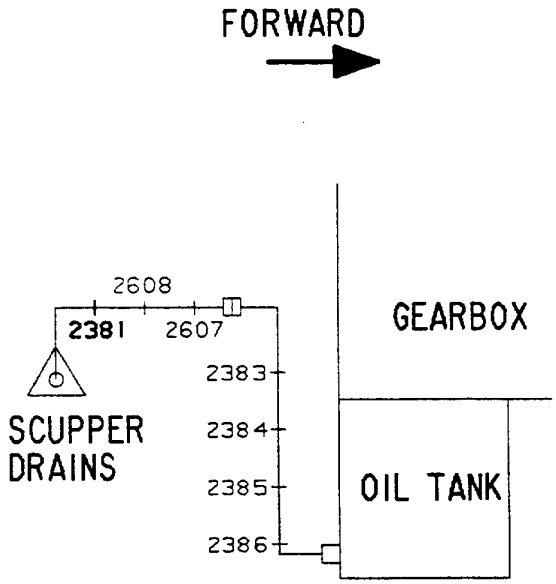
Schematic view of raceway - Before and after alteration
Fig.3



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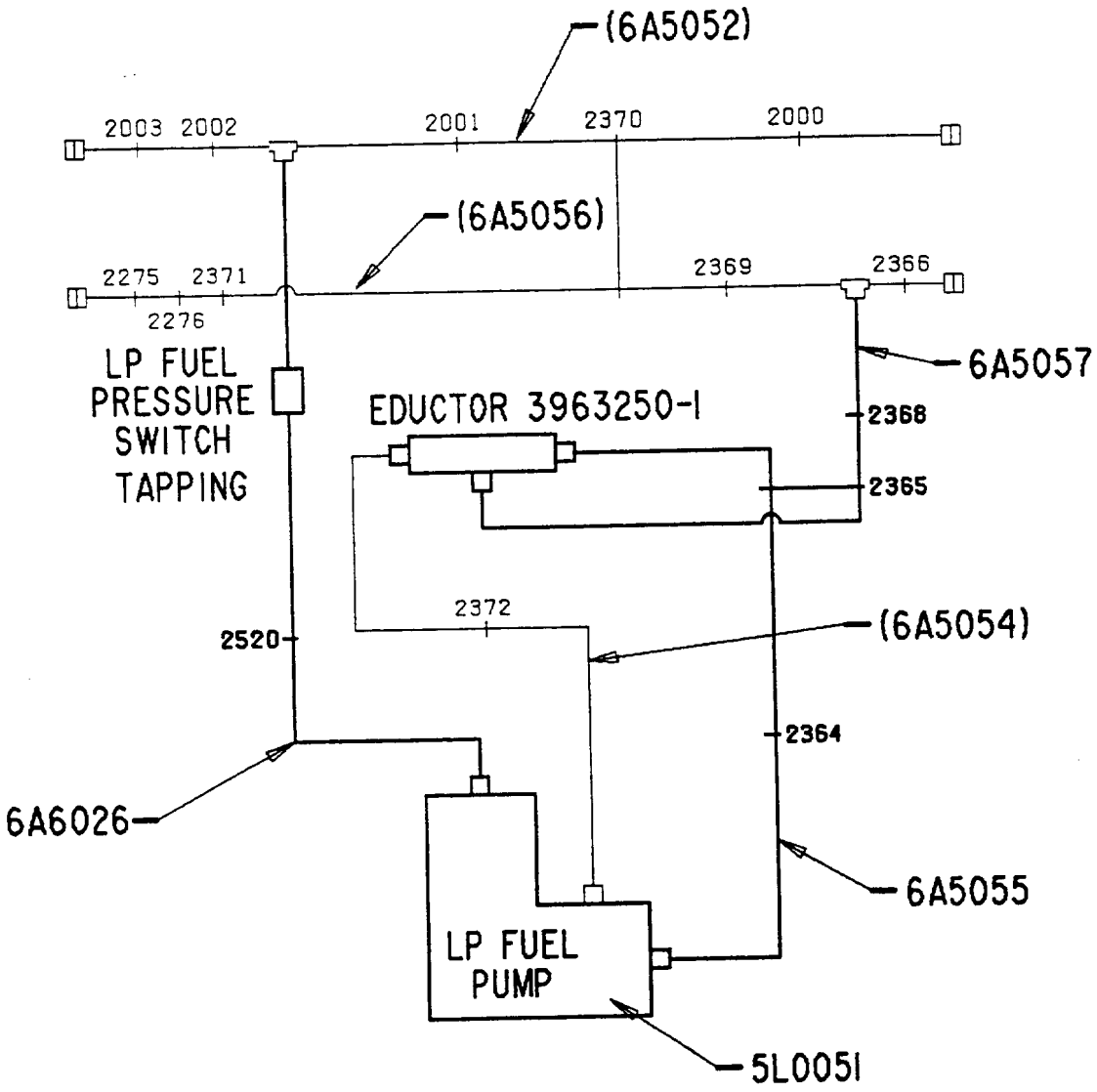
Part schematic view of drain tubes - Before and after alteration
Fig.4



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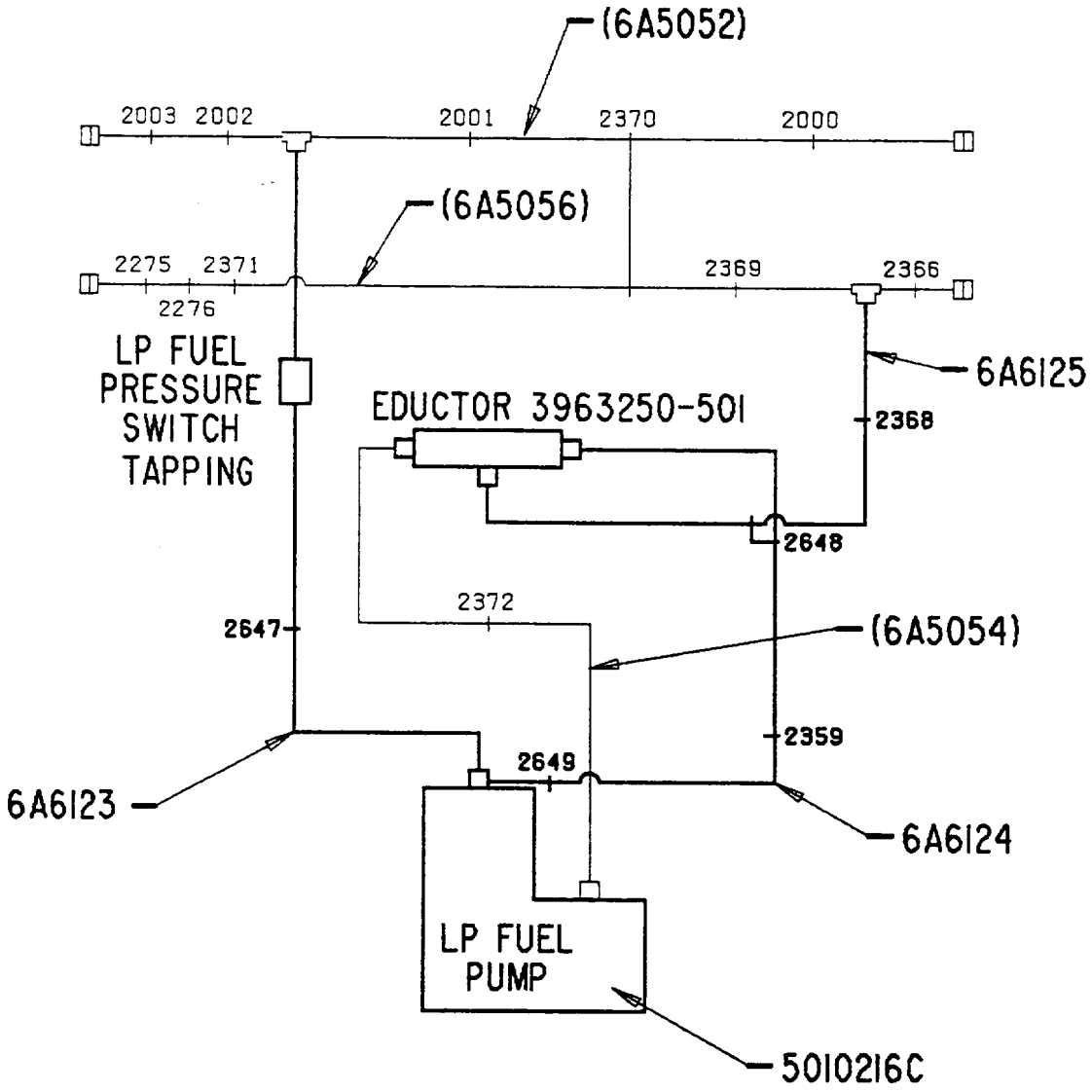
Schematic view of fuel tubes - Before alteration
Fig.5



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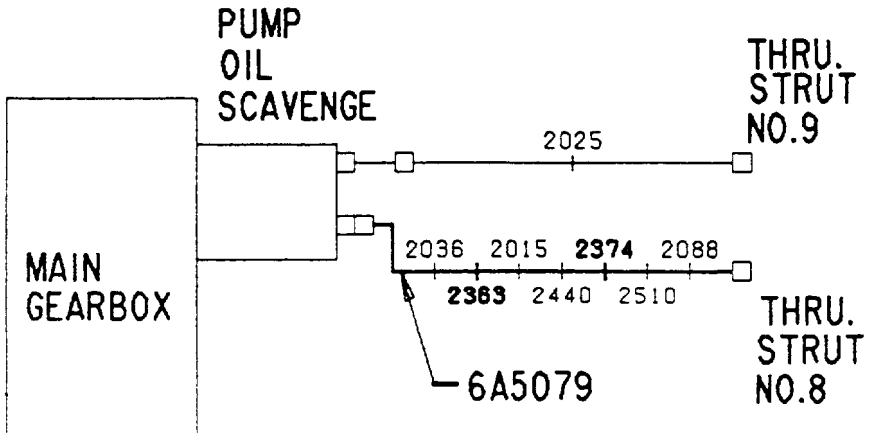
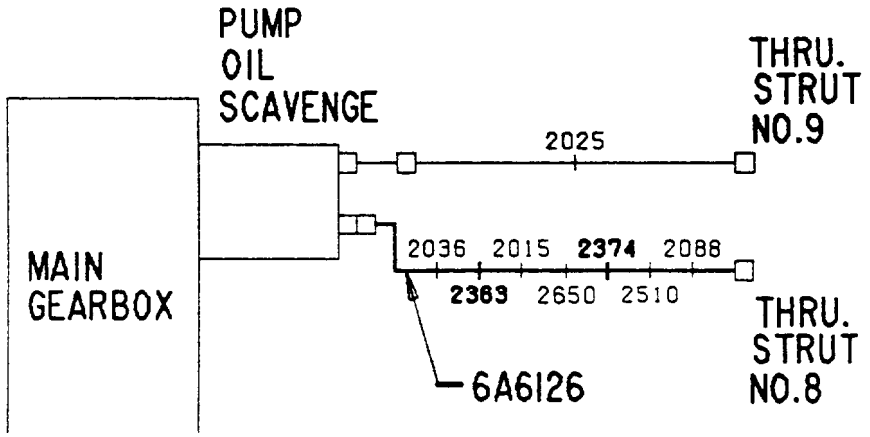
Schematic view of fuel tubes - After alteration
Fig.6



PART SCHEMATIC VIEW
OF OIL SCAVENGE TUBES

BEFORE ALTERATION



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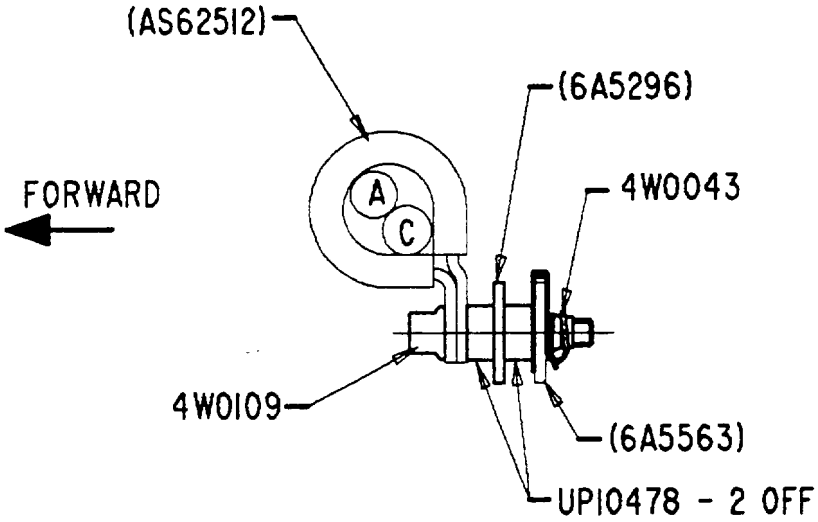
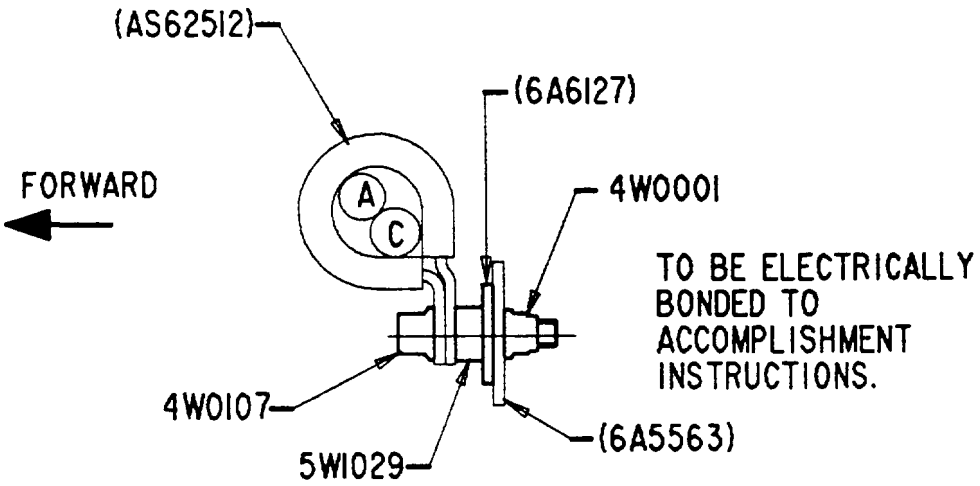
PART SCHEMATIC VIEW
OF OIL SCAVENGE TUBES

Part schematic view of oil scavenge tubes - Before and after alteration
Fig.7



CP2351 (SEE FIG 3 FOR POSITION)

BEFORE ALTERATION



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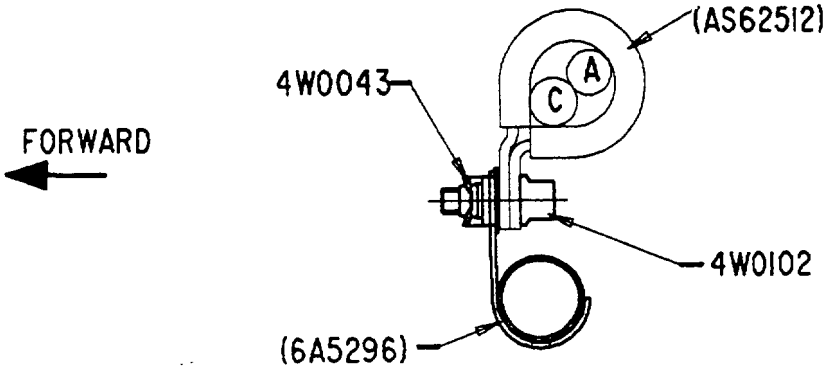
CP2351 (SEE FIG 3 FOR POSITION)

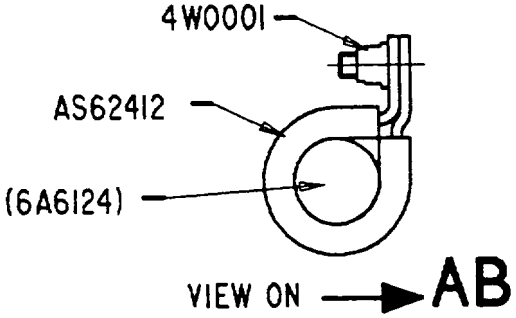
AFTER ALTERATION

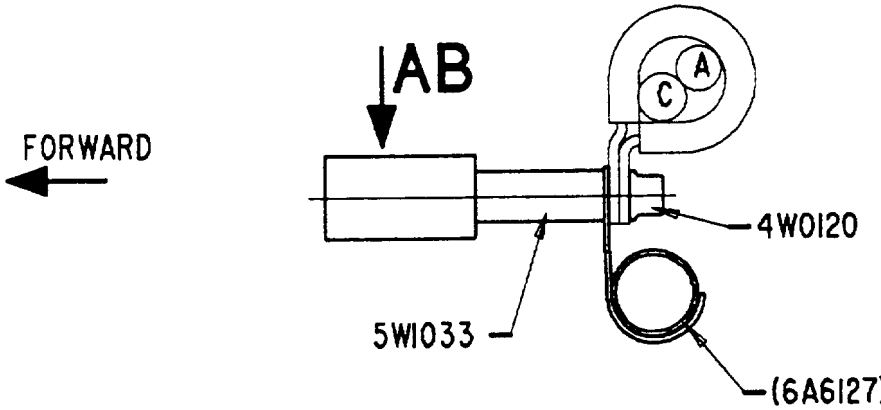
Clipping point 2351 - Before and after alteration
Fig.8



CP2359 (SEE FIGS 1,3 AND 6 FOR POSITION)

BEFORE ALTERATION

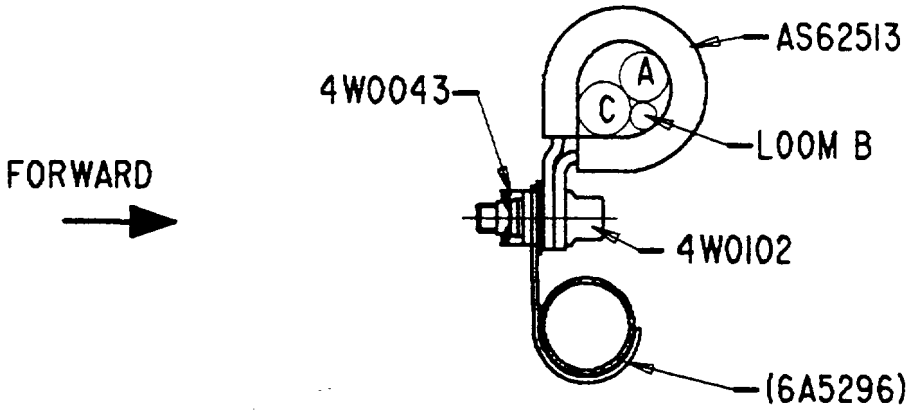




CP2359 (SEE FIGS 1,3 AND 6 FOR POSITION)

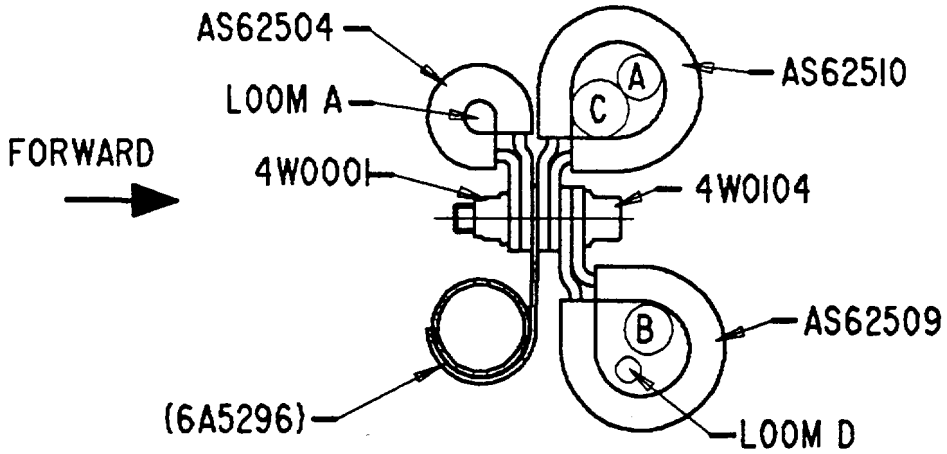
AFTER ALTERATION

Clipping point - Before and after alteration
Fig.9



CP2360 (SEE FIGS 1,2 AND 3 FOR POSITION)

DELETED



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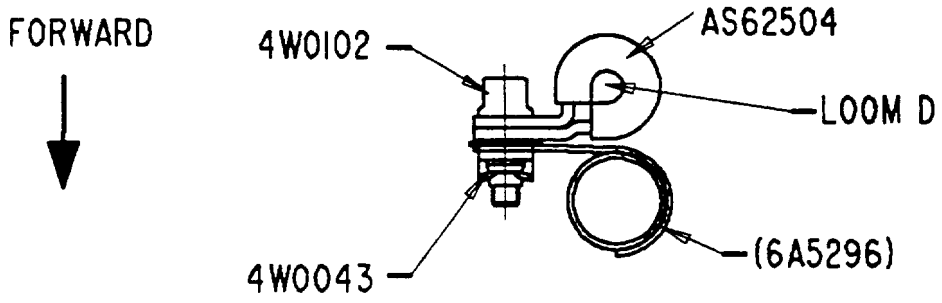
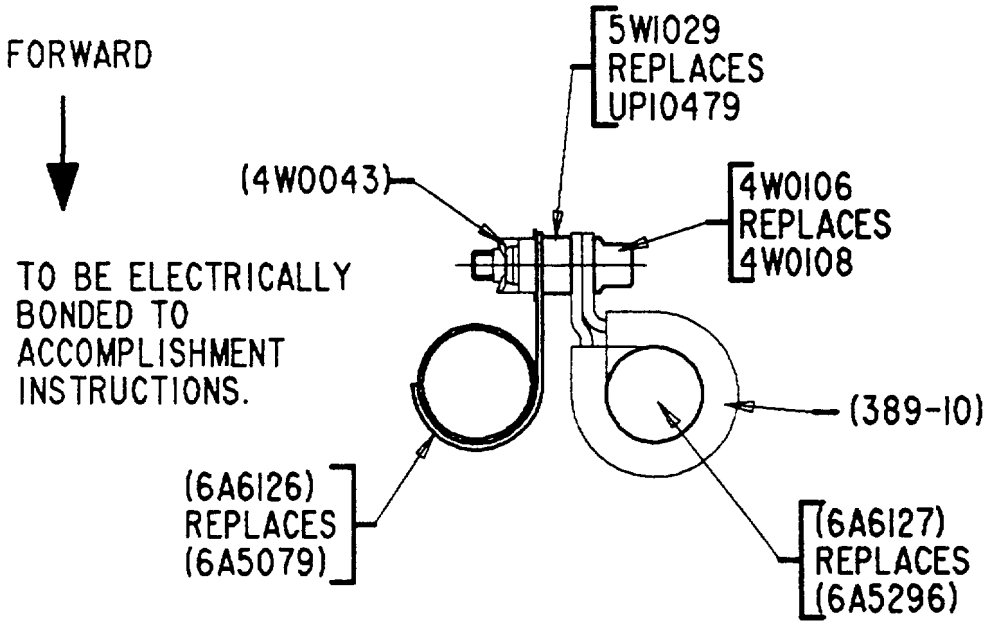
CP2361 (SEE FIGS 1,2 AND 3 FOR POSITION)
DELETED

Deleted clipping points 2360 and 2361
Fig.10



CP2362 (SEE FIGS 1 AND 3 FOR POSITION)

DELETED



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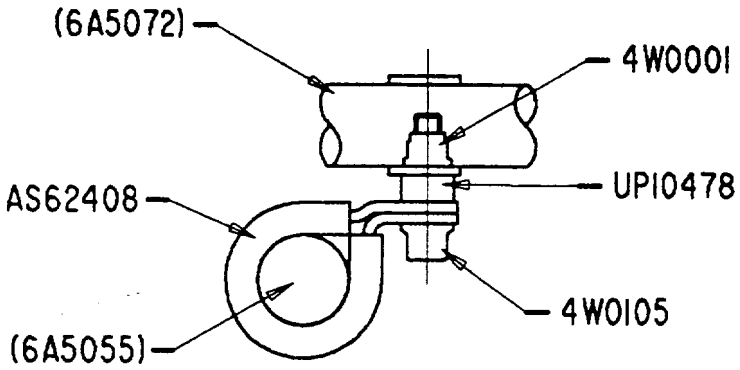
CP2363 (SEE FIGS 3 AND 7 FOR POSITION)

BEFORE AND AFTER ALTERATION

deleted clipping point 2362 and clipping point 2363 - Before and after alteration
Fig.11

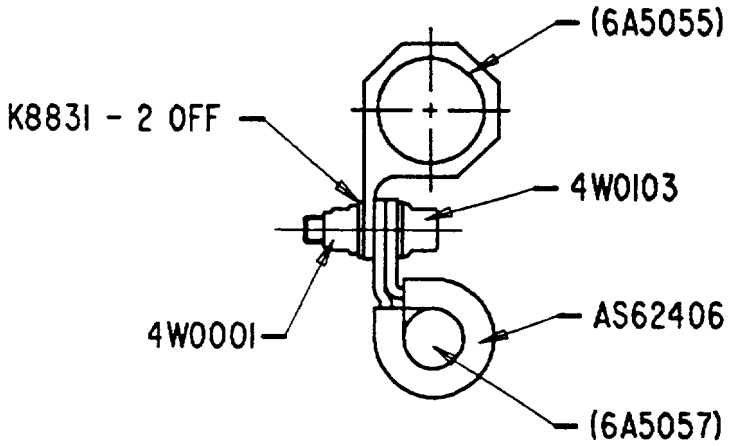
LOOKING FORWARD



CP2364 (SEE FIG 5 FOR POSITION)

DELETED

LOOKING FORWARD



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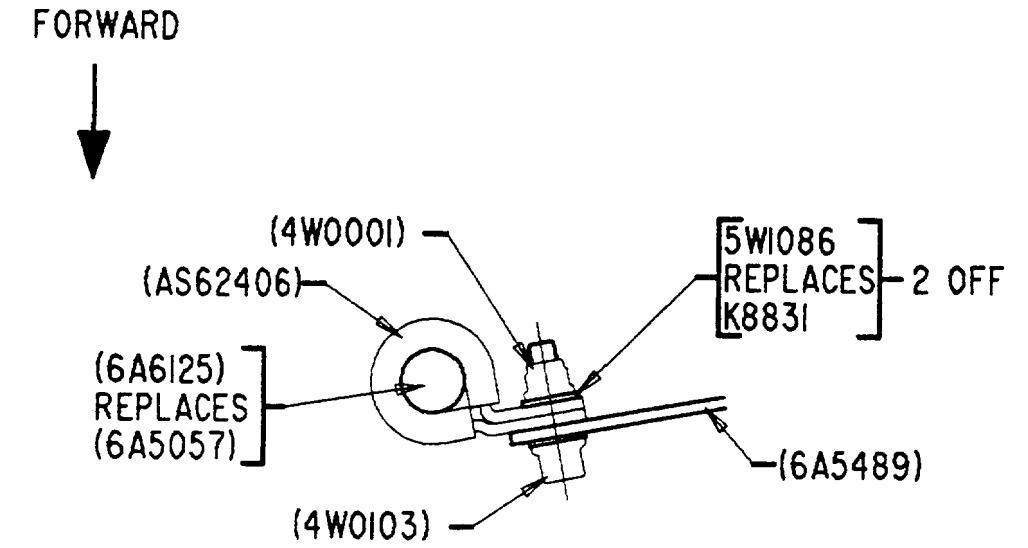
CP2365 (SEE FIG 5 FOR POSITION)

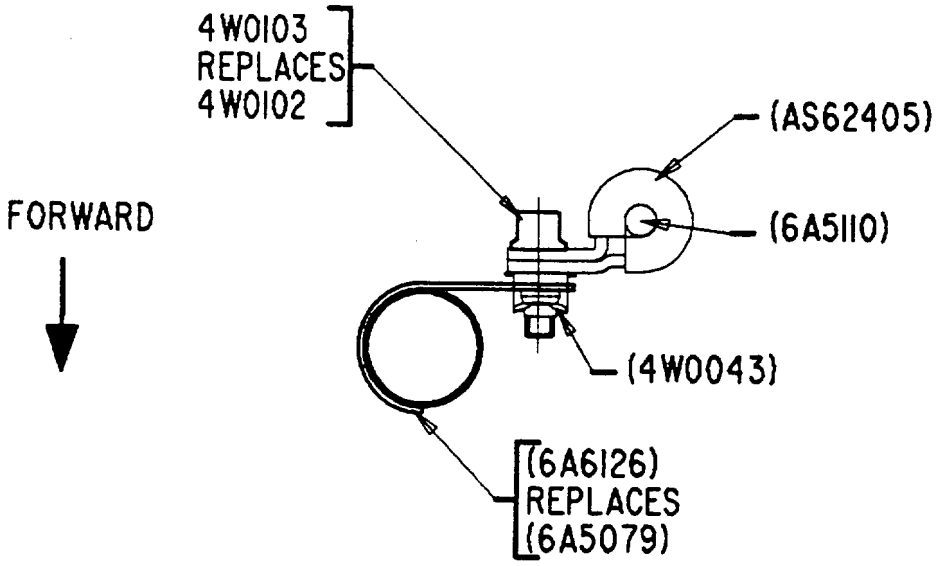
DELETED

Deleted clipping points 2364 and 2365
Fig.12



CP2368 (SEE FIGS 5 AND 6 FOR POSITION)

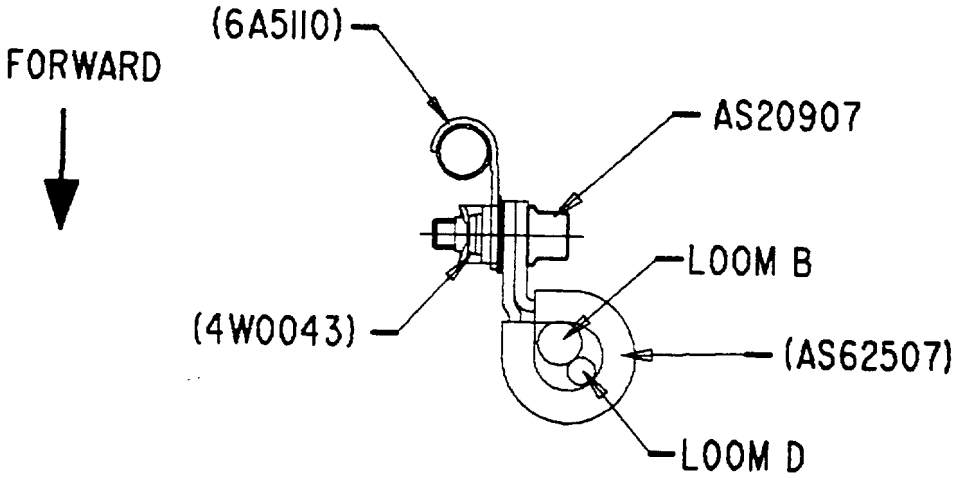
BEFORE AND AFTER ALTERATION



CP2374 (SEE FIG 7 FOR POSITION)

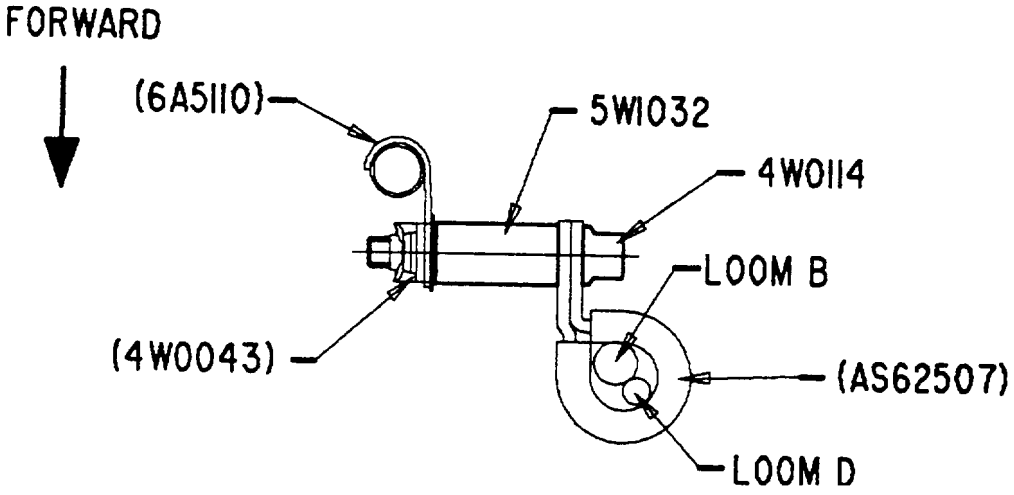
BEFORE AND AFTER ALTERATION

Clipping points 2368 and 2374 - Before and after alteration
Fig.13



CP2376 (SEE FIG 2 FOR POSITION)

BEFORE ALTERATION



CP2376 (SEE FIG 2 FOR POSITION)

AFTER ALTERATION

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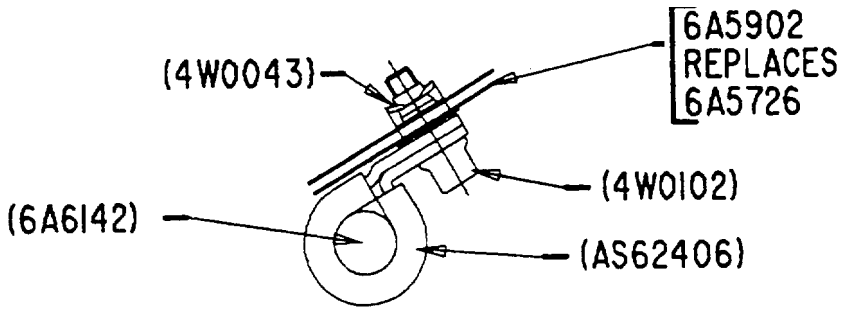
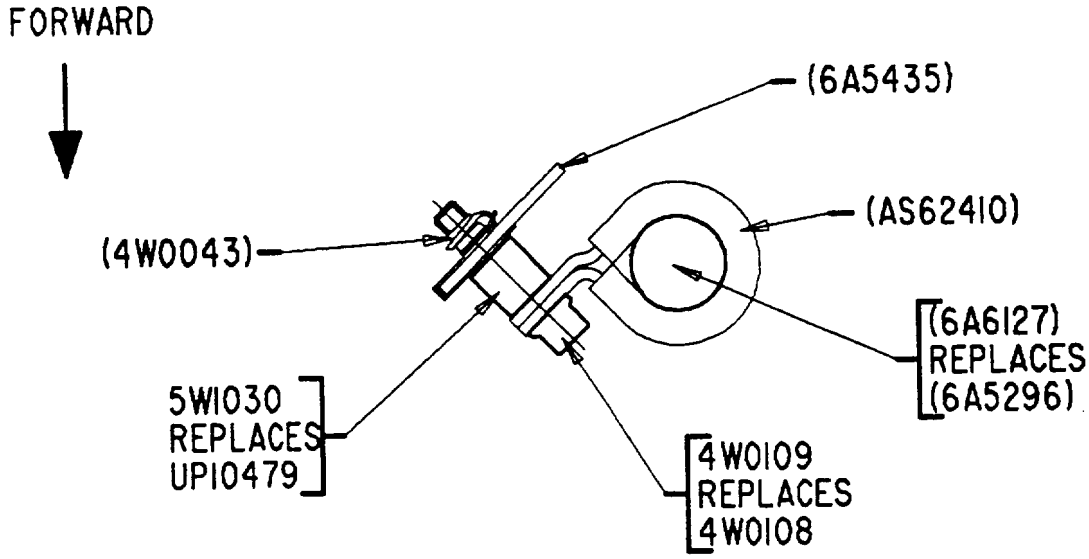
Clipping point 2376 - Before and after alteration
Fig.14



CP2381 (SEE FIG 4 FOR POSITION)

BEFORE AND AFTER ALTERATION

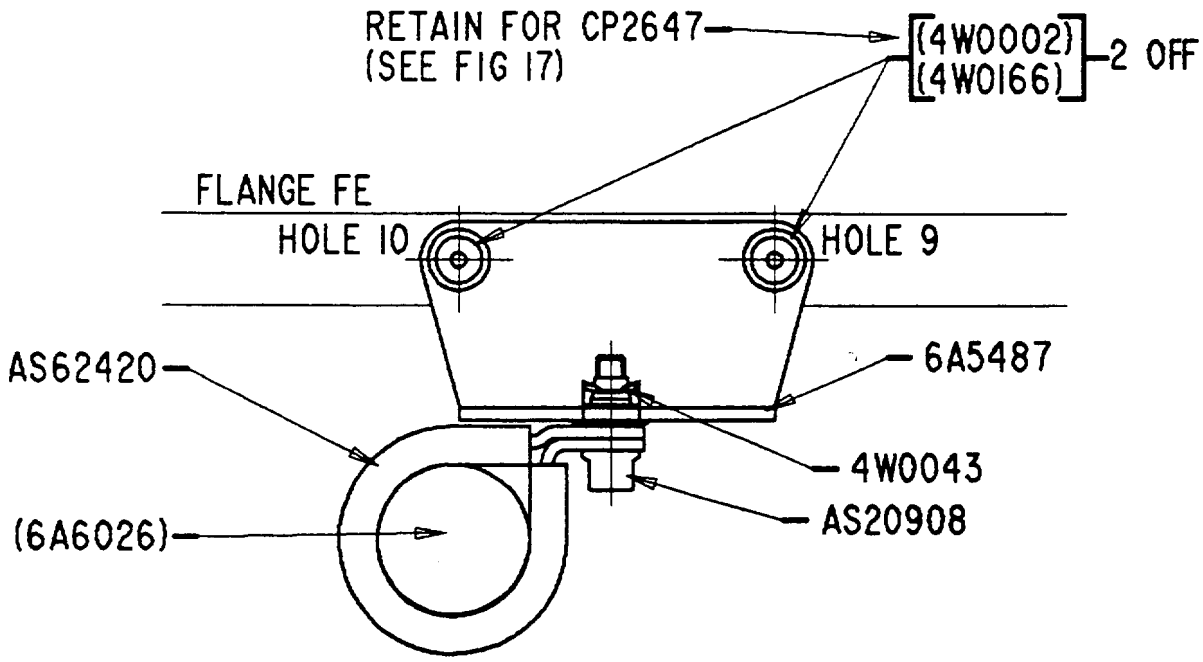


CP2515 (SEE FIG 3 FOR POSITION)

BEFORE AND AFTER ALTERATION

Clipping points 2381 and 2515 - Before and after alteration
Fig.15

LOOKING FORWARD



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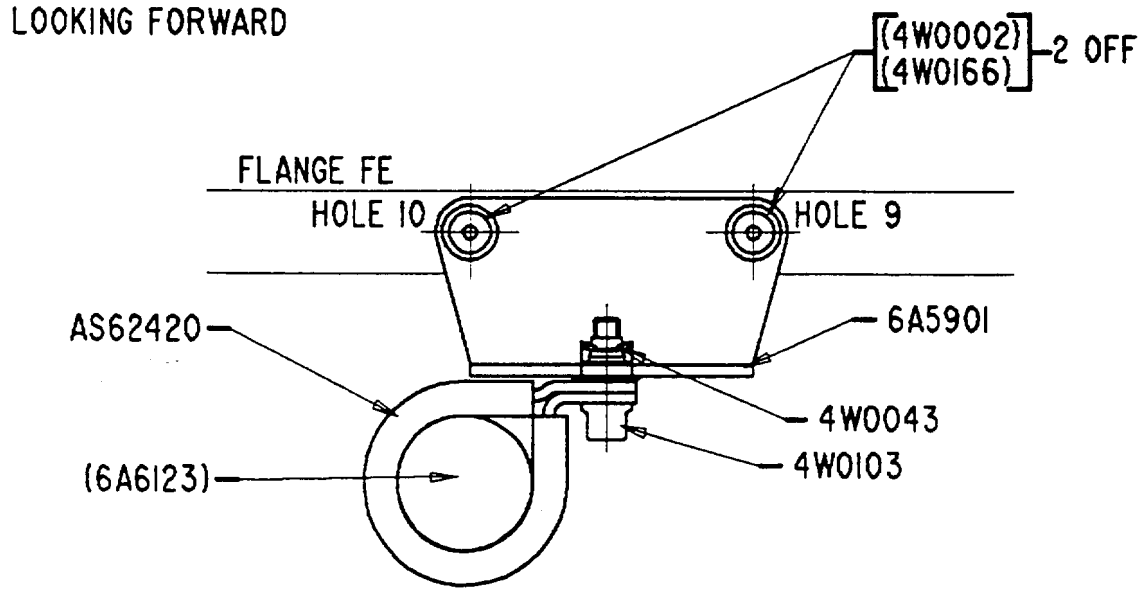
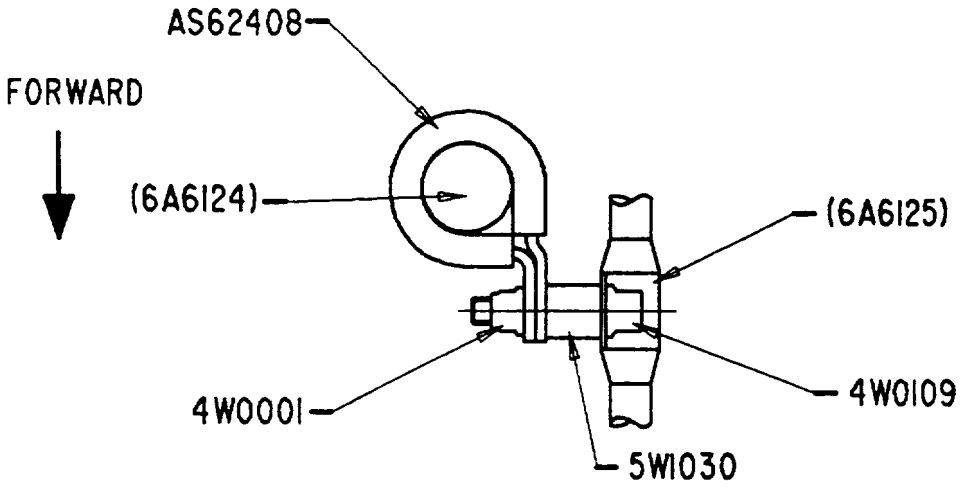
Clipping point 2520 (see Figure 5 for position) - Deleted
Fig.16



CP2647 (SEE FIG 6 FOR POSITION)
ADDED



CP2648 (SEE FIG 6 FOR POSITION)
ADDED

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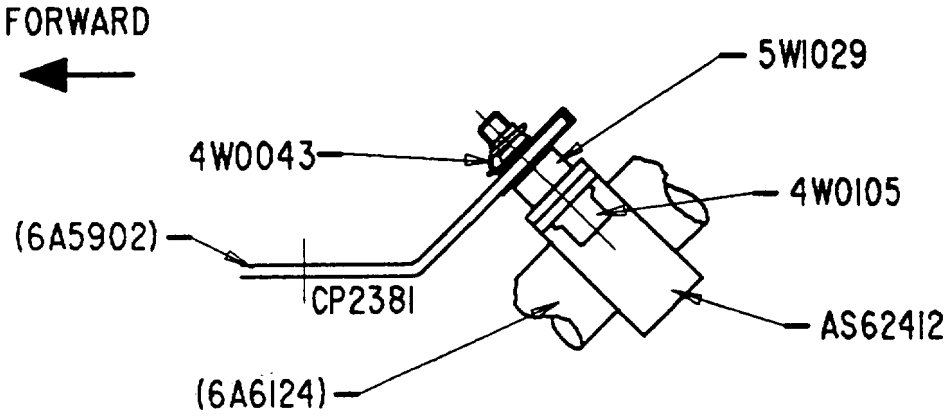
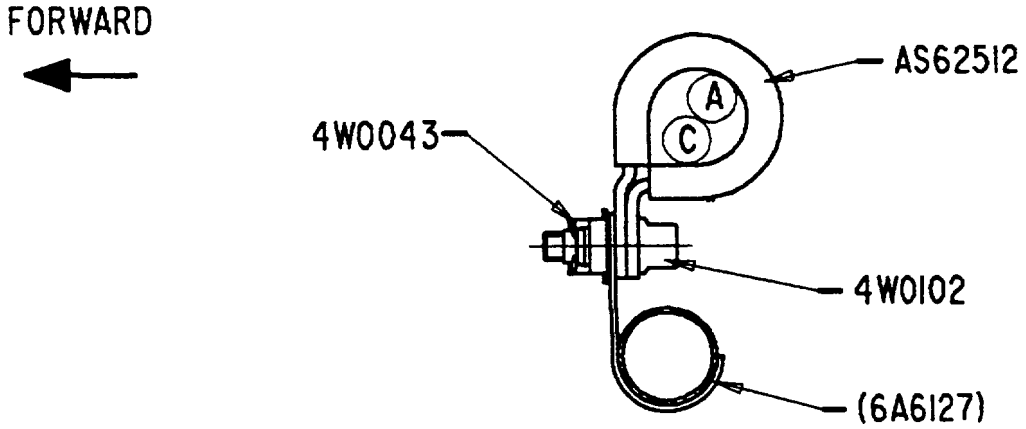
Clipping points 2647 and 2648 - Additional
Fig.17



CP2649 (SEE FIG 6 FOR POSITION)

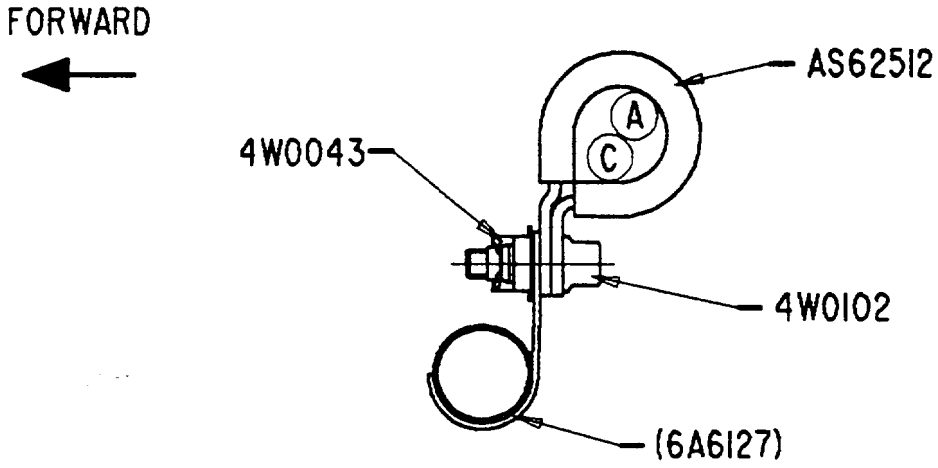
ADDED



CP2651 (SEE FIGS 1 AND 3 FOR POSITION)

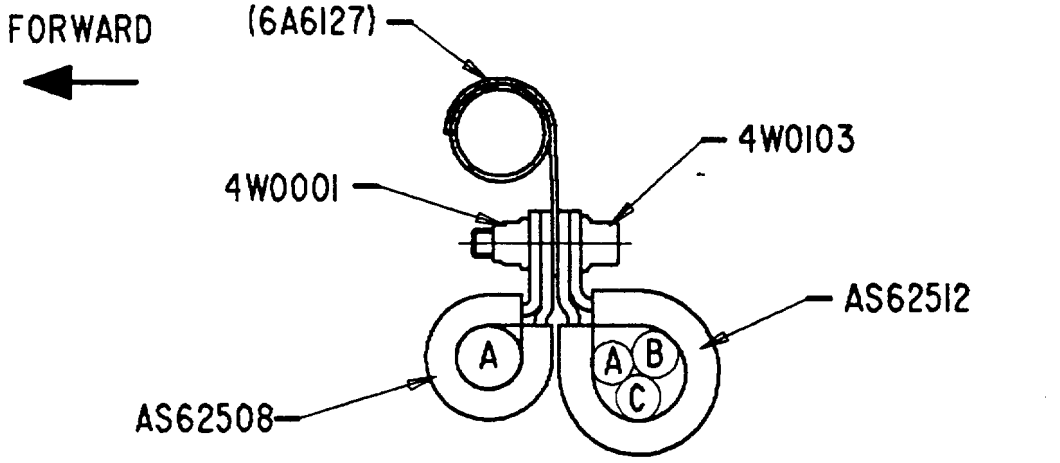
ADDED

Clipping points 2649 and 2651 - Additional
Fig.18



CP2652 (SEE FIGS 1 AND 3 FOR POSITION)

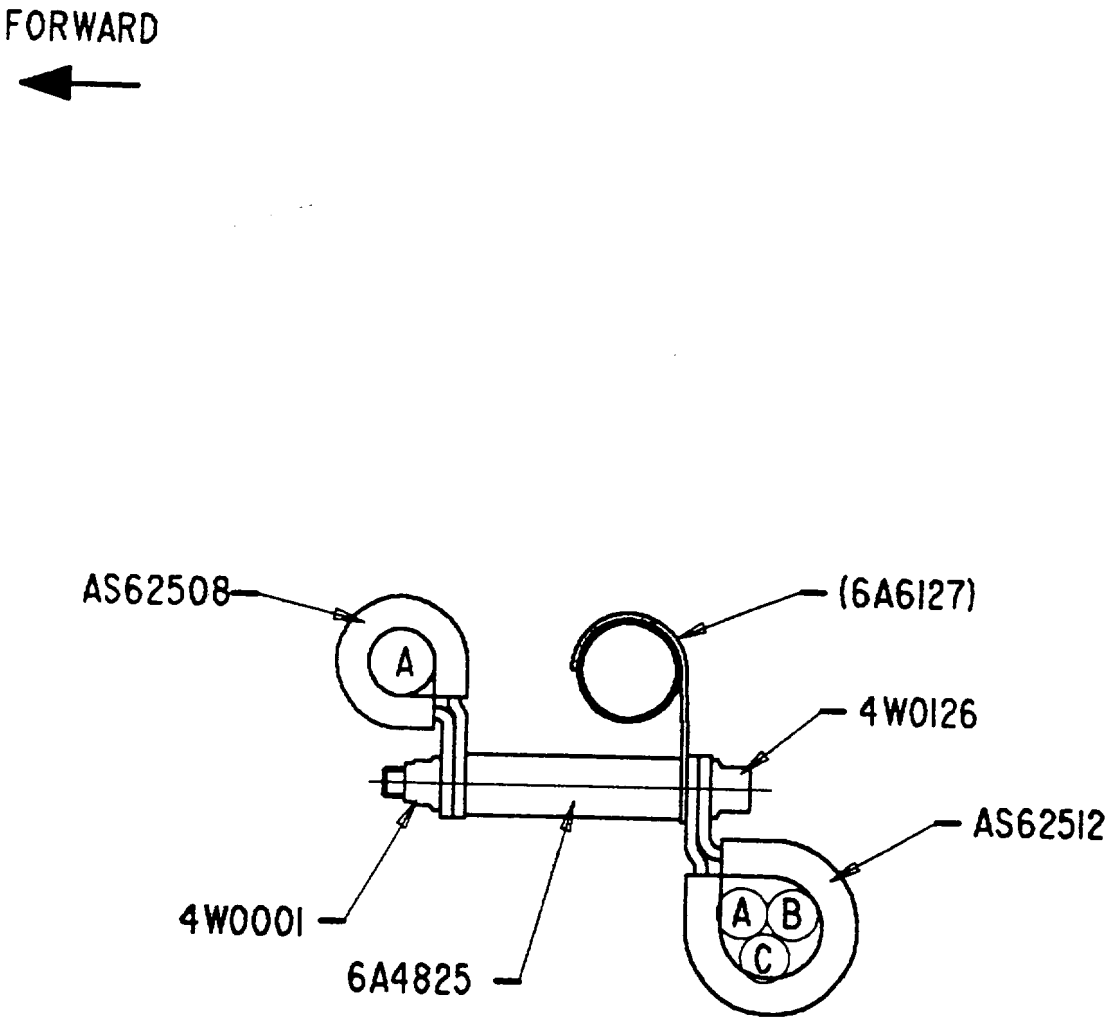
ADDED



CP2653 (SEE FIGS 1,2 AND 3 FOR POSITION)

ADDED

Part Clipping points 2652 and 2653 - Additional
Fig.19



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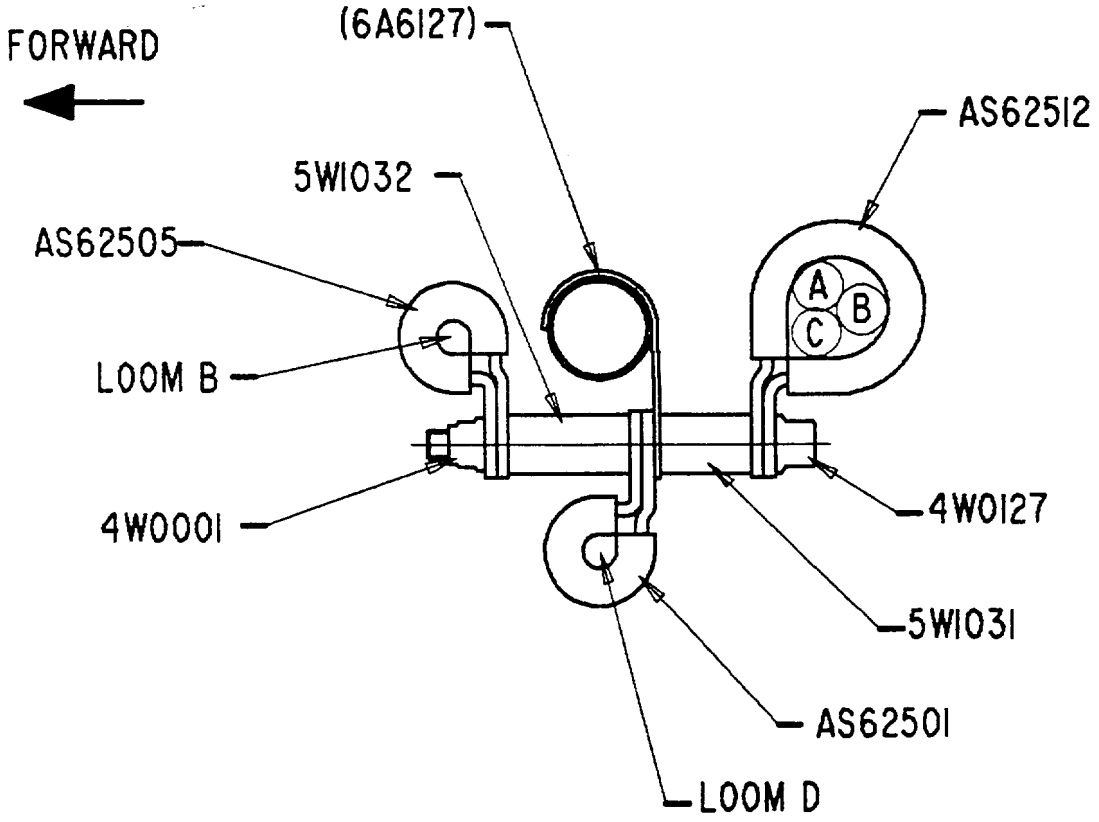
Clipping point 2654 (see Figures 1, 2 and 3 for position) - Additional
Fig.20



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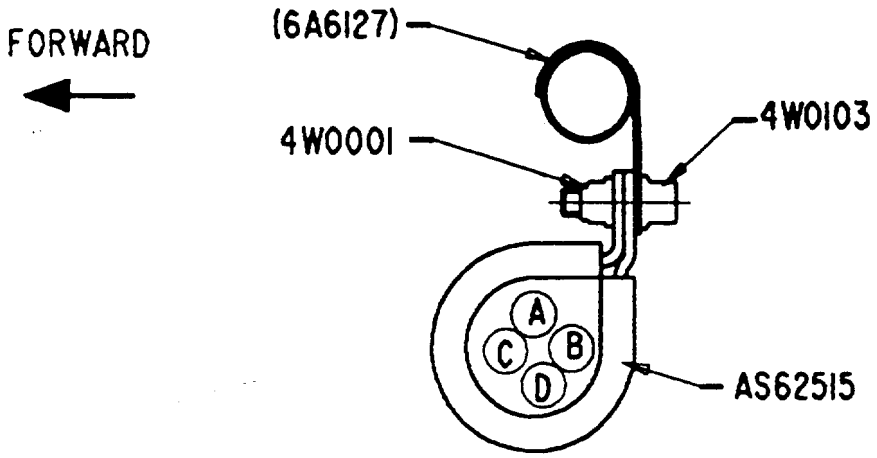
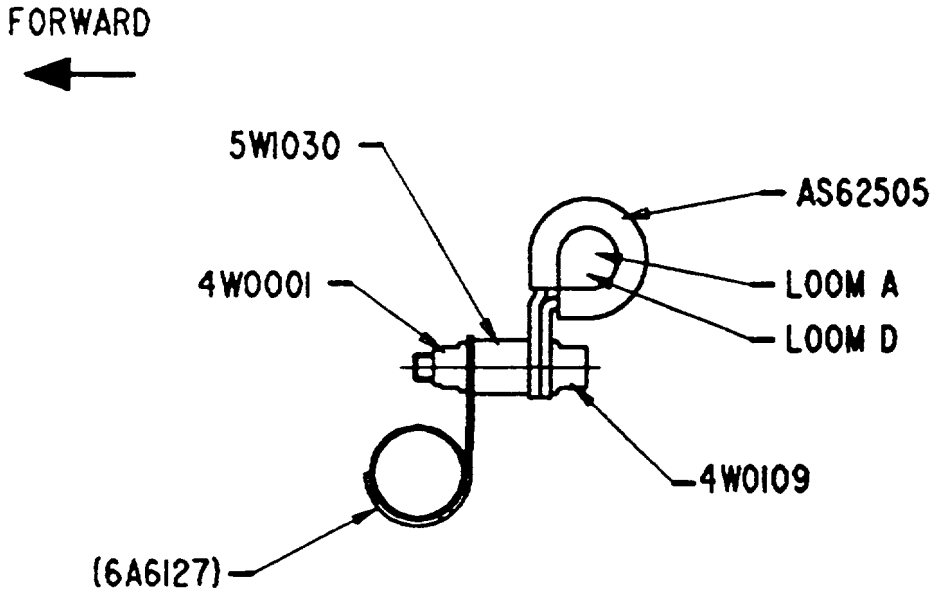
Clipping point 2655 (see Figures 1, 2, and 3 for position) - Additional
Fig.21



CP2656 (SEE FIGS 1,2 AND 3 FOR POSITION)

ADDED



CP2657 (SEE FIGS 1 AND 3 FOR POSITION)

ADDED

ded0000386

Clipping points 2656 and 2657 - Additional
Fig.22

2. Accomplishment Instructions

A. Rework Instructions

(1) For rework instructions necessary to accomplish this Service Bulletin, refer to steps (18), (28) and (29) under 2.B. Assembly Instructions.

B. Assembly Instructions

(1) Disassemble clipping points 2359, 2360, 2361, 2362, 2376, and 2503. Refer to Figures 1, 2, 3, 9, 10, 11 and 14.

(2) Disassemble clipping points 2364, 2365, 2368, 2372, and 2520. Refer to Figures 5, 12, 13 and 16.

(3) Remove the 6A5487 bracket for clipping point 2520 from fancase flange FE. Retain the bolts and nuts. Refer to Figures 5 and 16.

(4) Disconnect the unions connecting the 6A5057 fuel tube to the 6A5056 fuel tube and the eductor. Remove the 6A5057 fuel tube. Refer to Figure 5.

(5) Disconnect the unions connecting the 6A5054 and 6A5055 fuel tubes to the Eductor and LP fuel pump. Remove the 6A5054 and 6A5055 fuel tubes. Refer to Figure 5.

(6) Disconnect the Loom 'D' electrical harness connector from the LP fuel pressure switch. Remove the LP fuel pressure switch and sealing ring from the 6A6026 fuel tube. Discard the sealing ring. Refer to Figure 5.

(7) Remove and hold the bolts and washers securing the 6A6026 fuel tube to the 6A5052 fuel tube. Remove the bolts and washers securing the 6A6026 fuel tube to the LP fuel pump, retain the 4W0173 bolt and one of the 2 off 4W0169 bolts and all washers. Remove and hold the attaching parts. Remove the 6A6026 fuel tube and sealing rings. Discard the sealing rings. Refer to figures 5 and 24A.

(8) Disassemble clipping points 2351, 2515 and 2363. Refer to Figures 3, 8, 11, and 15.

(9) Disassemble clipping points 2352, 2353, 2355, 2356, 2357 and 2358 sufficiently to remove the 6A5296 raceway. Remove the 6A5296 raceway. Refer to Figure 3.

(10) Disassemble clipping points 2036, 2363, 2015, 2374, 2510 and 2088 sufficiently to remove the 6A5079 oil tube. Refer to Figure 7.

(11) Remove the bolts that attach the 6A5079 oil tube to the fan case disconnect and the oil scavenge pump. Remove the 6A5079 oil tube and the sealing rings. Discard the sealing rings. Refer to Figure 7.

(12) Remove the bolt, strainer, sealing ring and nut from the 6A5079 oil tube. Discard the sealing ring. Refer to Figure 31.

(13) Remove the magnetic probe, body unit and the 3 sealing rings from the 6A5079 oil tube. Discard the sealing rings. Refer to Figure 31.

(14) Disassemble and remove the parts at clipping point 2381 from the 6A5726 bracket. Remove the 6A5726 bracket from the FMU. Retain the bolts. Refer to Figures 4 and 15.

(15) Remove the three bolts that attach the 3963250-1 eductor valve to the fancase bracket. Remove the 3963250-1 eductor valve. refer to Figure 5.

(16) Install the new 3963250-501 eductor valve to the fancase bracket using the three bolts removed at step (15). Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). refer to Figure 6.

(17) Disconnect the Loom 'A' and Loom 'B' electrical harness connectors from the FMU. Refer to Figures 1 and 2.

(18) Rework harness Loom 'A' and Loom 'B' to the limb breakout configurations. Refer to Figure 25.

(19) Reconnect the Loom 'A' and Loom 'B' electrical harness connectors to the FMU. Refer to Figures 1 and 2.

(20) Lubricate a new AS43013-123 sealing ring with CoMat 10-077 approved engine oils. Install the sealing ring with the bolt, the strainer and the nut removed in step (12), on to the new 6A6126 oil tube. Torque the nut to 36 to 45 lbfin (4 to 5 Nm). Refer to Figure 31.

(21) Lubricate two new 44066 sealing rings and a new AS43003-908 sealing ring with CoMat 10-077 approved engine oils. Install the sealing rings with the magnetic probe and the body unit removed in step (13), on to the new 6A6126 oil tube. Torque the body unit to 160 to 180 lbfin (18 to 20 Nm). Refer to Figure 31.

(22) Lubricate a new MS9967-218 sealing ring with CoMat 10-077 approved engine oils. Install the sealing ring into the new 6A6126 oil tube and use the three bolts removed in step (11) to install the 6A6126 oil tube on to the scavenge pump. Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figure 7.

(23) Lubricate a new AS43013-123 sealing ring with CoMat 10-077 approved engine oils. Install the sealing ring into the new 6A6126 oil tube and use the three bolts removed in step (11) to install the 6A6126 oil tube on to the fan case. Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figure 7.

WARNING: WHEN YOU USE COMAT 01-002 INHIBITED AND STABILIZED TRICHLOROETHANE YOU MUST USE THE NECESSARY PROTECTIVE CLOTHING. DO NOT GET THE SOLVENT ON YOUR SKIN OR IN YOUR EYES. YOU MUST NOT SMOKE WHEN YOU USE THE SOLVENT AS THE VAPOR CHANGES AND BECOMES TOXIC.

(24) Clean all mating faces with CoMat 01-002 inhibited and stabilized trichloroethane and install the 6A6127 raceway on to the bracket at clipping point 2351 using the new bolt, spacer and nut, and the existing clip. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm). Refer to Figures 3 and 8.

WARNING: WHEN YOU USE COMAT 01-002 INHIBITED AND STABILIZED TRICHLOROETHANE YOU MUST USE THE NECESSARY PROTECTIVE CLOTHING. DO NOT GET THE SOLVENT ON YOUR SKIN OR IN YOUR EYES. YOU MUST NOT SMOKE WHEN YOU USE THE SOLVENT AS THE VAPOR CHANGES AND BECOMES TOXIC.

(25) Clean all mating faces with CoMat 01-002 inhibited and stabilized trichloroethane and install the 6A6127 raceway on to the 6A6126 oil tube at clipping point 2363 using the new bolt and spacer, the existing clip and clipnut. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm). Refer to Figures 7 and 11.

WARNING: WHEN YOU USE COMAT 01-002 INHIBITED AND STABILIZED TRICHLOROETHANE YOU MUST USE THE NECESSARY PROTECTIVE CLOTHING. DO NOT GET THE SOLVENT ON YOUR SKIN OR IN YOUR EYES. YOU MUST NOT SMOKE WHEN YOU USE THE SOLVENT AS THE VAPOR CHANGES AND BECOMES TOXIC.

(26) Lubricate a new AS43013-124 sealing ring with CoMat 10-038 petroleum jelly or CoMat 10-060 liquid paraffin. Install the sealing ring on to the 6A6123 fuel tube and install the 6A6123 fuel tube on to the LP fuel pump. Clean all mating faces with CoMat 01-002 inhibited and stabilized trichloroethane and install the existing bonding lead on to the 6A6123 fuel tube using the existing 4W0173 bolt and washers, install the new AS21528 bolt, the existing 4W0169 bolt and washers removed in step (7). Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figures 6 and 24B.

(27) Lubricate a new AS43013-124 sealing ring with CoMat 10-038 petroleum jelly or CoMat 10-060 liquid paraffin. Install the sealing ring on to the 6A6123 fuel tube and use the parts removed in step (7) to install the 6A6123 fuel tube on to the 6A5052 fuel tube. Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figure 6.

(28) Remove the MS24392J8 fuel tube nipple and sealing ring from the LP fuel pump housing and discard the sealing ring. Lubricate a new M25988-1-908 sealing ring with CoMat 10-038 petroleum jelly or CoMat 10-060 liquid paraffin. Install the sealing ring and the MS9954-08 plug on to the LP fuel pump housing. Torque the plug to 110 to 150 lbfin (12,4 to 16,9 Nm). Safety the plug with CoMat 02-147 lockwire. Refer to Figures 23 and 24.

(29) Vibro-engrave the new part number, 5010216C, adjacent to the old part number on the LP fuel pump name plate and delete the old part number. use vibro-engraving equipment.

(30) Install the 6A6124 fuel tube on to the eductor. Torque the tube union to 283 to 310 lbfin (32 to 35 Nm). lubricate a new AS43003-910 sealing ring with CoMat 10-038 petroleum jelly or CoMat 10-060 liquid paraffin. Install the sealing ring on to the AS27473 union and install the AS27473 union on to the 6A6123 fuel tube. Torque the union to 381 to 416 lbfin (43 to 47Nm). Install the 6A6124 fuel tube on to the AS27473 union installed at the 6A6123 fuel tube LP fuel pump inlet. Torque the tube union to 319 to 345 lbfin (36 to 39 Nm). Refer to Figures 6 and 24B.

(31) Install the 6A5054 fuel tube on to the eductor and the LP fuel pump. Torque the tube unions to 204 to 221 lbfin (23 to 25 Nm). Refer to Figure 6.

(32) Reassemble clipping point 2372 using the existing material removed at step (2). Torque the bolt to 36 to 45 lbfin (4 to 5 Nm). Refer to Figure 6.

(33) Install the 6A6125 fuel tube on to the eductor. Torque the tube union to 270 to 300 lbfin (31 to 34 Nm). Refer to Figure 6.

(34) Install the 6A6125 fuel tube on to the 6A6056 fuel tube. Torque the tube union to 230 to 240 lbfin (26 to 28 Nm). Refer to Figure 6.

(35) Lubricate a new AS3003-904 sealing ring CoMat 10-038 petroleum jelly or CoMat 10-060 liquid paraffin. Install the sealing ring and the LP fuel pressure switch on to the 6A6123 fuel tube. Torque the LP fuel pressure switch to 60 to 70 lbfin (7 to 8 Nm). Refer to Figure 6.

(36) Reconnect the loom 'D' harness connector to the LP fuel pressure switch. Refer to Figure 6.

(37) Assemble clipping points 2036, 2015, 2510 and 2088 using the material removed at step (10) to the new 6A6126 oil tube. Torque the bolts at each clipping point to 36 to 45 lbfin (4 to 5 Nm). Refer to Figure 7.

(38) Assemble clipping point 2374 on to the new 6A6126 oil tube using the existing clip and clipnut and new 4W0103 bolt. Torque the bolt to 36 to 45 lbfin (4 to 5 Nm). Refer to Figures 7 and 13.

(39) Install the new 6A5902 bracket on to the FMU at clipping point 2381 using the bolts removed at step (14). Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figures 4 and 15.

(40) Assemble clipping point 2381 on the new 6A5902 bracket using the existing material removed at step (14). Torque the bolt to 36 to 45 lbfin (4 to 5 Nm). Refer to Figures 4 and 15.

(41) Assemble clipping points 2352, 2353, 2355, 2356, 2357 and 2358 using the material removed at step (9) on to the new 6A6127 raceway. Torque the bolts at each clipping point to 36 to 45 lbfin (4 to 5 Nm). Refer to Figure 3.

(42) Install the bolt, clip and clipnut on to the 6A 6127 raceway at new clipping point 2651. refer to Figures 1, 3 and 18.

(43) Install the bolt, clips, spacer and nut on to the 6A6127 raceway and 6A6124 fuel pipe at revised clipping point 2359. Refer to Figures 1, 3, 6 and 9.

(44) Install the bolt, clip and clipnut on to the 6A6127 raceway at new clipping point 2652. Refer to Figures 1, 3 and 19.

(45) Install the bolt, clip, spacer and clipnut on to the 6A6127 raceway and 6A5435 bracket at revised clipping point 2515. Refer to Figures 3 and 15.

(46) Install the bolt, clips, and nut on to the 6A6127 raceway at new clipping point 2653. Refer to Figures 1, 2, 3 and 19.

(47) Install the bolt, clips, spacer and nut on to the 6A6127 raceway at new clipping point 2654. Refer to Figures 1, 2, 3 and 20.

(48) Install the bolt, clip, spacers and nut on to the 6A6127 raceway at new clipping point 2655. Refer to Figures 1, 2, 3 and 21.

(49) Install the bolt, clip and nut on to the 6A6127 raceway at new clipping point 2656. Refer to Figures 1, 2, 3 and 22.

(50) Install the bolt, clip, spacer and nut on to the 6A6127 raceway at new clipping point 2657. Refer to Figures 1, 3 and 22.

(51) Install the bolt, clip, spacer and clipnut on to the 6A5110 raceway at revised clipping point 2676. Refer to Figures 2 and 14.

(52) Assemble clipping point 2503 using the existing material removed at step (1).

(53) Torque the bolts at clipping points 2651, 2359, 2652, 2515, 2653, 2654, 2655, 2656, 2657, 2376 and 2503 to 36 to 45 lbfin (4 to 5 Nm). Refer to Figures 1, 2 and 3.

(54) Install the 6A5901 bracket for clipping point 2647, at the position previously occupied by the 6A5487 bracket removed at step (3) using the existing bolts and nuts. Torque the bolts to 85 to 105 lbfin (10 to 12 Nm). Refer to Figures 6 and 17.

(55) Install the bolt, clip and clipnut on to the 6A5901 bracket at clipping point 2647. Refer to Figures 6 and 17.

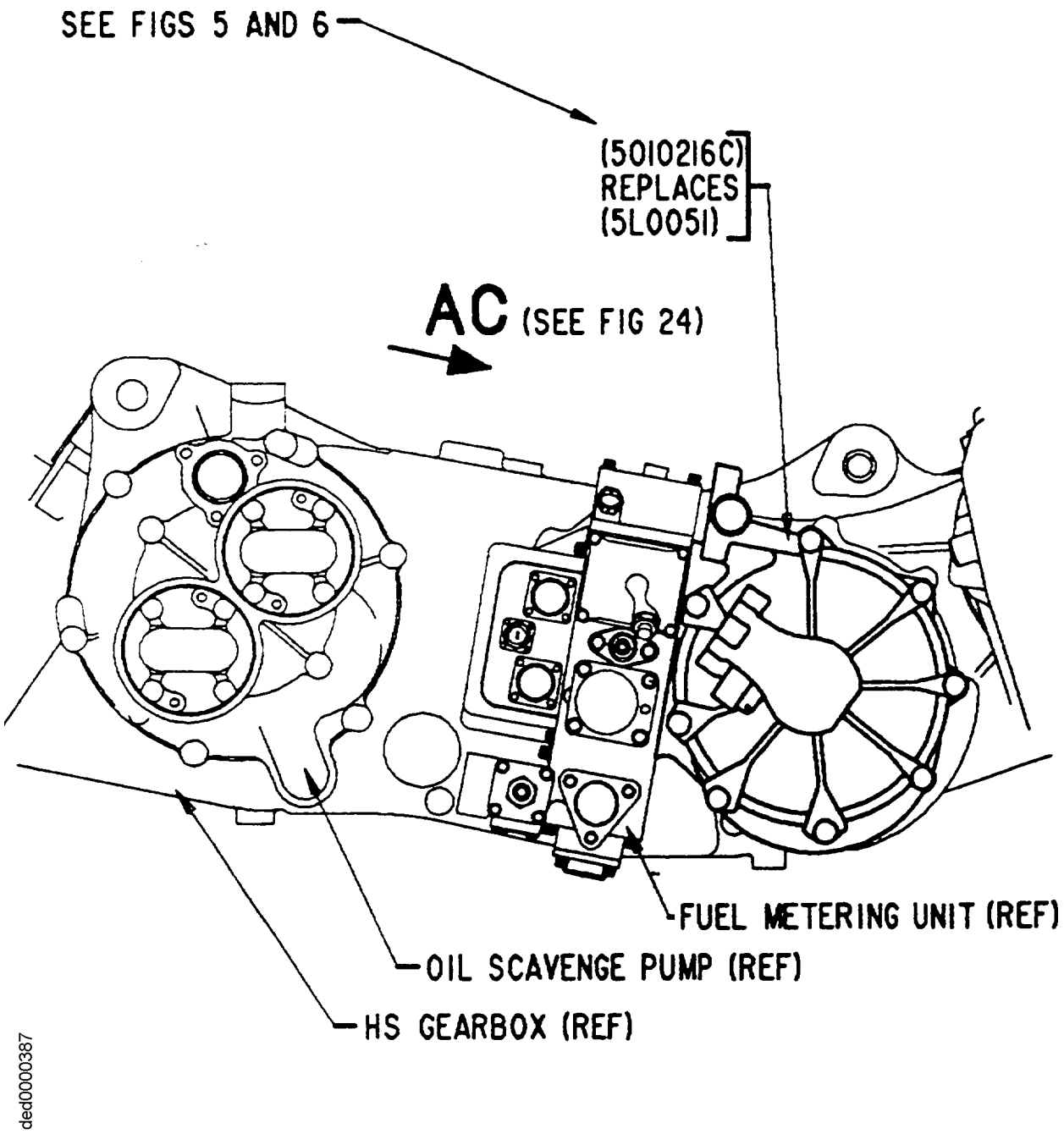
(56) Install the bolt, spacer, clip and nut on to the 6A6125 fuel tube at clipping point 2648. Refer to Figures 6 and 17.

(57) Install the bolt, clip, spacer and clipnut at clipping point 2649 on the 6A5902 bracket installed at step (39). refer to Figures 6 and 18.

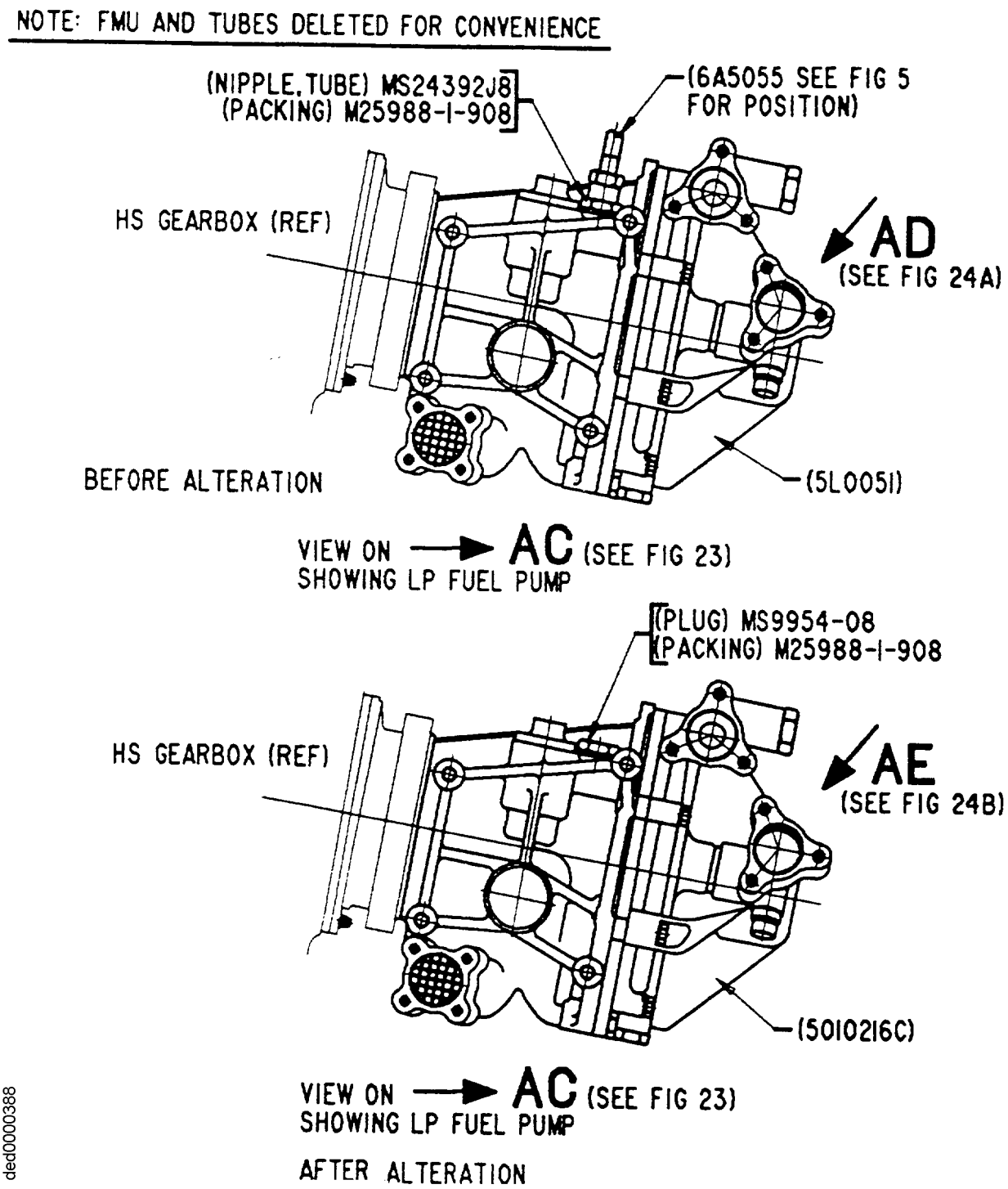
(58) Install the bolt, washers, clip and nut on to the 6A5489 bracket at revised clipping point 2368. Refer to Figures 5, 6 and 13.

(59) Torque the bolts at clipping points 2647, 2648, 2649 and 2368 to 36 to 45 lbfin (4 to 5 Nm).

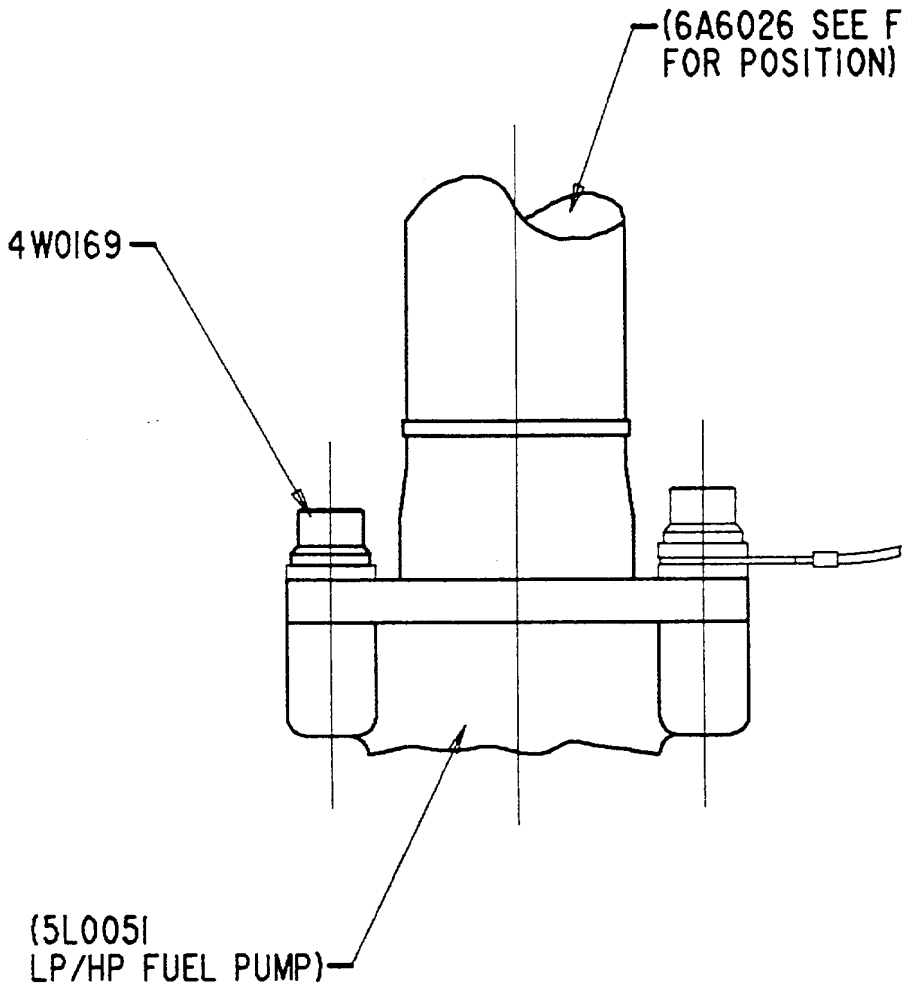
(60) Safety the harness connectors, tube unions and LP fuel pressure switch with CoMat 02-126 lockwire.



Part view on HS gearbox looking forward showing position of LP fuel pump - Before and after alteration
Fig.23



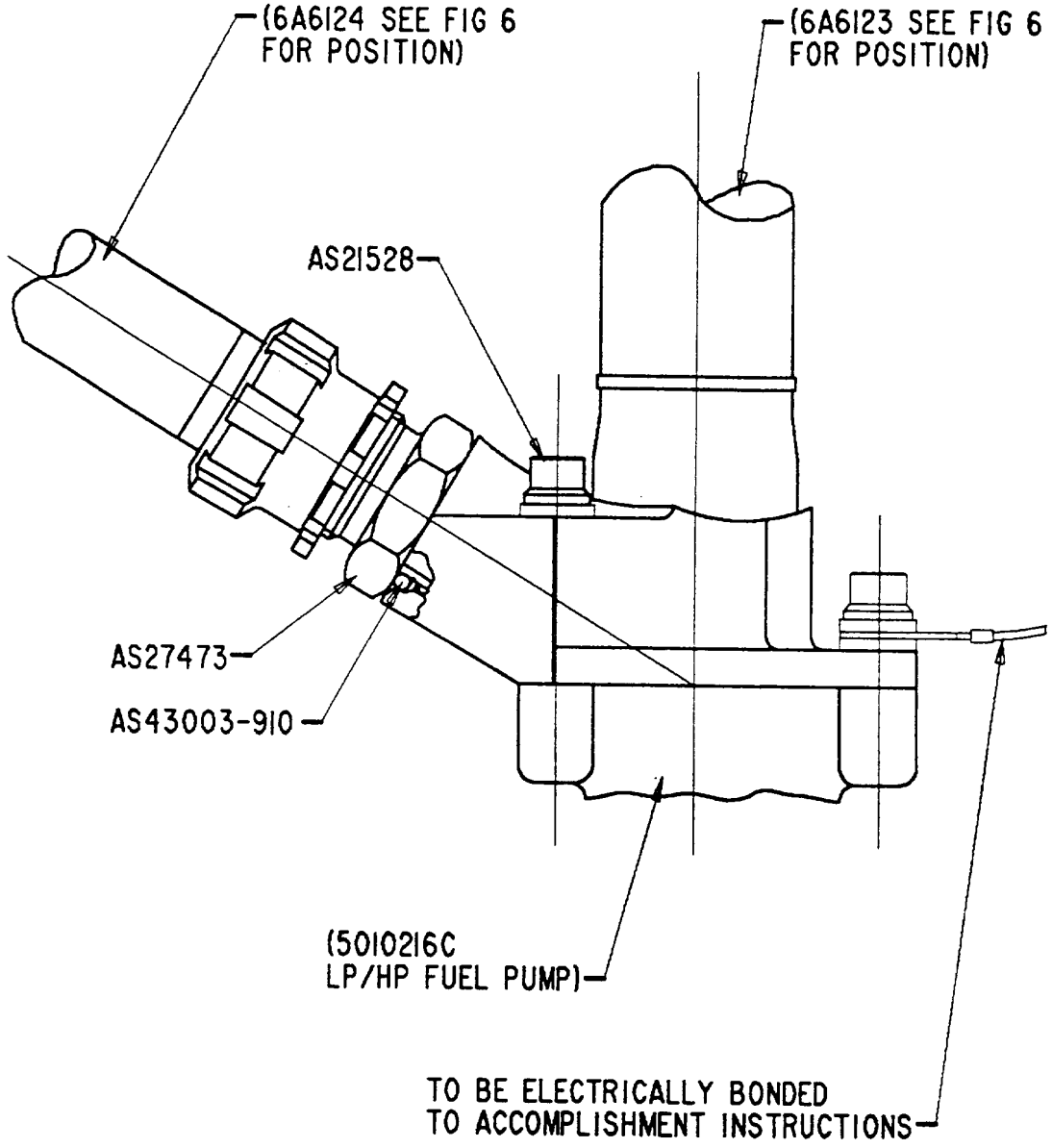
View on arrow AC (see Figure 23) showing LP fuel pump - Before and after alteration
Fig.24



ENLARGED VIEW ON → AD (SEE FIG 24)
SHOWN THUS FOR CONVENIENCE

(BEFORE ALTERATION)

View on arrow AD - Before alteration
Fig.24A



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View on arrow AE - After alteration
Fig.24B

NOTE: ALL HARNESS LENGTHS AND KEYWAY ORIENTATIONS REMAIN UNALTERED.

1. RECORD ALL EXISTING TIE POSITIONS INCLUDING BREAKOUT POINTS AT POSITIONS **A** (LOOM A SEE FIG 26) AND **B** (LOOM B SEE FIG 27)
2. CUT TIES AND REMAKE BREAKOUT POINTS AS INDICATED (SEE FIGS 28 AND 29 FOR RETIEING PROCEDURE) USING BRAID MATERIAL PART NUMBER 3100631.
3. RETIE EACH LIMB AT PREVIOUSLY RECORDED POSITIONS UPTO AND INCLUDING ORIGINAL BREAK OUT POINTS (SEE FIG 30 FOR RETIEING PROCEDURE) USING BRAID MATERIAL PART NUMBER 3100631.
4. REMOVE EXISTING IDENTIFICATION.
5. APPLY TWO (2) TURNS OF COMAT 02.148 IN ORIGINAL POSITION AND MARK ON NEW PART NUMBER USING A BLACK BALLPOINT PEN.

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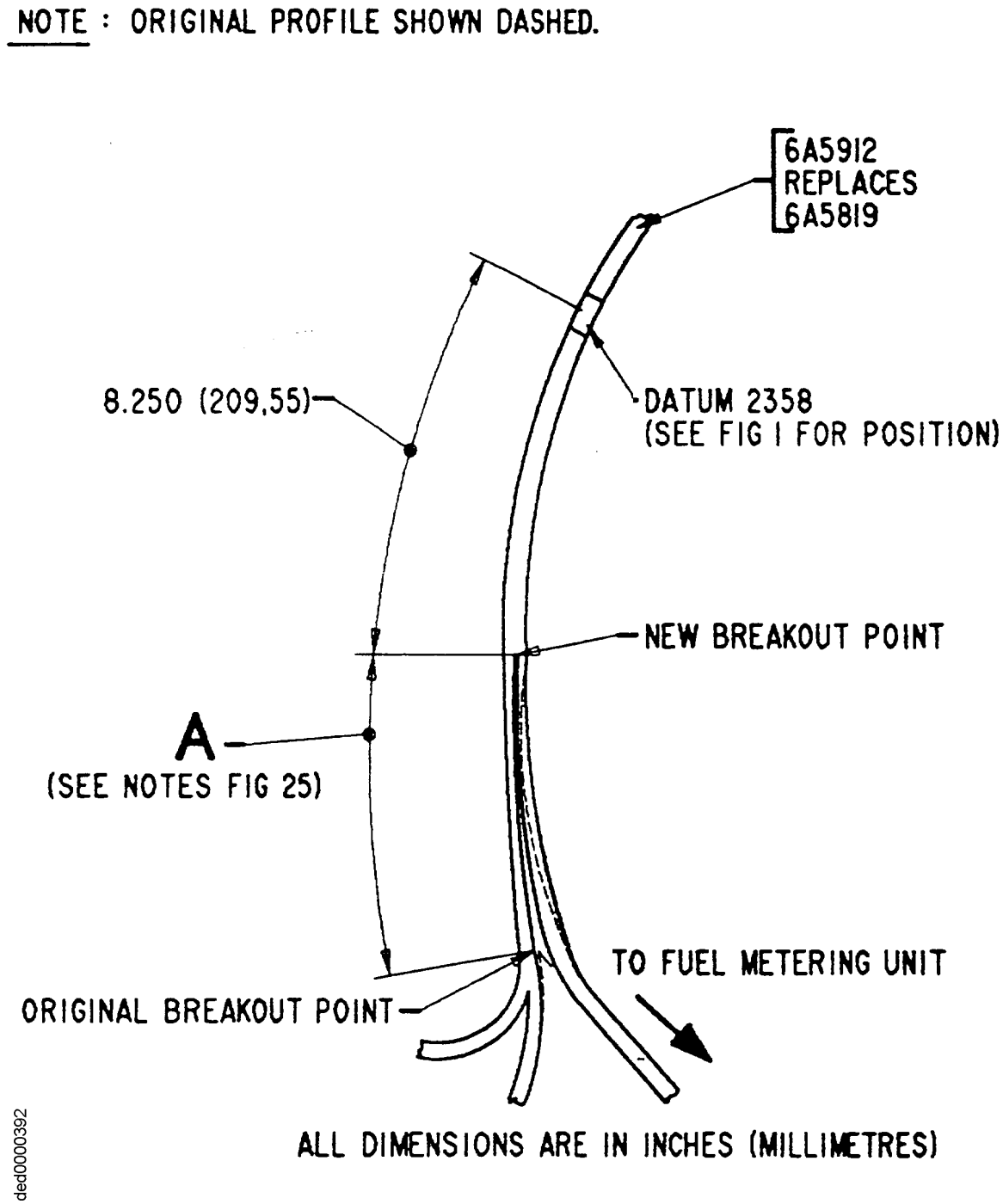
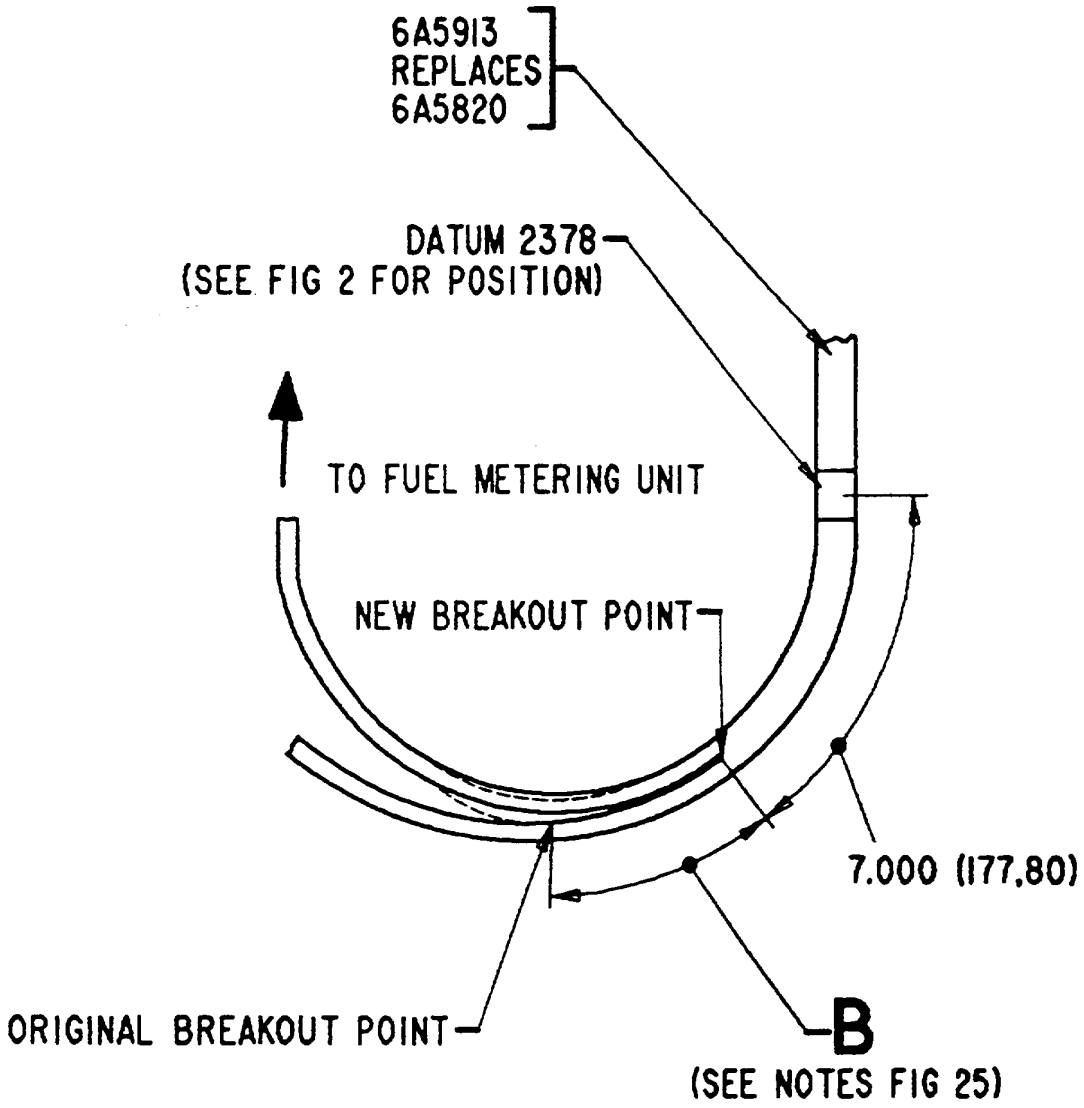
Rework of existing harness looms 'A' and 'B'
Fig.25



Part view on harness Loom 'A' showing required rework
Fig.26



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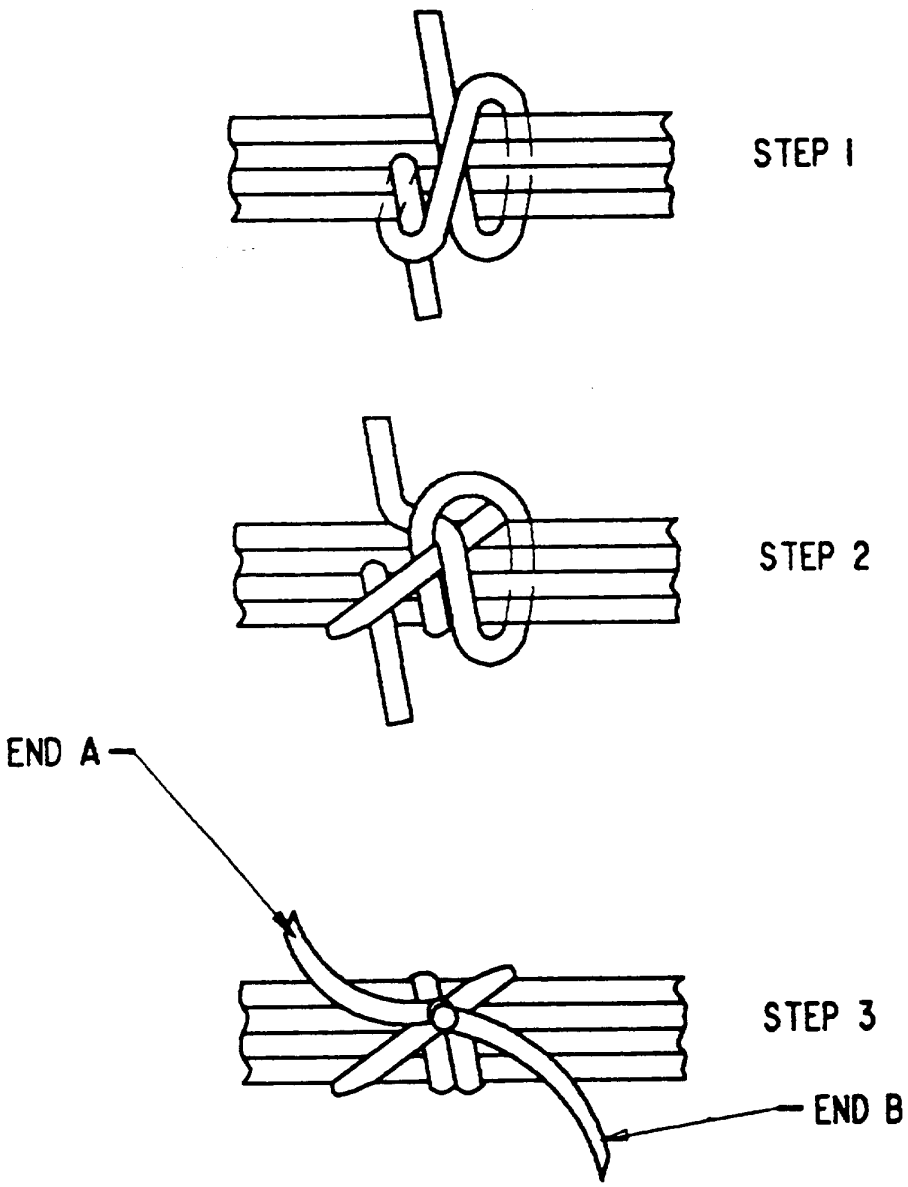
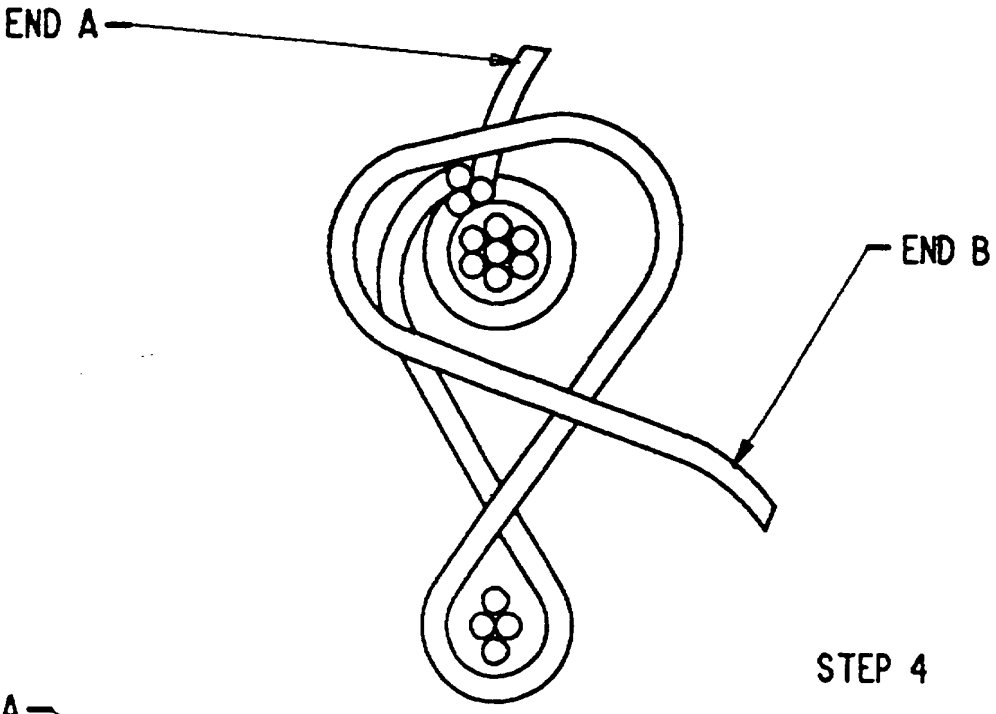
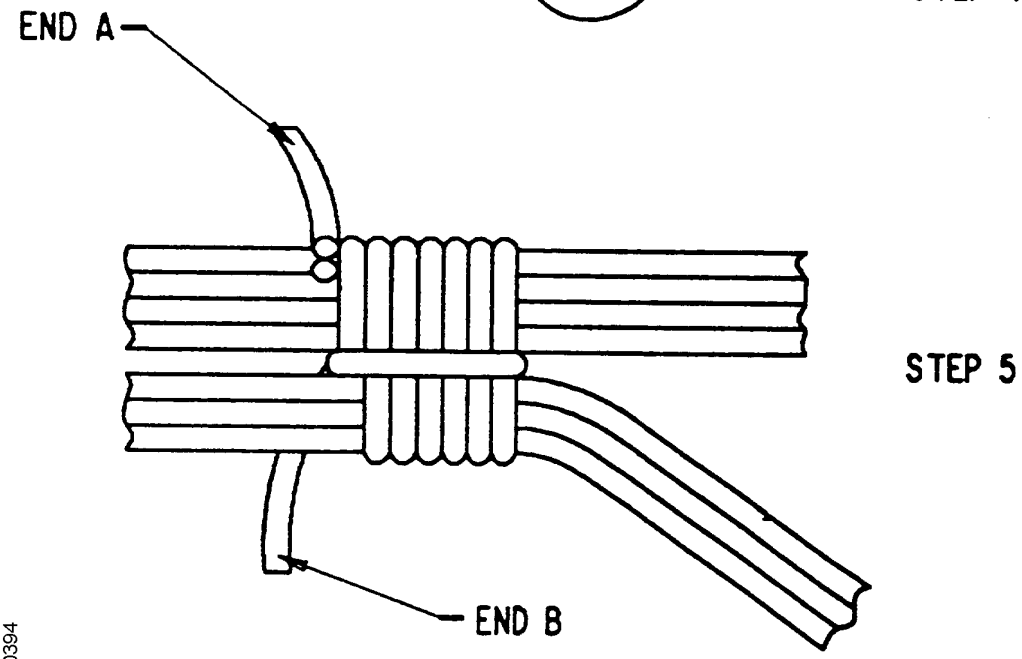
Part view on harness Loom 'B' showing required rework
Fig.27



Rework of existing harnesses looms 'A' and 'B' showing procedure for fastening lacing tape at harness junctions
Fig.28





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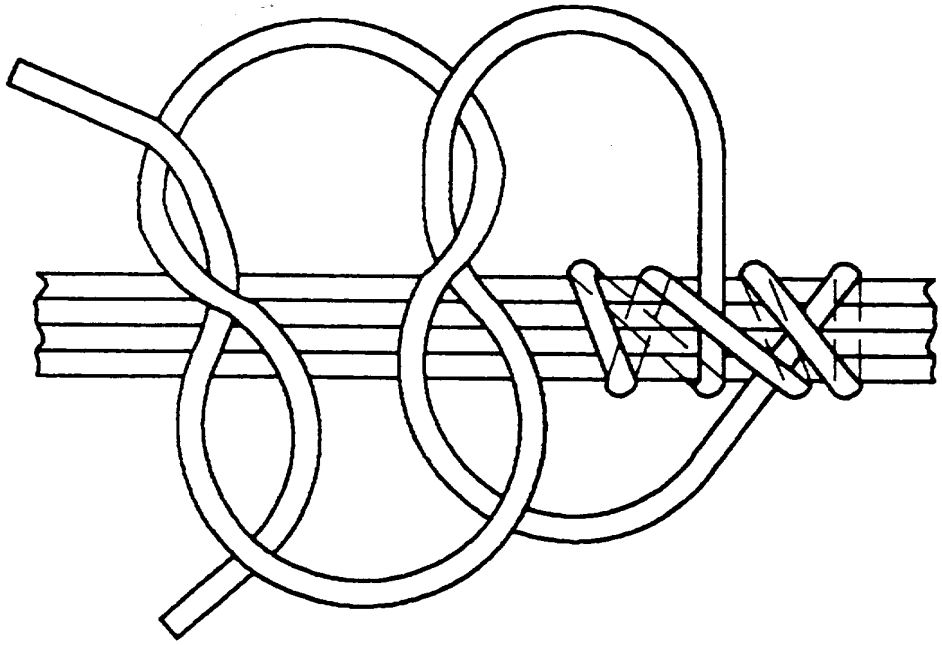
Rework of existing harnesses looms 'A' and 'B' showing procedure for fastening lacing tape at harness junctions
Fig.29



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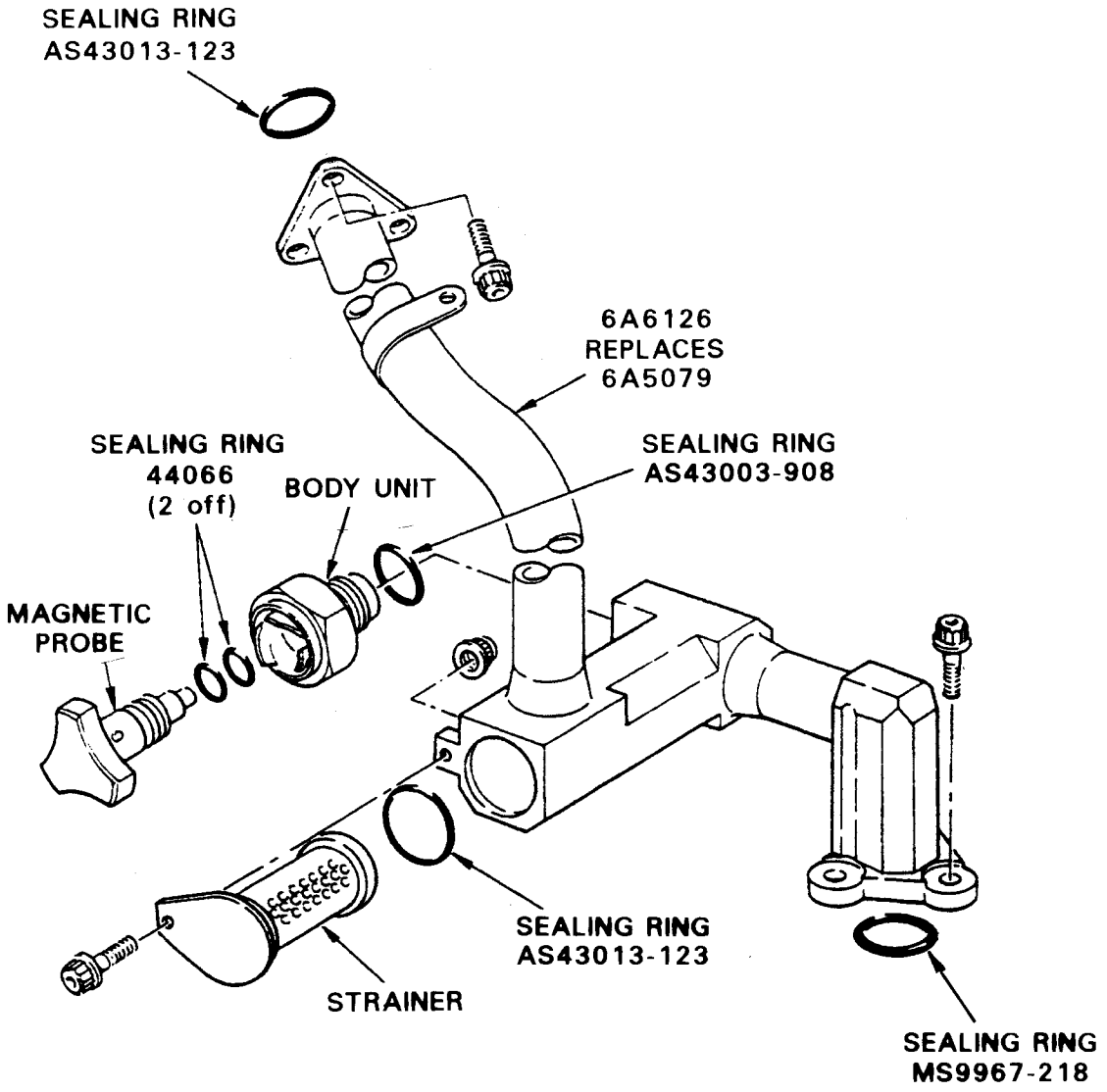
Rework of existing harnesses looms 'A' and 'B' showing procedure for fastening lacing tape to harness
Fig.30



Oil scavenge tube (see Figure 7 for location) - Before and after alteration
Fig.31

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
6A6127 (71-51-50)	1		Tube, raceway - A/O	6A5296 (04-100)	(A)(C)(S1)
6A0106 (71-51-50)	1		Bolt, machine double hex)CP2363	6A5108 (04-133)	(A)(B)(S1)
5W1029 (71-51-50)	1		Spacer, Sleeve))	UP10479 (04-138)	(A)(B)(S1)
4W0109 (71-51-50)	1		Bolt, machine double hex)CP2515	4W0108 (04-141)	(A)(B)(S1)
5W1030 (71-51-50)	1		Spacer, Sleeve))	UP10479 (04-146)	(A)(B)(S1)
6A5912 (71-51-51)	1		Harness assy loom 'A'	6A5819 (01-005)	(A)(C)(1D) (S1)
4W0107 (71-51-51)	1		Bolt, machine double hex)CP2351	4W0109 (01-625)	(A)(B)(S1)
5W1029 (71-51-51)	1		Spacer, Sleeve))	UP10478 (01-630)	(A)(B)(F) (S1)
4W0001 (71-51-51)	1		Nut, self locking CP2351	4W0043 (01-632)	(A)(B)(S1)
4W0120 (71-51-51)	1		Bolt, machine double hex CP2359	4W0102 (01-673)	(A)(B)(S1)
5W1033 (71-51-51)	1		Spacer, sleeve CP2359	- (01-678)	(A)(E)

4W0001 (71-51-51)	1	Nut, self locking CP2359	4W0043 (01-680)	(A)(B)(S1)
- (71-51-51)	1	Bolt, machine double hex)CP)2360	4W0102 (01-681)	(B)
- (71-51-51)	1	Clamp, loop style, cushion))	AS62513 (01-684)	(B)
- (71-51-51)	1	Nut, self locking)	4W0043 (01-688)	(B)
- (71-51-51)	1	Bolt, machine double hex)CP)2361	4W0104 (01-689)	(B)
- (71-51-51)	1	Clamp, loop style, cushion))	AS62510 (01-692)	(B)
- (71-51-51)	1	Nut, self locking)	4W0001 (01-696)	(B)
- (71-51-51)	1	Bolt, machine double hex)CP)2362	4W0102 (01-697)	(B)
- (71-51-51)	1	Clamp, loop style, cushion))	AS62504 (01-700)	(B)
- (71-51-51)	1	Nut, self locking)	4W0043 (01-704)	(B)
- (71-51-51)	1	Clamp, loop style, cushion CP2361	AS62504 (01-740)	(B)
4W0102 (71-51-51)	1	Bolt, machine double hex CP2651	- (02-129)	(A)(E)
AS62512 (71-51-51)	1	Clamp, loop style cushion)CP)2651	- (02-132)	(A)(E)
4W0043 (71-51-51)	1	Nut, self locking)	- (02-136)	(A)(E)
4W0103 (71-51-51)	1	Bolt, machine double hex)CP)2653	- (02-137)	(A)(E)
AS62512 (71-51-51)	1	Clamp, loop style cushion)	- (02-140)	(A)(E)

4W0001 (71-51-51)	1	Nut, self locking	CP 2653	- (02-144)	(A)(E)
AS62508 (71-51-51)	1	Clamp, loop style cushion		- (02-148)	(A)(E)
6A0126 (71-51-50)	1	Bolt, machine double hex		- (02-153)	(A)(E)
AS62512 (71-51-51)	1	Clamp, loop style cushion		- (02-156)	(A)(E)
6A4825 (71-51-51)	1	Spacer, Sleeve	CP 2654	- (02-158)	(A)(E)
4W0001 (71-51-51)	1	Nut, self locking		- (02-160)	(A)(E)
AS62508 (71-51-51)	1	Clamp, loop style cushion		- (02-164)	(A)(E)
4W0103 (71-51-51)	1	Bolt, machine double hex CP2656		- (02-173)	(A)(E)
AS62515 (71-51-51)	1	Clamp, loop style cushion	CP 2656	- (02-176)	(A)(E)
4W0001 (71-51-51)	1	Nut, self locking		- (02-180)	(A)(E)
6A0109 (71-51-50)	1	Bolt, machine double hex		- (02-185)	(A)(E)
AS62505 (71-51-51)	1	Clamp, loop style cushion	CP 2657	- (02-188)	(A)(E)
5W1030 (71-51-51)	1	Spacer, Sleeve		- (02-190)	(A)(E)
4W0001 (71-51-51)	1	Nut, self locking		- (02-192)	(A)(E)

4W0102 (71-51-51)	1	Bolt, machine double hex	CP2652	- (02-193)	(A)(E)
AS62512 (71-51-51)	1	Clamp, loop style cushion	CP2652	- (02-196)	(A)(E)
4W0043 (71-51-51)	1	Nut, self locking	CP2652	- (02-200)	(A)(E)
6A0127 (71-51-51)	1	Bolt, machine double hex	CP2652	- (02-201)	(A)(E)
AS62512 (71-51-51)	1	Clamp, loop style cushion	CP2652	- (02-204)	(A)(E)
5W1031 (71-51-51)	1	Spacer, Sleeve	CP2655	- (02-206)	(A)(E)
5W1032 (71-51-51)	1	Spacer, Sleeve	CP2652	- (02-207)	(A)(E)
4W0001 (71-51-51)	1	Nut, self locking	CP2652	- (02-208)	(A)(E)
6A5913 (71-51-54)	1	Harness assy loom 'B'		6A5820 (01-005)	(A)(C)(1D) (S1)
4W0114 (71-51-54)	1	Bolt, machine double hex	CP2376	AS20907 (01-773)	(A)(B)(S1)
5W1032 (71-51-54)	1	Spacer, sleeve	CP2652	- (01-778)	(A)(E)
- (71-51-54)	1	Clamp, loop style cushion CP2361		AS62509 (01-792)	(B)
AS62505 (71-51-54)	1	Clamp, loop style cushion CP2655		- (01-884)	(A)(E)
AS62501 (71-51-54)	1	Clamp, loop style cushion CP2655		- (01-404)	(A)(E)
- (73-11-49)	1	Bracket CP2381		6A5726 (26-095)	(C)

6A5902 (73-11-49)	1	Bracket assy CP2381	- (26-260)	(A)(E)
AS27473 (73-11-49)	1	Union, double ended	- (28-490)	(A)(E)
AS43003-910 (73-11-49)	1	Sealing ring ended	- (28-492)	(A)(E)
6A6124 (73-11-49)	1	Tube, fuel-assy	- (28-500)	(A)(C)(S1)
- (73-11-49)	1	Bolt, machine double hex	4W0105 (28-533)	(B)
- (73-11-49)	1	Clip, loop style cushion	CP2364 AS62408 (28-536)	(B)
- (73-11-49)	1	Spacer, Sleeve	UP10478 (28-538)	(B)
- (73-11-49)	1	Nut, self locking	4W0001 (28-540)	(B)
4W0109 (73-11-49)	1	Bolt, machine double hex	- (28-541)	(A)(E)
AS62408 (73-11-49)	1	Clip, loop style cushion	CP2648 - (28-544)	(A)(E)
5W1030 (73-11-49)	1	Spacer, Sleeve	- (28-546)	(A)(E)
4W0001 (73-11-49)	1	Nut, self locking	- (28-548)	(A)(E)
AS62412 (73-11-49)	1	Clip, loop style cushion CP2359	- (28-552)	(A)(E)

4W0105 (73-11-49)	1	Bolt, machine double hex	- (28-557)	(A)(E)
AS62412 (73-11-49)	1	Clip, loop style cushion	- (28-560)	(A)(E)
5W1029 (73-11-49)	1	Spacer, Sleeve	- (28-562)	(A)(E)
4W0043 (73-11-49)	1	Nut, self locking	- (28-564)	(A)(E)
6A6125 (73-11-49)	1	Tube, fuel - assy	6A5057 (29-500)	(A)(C)(S1)
5W1086 (73-11-49)	2	Washer CP2368	K8831 (29-526)	(A)(B)(S1)
- (73-11-49)	1	Bolt, machine double hex	4W0103 (28-533)	(B)
- (73-11-49)	1	Washer CP2365	K8831 (29-535)	(B)
- (73-11-49)	1	Clip, loop Style cushion	AS62406 (29-536)	(B)
- (73-11-49)	1	Nut, self locking	4W0001 (29-540)	(B)
6A6123 (73-11-49)	1	Tube, fuel - assy of	6A6026 (31-100)	(A)(C)(S1)
AS21528 (73-11-49)	1	Bolt	- (31-112)	(A)(E)
- (73-11-49)	1	Bolt	4W0169 (31-114)	(B)(F)
- (73-11-49)	1	Bolt machine double hex	AS20908 (31-133)	(B)
- (73-11-49)	1	Clip, loop Style cushion CP2520	AS62420 (31-136)	(B)
- (73-11-49)	1	Nut, self locking	4W0043 (31-140)	(B)

4W0103 (73-11-49)	1	Bolt machine double hex) CP2647)	- (31-141)	(A)(E)
AS62420 (73-11-49)	1	Clip, loop Style cushion) CP2647)	- (31-144)	(A)(E)
4W0043 (73-11-49)	1	Nut, self locking) CP2647)	- (31-148)	(A)(E)
- (73-11-49)	1	Bracket CP2520	6A5487 (31-160)	(C)
6A5901 (73-11-49)	1	Bracket CP2647	- (31-170)	(A)(E)
5010216C (73-12-41)	1	Pump, fuel LP/HP	5L0051 (01-100)	(A)(C) (S1) (1D)
- (73-12-41)	1	Nipple, tube	MS24392J8 (01-153)	(G)
MS9954-08 (73-12-41)	1	Plug	- (01-153)	(H)
M25988-1-908 (73-12-41)	1	Ring, sealing	- (01-154)	(H)
3963250-501 (73-13-04)	1	Valve, eductor	3963250-1 (01-500)	(A)(C)(S1)
4W0103 (75-22-49)	1	Bolt, machine double hex CP2374	4W0102 (06-565)	(A)(B)(S1)
6A6126 (79-22-49)	1	Tube, oil - assy of	6A5079 (07-500)	(A)(C)(S1)

C. Instruction/Disposition Code Statements:

(A) New parts currently available for sale.

(B) Old parts will continue to be available for sale for other applications.

(C) Old parts no longer available for sale.

(E) Additional part.

(1D) Old parts can be reworked and re-identified to the new part number.

(S1) New part may be used in place of old part but not vice-versa.

(F) Quantity decreased from 2 to 1.

(G) Old part becomes redundant on incorporation of this modification.

(H) Required for reworking HP/LP fuel pump.

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.

D. Standard Equipment

Vibro-engraving equipment.

E. Expendable Parts

Part No	ATA/IPC No	Qty	Keyword
AS43013-123	79-22-49, 07-498	1	Sealing Ring
AS43013-123	79-22-49, 07-690	1	Sealing Ring
44066	79-22-45, 01-170	2	Sealing Ring
AS43003-908	79-22-45, 01-098	1	Sealing Ring
MS9967-218	79-22-49, 07-516	1	Sealing Ring
AS43013-124	73-11-49, 31-098	1	Sealing Ring
AS43013-124	73-11-49, 31-116	1	Sealing Ring
AS43003-904	73-33-01, 01-090	1	Sealing Ring
3100631	71-51-51, 03-070	A/R	Braid
3100631	71-51-54, 03-070	A/R	Braid

A/R = As Required

F. Consumable Materials

CoMat 01-002	Inhibited and stabilized trichloroethane
CoMat 02-126	Lockwire
CoMat 02-147	Lockwire
CoMat 02-148	Adhesive tape (electrical)
CoMat 10-038	Petroleum jelly
CoMat 10-060	Liquid paraffin
CoMat 10-077	Approved engine oils