

POWER PLANT - NACELLE - POWERPLANT - DRAIN TUBES - REPLACEMENT OF. - CATEGORY CODE 7 -
MOD.NAC-71-0147

1. Planning Information

A. Effectivity

- (1) Airplane: Airbus A320
- (2) Engine: V2500-A1 Nacelle Engine Buildup Units prior to
Serial Number 0325001.

B. Reason

(1) Condition

Several drains tubes are difficult to install which often puts them on the minimum clearance condition with adjacent hardware.

(2) Background

Reports have been received from production on the difficulty in installing some drains tubes and in meeting the minimum clearance requirements.

(3) Objective

To meet minimum clearance limits and provide drains tubes that are a better fit to ease installation.

(4) Substantiation

Trial installation showed that the new tubes introduced by this Service Bulletin gave the improved fit and necessary clearance.

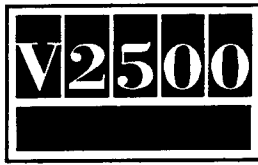
(5) Effect of Bulletin on:

(a) Removal/Installation	Affected
(b) Disassembly/Assembly	Not affected
(c) Cleaning	Not affected
(d) Inspection/Check	Not affected
(e) Repair	Not affected
(f) Testing	Not affected

(6) Supplemental Information

None.

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**C. Description**

(1) The change introduced by this Service Bulletin is as follows:-

- (a) Eleven drains tubes are removed and replaced with new drains tubes.
- (b) The collector plate assembly is removed and replaced with a new collector plate assembly.
- (c) Various clipping points are revised and/or deleted.

D. Approval

The technical content of this Service Bulletin is covered by an Airbus Industrie Modification which is under DGAC (Direction Generale de L'Aviation Civile - France) approval.

E. Compliance

Category Code 7

Accomplish when the supply of superseded parts has been depleted.

F. Manpower

Estimated manhours to incorporate the full intent of this Service Bulletin:

VENUE	ESTIMATED MANHOURS
(1) In Service	N/A
(2) At Overhaul	N/A
Total M/Hrs	

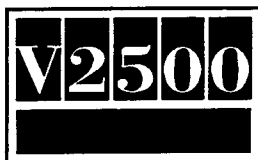
G. Material Cost and Availability

Modification Kit not required. Parts supplied as single line items.

H. Tooling - Cost and Availability

None required.

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I. Weight and Balance

- (1) Weight change.....None
- (2) Moment arm.....No effect
- (3) Datum.....Engine Front Mount Centerline
(Powerplant Station PPS 100.00)

J. Electrical Load Data

Not affected.

K. References

- (1) Internal Reference No.

93VN057A
- (2) Other References

A320/V2500 Aircraft Maintenance Manual 71-71-42

L. Other Publications Affected

Publication

A320/V2500-A1 Powerplant Illustrated Parts Catalog	71-71-42 71-71-48 71-73-48
A320/V2500-A1 Engine Illustrated Parts Catalog	71-71-42 71-71-48 71-71-48
A320/V2500-A1 Powerplant Buildup Manual	71-00-02
A320/V2500-A1 Engine Manual	72-00-60

2. Accomplishment Instructions

A. Pre-requisite Instructions

- (1) Remove the Drains Mast as instructed in the A320/V2500 Aircraft Maintenance Manual, Task 71-71-42-000-010.

B. Removal Instructions

- (1) Remove and discard the 740-5682-503 Drains Collector Plate Assembly (Refer to Figure 1.)
- (2) Disassemble the clipping points listed below (Refer to Figures 1,2 and 3):

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NOTE: Keep the nuts, bolts, washers and clamps for any given clipping point in a separate, labelled bag to ease installation.

CP0948, CP0932, CP0931, CP0973, CP0915, CP0317, CP0919, CP0920, CP0925, CP0924, CP0252, CP0927, CP0946, CP0943, CP0944, CP0942, CP0941, CP0940, CP0939, CP0938, CP0937, CP0968, CP0570, CP0951, CP0952, CP0949, CP0950, CP0953 and CP0954. Refer to Figures 1, 2 and 3.) Clipping points CP0931, CP0944, CP0570 are deleted. Refer to Section 3, Material Information for disposition instructions.

- (3) Remove and discard the tubes listed below:

740-5790-505, 740-5791-503, 740-5261-505, 740-5698-507, 740-5702-507, 740-5673-501, 740-5692-505, 740-5688-509, 740-5267-505, 740-5792-515 and 740-5696-505.

C. Rework Instructions

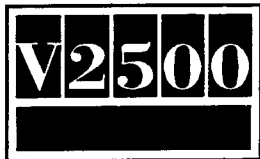
None.

D. Assembly Instructions

NOTE: Route the drains tubes so that the flow direction arrows on the tube point towards the Drains Mast.

- (1) Install the 740-5790-507 tube (from the FCOC) as shown. Hand tighten the coupling only at this stage (Refer to Figure 1, sht 2).
- (2) Assemble clipping point CP0948 as shown with a new AS21421 Bolt, new ST1698D50 Spacer, an AS20624 Nut, SP154D Washer, 400WSS4 Clip and a 400WSS16 Clamp (Refer to Figure 1, sht 3).
- (3) Assemble clipping point CP0932 as shown with a new AS21418 Bolt, new ST1698D49 Spacer, 400WSS16 Clip, AS20624 Nut and an SP154D Washer.
- (4) Assemble clipping point CP0973 as shown with an AS21408 Bolt, 400WSS16 Clip, 400WSS4 Clip, an AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 4).
- (5) Assemble clipping point CP0915 as shown with an AS21411 Bolt, ST1698D47 Spacer, 400WSS4 Clip, AS20624 Nut and an SP154D Washer.
- (6) Assemble clipping point CP0317 as shown with an AS21409 Bolt, 400WSS4 Clip, AS20624 Nut and an SP154D Washer.
- (7) Install the 740-5791-505 tube as shown. Hand tighten the coupling only at this stage (Refer to Figure 1, sht 2).
- (8) Assemble clipping point CP0919 as shown with an AS21409 Bolt, two 400WSS4 Clips, an AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 4).

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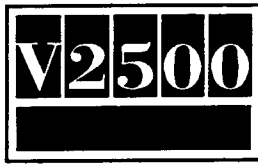
- (9) Assemble clipping point CP0920 as shown with an AS21408 Bolt, two 400WSS4 Clips, an AS20624 Nut and an SP154D Washer.
- (10) Assemble clipping point CP0925 as shown with an AS21408 Bolt, 400WSS4 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 5).
- (11) Assemble clipping point CP0924 as shown with an AS21408 Bolt, 400WSS4 Clip, AS20624 Nut and an SP154D Washer.
- (12) Install the 740-5261-507 tube as shown. Hand tighten the coupling only at this stage (Refer to Figure 1, sht 2).
- (13) Assemble clipping point CP0252 as shown with an AS21411 Bolt, ST1698D47 Spacer, 400WSS4 Clip, TA025074-14 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 5).
- (14) Assemble clipping point CP0927 as shown with an AS21411 Bolt, ST1698D47 Spacer, 400WSS4 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 6).
- (15) Assemble clipping point CP0946 as shown with an AS21411 Bolt, ST1698D47 Spacer, 400WSS4 Clip, AS20624 Nut and an SP154D Washer.
- (16) Install the 740-5673-503 tube as shown. hand tighten the coupling only at this stage (Refer to Figure 1, sht 2).
- (17) Assemble clipping point CP0938 as shown with an AS21407 Bolt and a 400WSS6 Clip (Refer to Figure 1, sht 7).
- (18) Assemble clipping point CP0939 as shown with an AS21408 Bolt and a 400WSS6 Clip.
- (19) Assemble clipping point CP0940 as shown with an AS21408 Bolt, 400WSS6 Clip and a 400WSS8 Clip.
- (20) Assemble clipping point CP0941 as shown with an AS21408 Bolt, 400WSS8 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 8).
- (21) Install the 740-5702-509 tubes as shown. Hand tighten the coupling only at this stage (Refer to Figure 1, sht 2).
- (22) Assemble clipping point CP0942 as shown with an AS21415 Bolt, ST1698D48 Spacer, 400WSS4 Clip, 400WSS6 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 8).
- (23) Install the 740-5698-509 tube as shown. Hand tighten the coupling only at this stage (Refer to Figure 1, sht 2).
- (24) Assemble clipping point CP0943 as shown with an AS21408 Bolt, 400WSS6 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 1, sht 6).

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- (25) Assemble clipping point CP0959 as shown with an AS21408 Bolt, 400WSS8 Clip, AS20624 Nut and an SP154D Washer.
- (26) Install the 740-5688-511 tube as shown. Hand tighten the coupling only at this stage (Refer to Figure 3, sht 1).
- NOTE: Clipping point CP1169 replaces Clipping point CP0968. However; the clipping point number CP0968 is retained and used to replace Clipping point CP0570. Refer to Figure 3, sht 2.
- (27) Assemble clipping point CP0968 as shown with an AS21408 Bolt, two 400WSS4 Clips, an AS20624 Nut and an SP154D Washer.
- (28) Assemble clipping point CP1169 as shown with an AS21408 Bolt, 400WSS4 Clip, 400WSS1 Clip, an AS20624 Nut and an SP154D Washer.
- (29) Install the 740-5692-507 tube as shown. Hand tighten the coupling only at this stage (Refer to Figure 3, sht 1).
- (30) Assemble clipping point CP0937 as shown with an AS21418 Bolt, ST1698D49 Spacer, 400WSS4 Clip, AS20624 Nut and an SP154D Washer (Refer to Figure 3, sht 2).
- (31) Install the 740-5267-507 tube as shown. Hand tighten the coupling only at this stage (Refer to Figure 2, sht 1).
- (32) Install the 740-5792-517 tube as shown. Hand tighten the coupling only at this stage.
- (33) Install the 740-5696-507 tube as shown. Hand tighten the coupling only at this stage.
- (34) Put the new 740-5682-505 Collector Plate Assembly in position (it can only fit one way) and connect the nine drain tubes to it. Hand tighten the couplings only at this stage (Refer to Figure 1, sht 2).
- (35) Assemble clipping point CP0954 as shown with an AS21408 Bolt, 400WSS4 Clip, 400WSS16 Clip, an AS20624 Nut and an SP154D Washer (Refer to Figure 2, sheets 2 and 3).
- (36) Assemble clipping point CP0953 as shown with an AS21408 Bolt, 400WSS4 Clip, an AS20624 Nut and an SP154D Washer.
- (37) Assemble clipping point CP0949 as shown with an AS21408 Bolt, 400WSS4 Clip, an AS20624 Nut and an SP154D Washer.
- (38) Assemble clipping point CP0950 as shown with an AS21408 Bolt, 400WSS4 Clip, an AS20624 Nut and an SP154D Washer.

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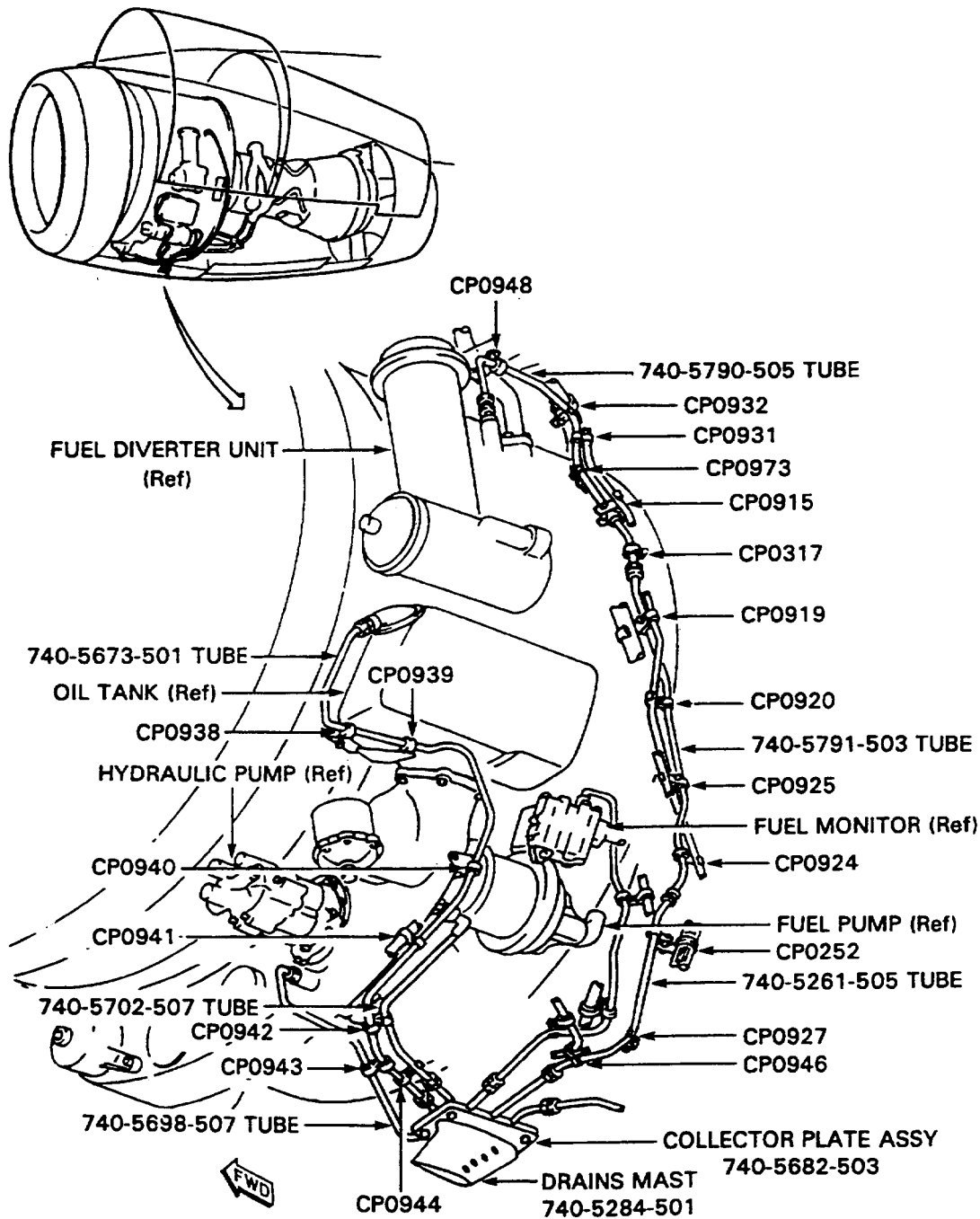
- (39) Assemble clipping point CP0952 as shown with an AS21408 Bolt and an 400WSS4 Clip.
- (40) Assemble clipping point CP0951 as shown with an AS21408 Bolt, 400WSS4 Clip and a 400WSS5 Clip.
- (41) Make sure that all tubes are free from preload and that a minimum clearance of 0.25 in (6 mm) is maintained between the tubes and adjacent structure/hardware.
- (42) Torque the couplings at both ends of the following tubes 110 to 125 lbf in (12 to 14 Nm):
- 740-5790-507 (ref. step 2.D.(1).
 - 740-5791-505 (ref. step 2.D.(7).
 - 740-5261-507 (ref. step 2.D.(12).
 - 740-5702-509 (ref. step 2.D.(21).
 - 740-5698-509 (ref. step 2.D.(23).
 - 740-5688-511 (ref. step 2.D.(26).
 - 740-5692-507 (ref. step 2.D.(28).
 - 740-5267-507 (ref. step 2.D.(31).
 - 740-5792-517 (ref. step 2.D.(32).
 - 740-5696-507 (ref. step 2.D.(33).
- (43) Torque the couplings at both ends of the 740-5673-503 tube to 200 to 250 lbf in (23 to 28 Nm). Refer to step 2.D.(16).
- (44) Torque the bolts at clipping points CP0938, 0939, 0940 0951 and 0952, and the nuts at the remaining clipping points to 20 to 25 lbf in (2 to 3 Nm)

E. Post-requisite Instructions

- (1) Install the Drains Mast as instructed in the A320/V2500 Aircraft Maintenance Manual, Task 71-71-42-410-010.

F. Recording Instructions

- (1) A record of accomplishment is necessary.

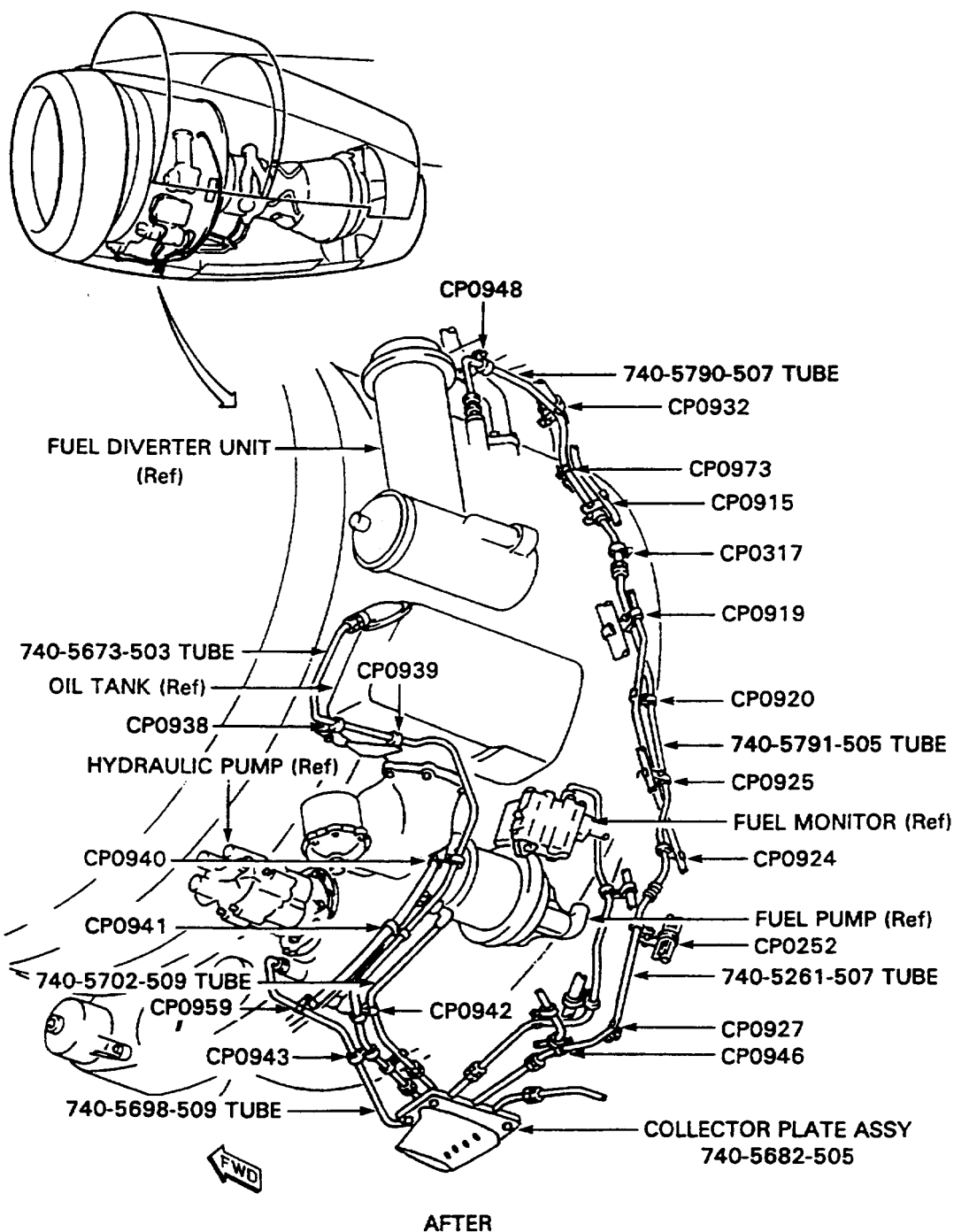


BEFORE

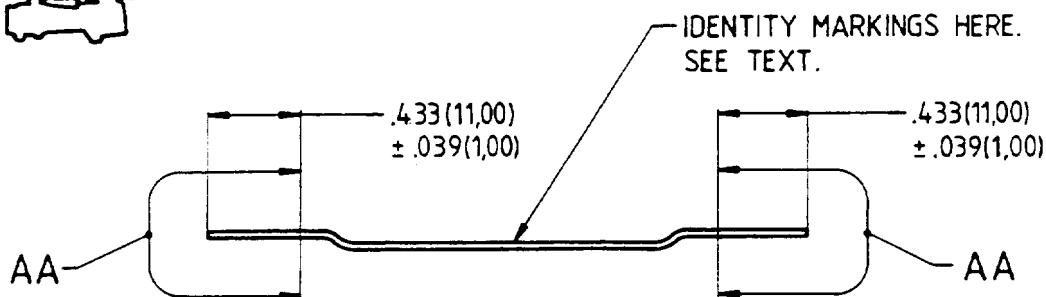
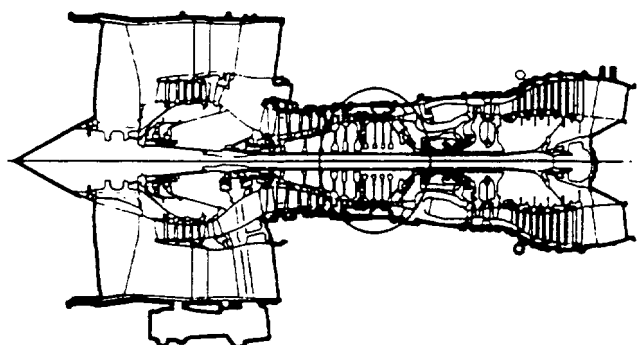
REPLACEMENT OF DRAIN TUBES, LEFT SIDE
Fig.1 SHEET 1

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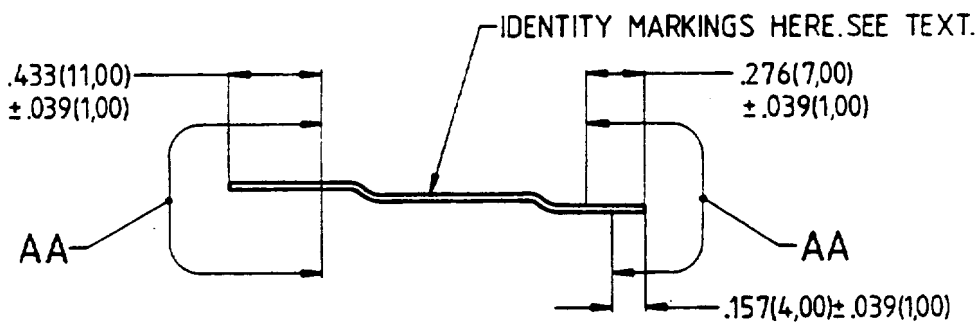
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REPLACEMENT OF DRAIN TUBES, LEFT SIDE
Fig.1 SHEET 2



TYPICAL SECTION THRU HEATSHIELD ASSY.—STAGE 8



TYPICAL SECTION THRU HEATSHIELD ASSY.—STAGE 11.

DIMENSIONS IN INCHES(MILLIMETRES).

APPLY THE HIGH HEAT RESISTING ENAMEL AS GIVEN IN TEXT.

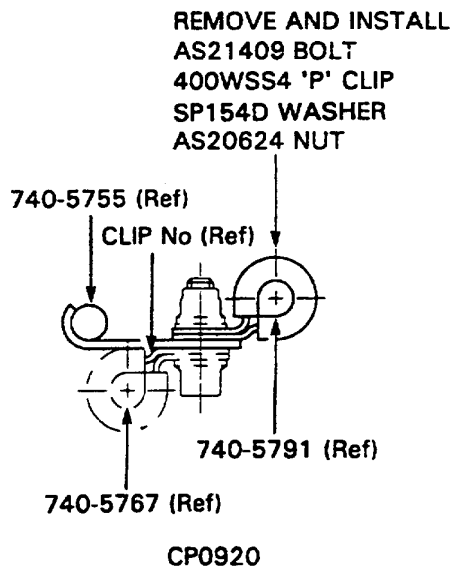
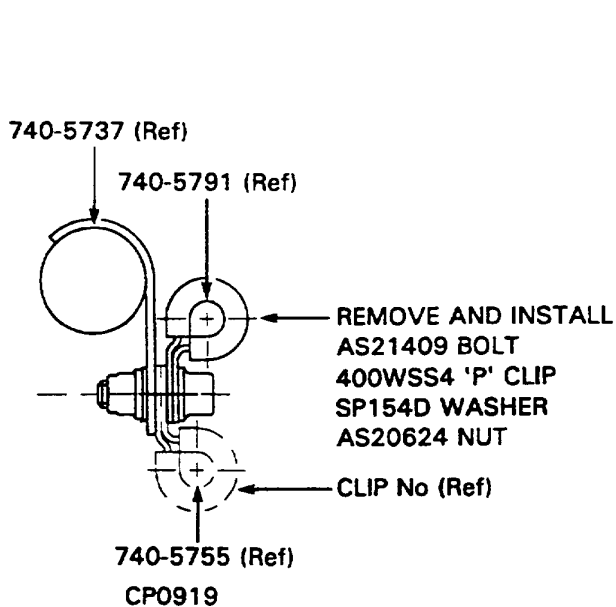
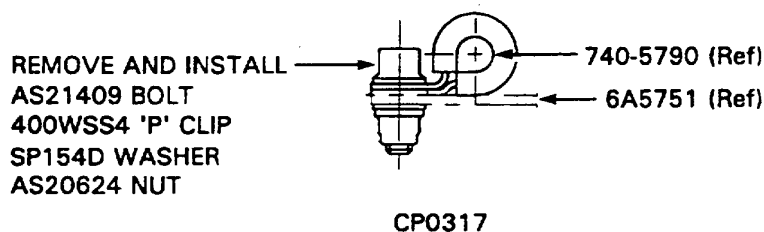
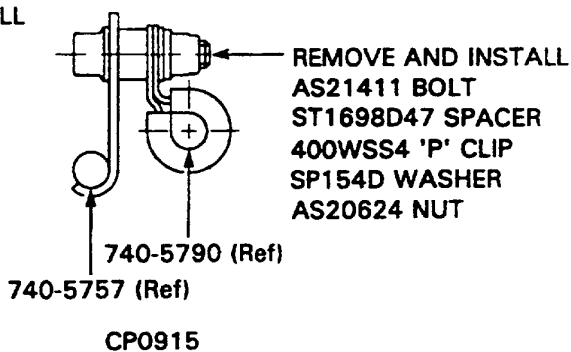
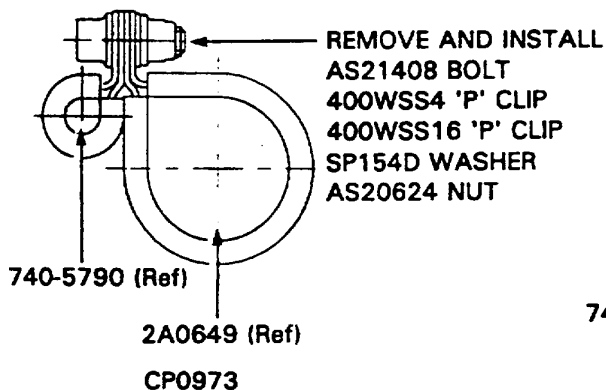
DO NOT LET THE ENAMEL TOUCH THE AREAS SPECIFIED AA.

REWORKING OF EXISTING HEATSHIELD ASSEMBLIES—STAGES 8 & 11.

ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS

Fig.1 SHEET 3

V2500—NAC—71—0147

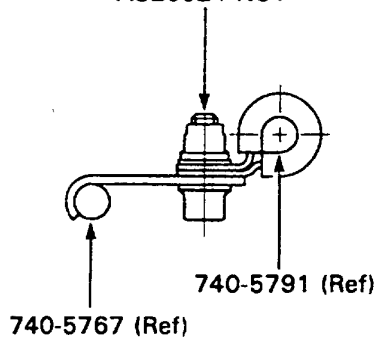


ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.1 SHEET 4



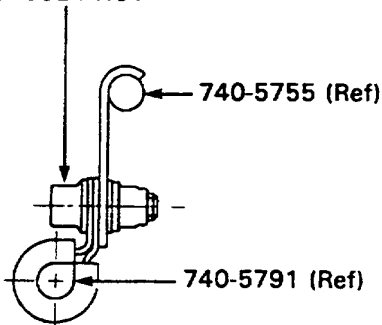
SERVICE BULLETIN

REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP
SP154D WASHER
AS20624 NUT



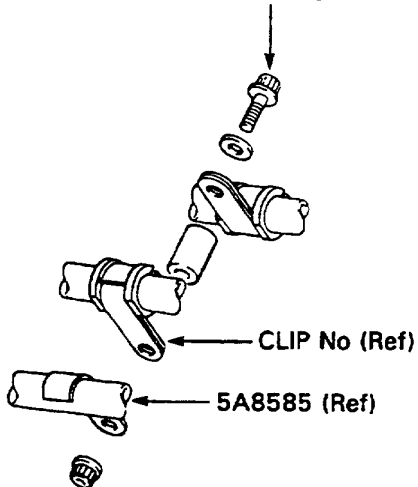
CP0925

REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP
SP154D WASHER
AS20624 NUT



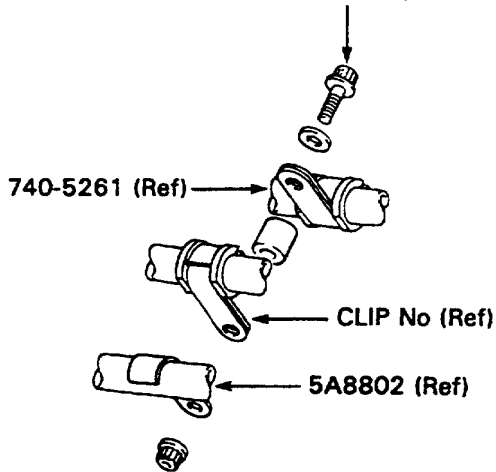
CP0924

REMOVE
AS20624 NUT
SP154D WASHER
400WSS4 'P' CLIP
ST1698D48 SPACER
AS21415 BOLT



CP0252 BEFORE

INSTALL
AS20624 NUT
SP154D WASHER
400WSS4 'P' CLIP
ST1698D47 SPACER
AS21411 BOLT



CP0252 AFTER

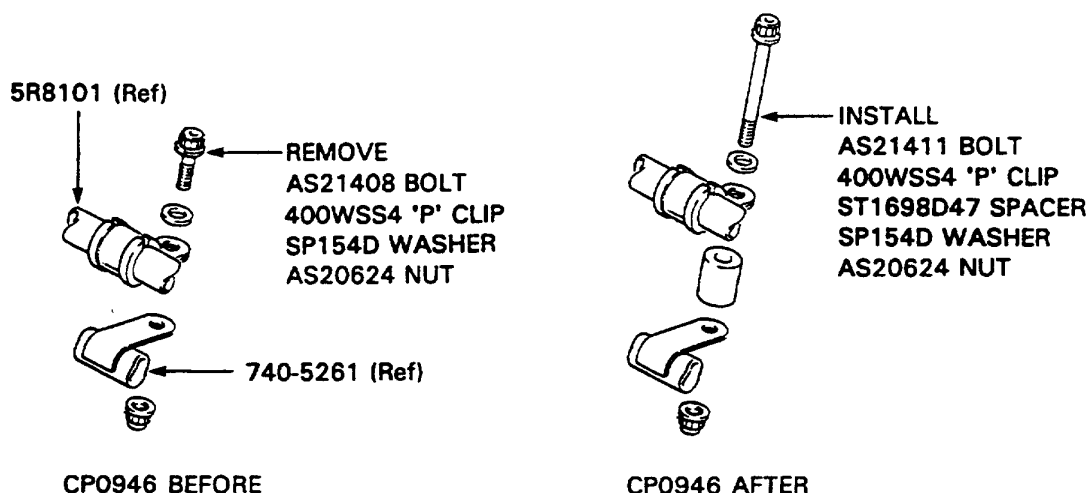
ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.1 SHEET 5

V2500-NAC-71-0147

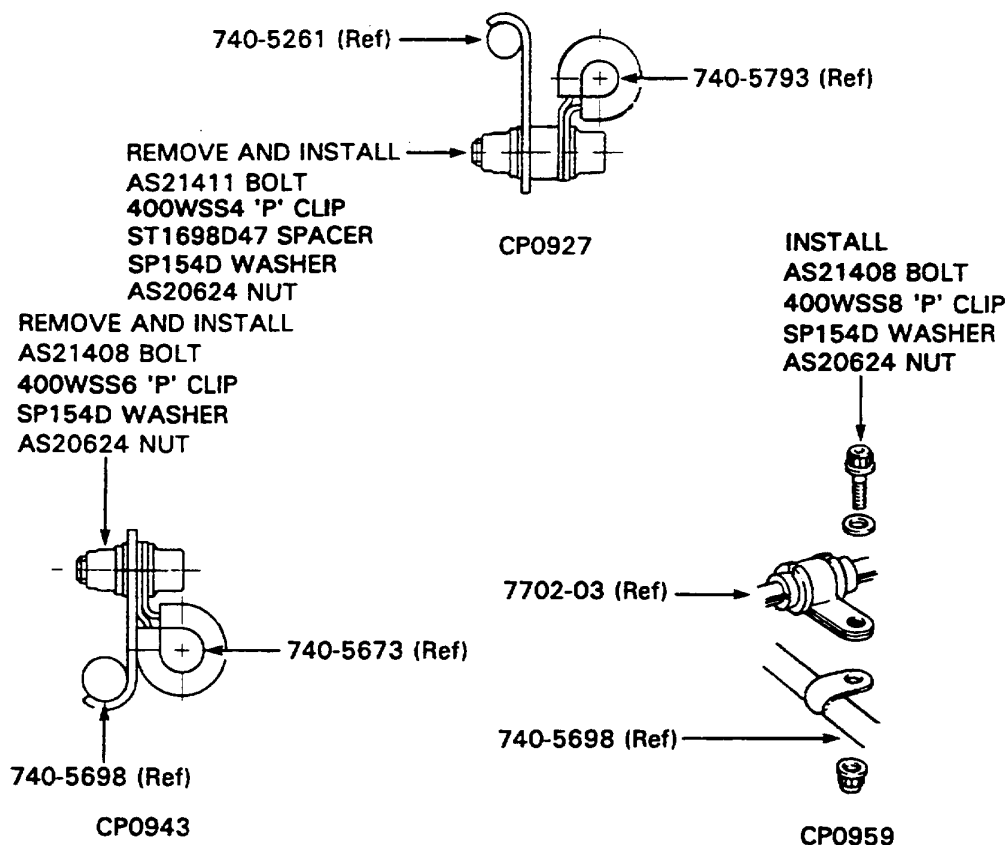


SERVICE BULLETIN

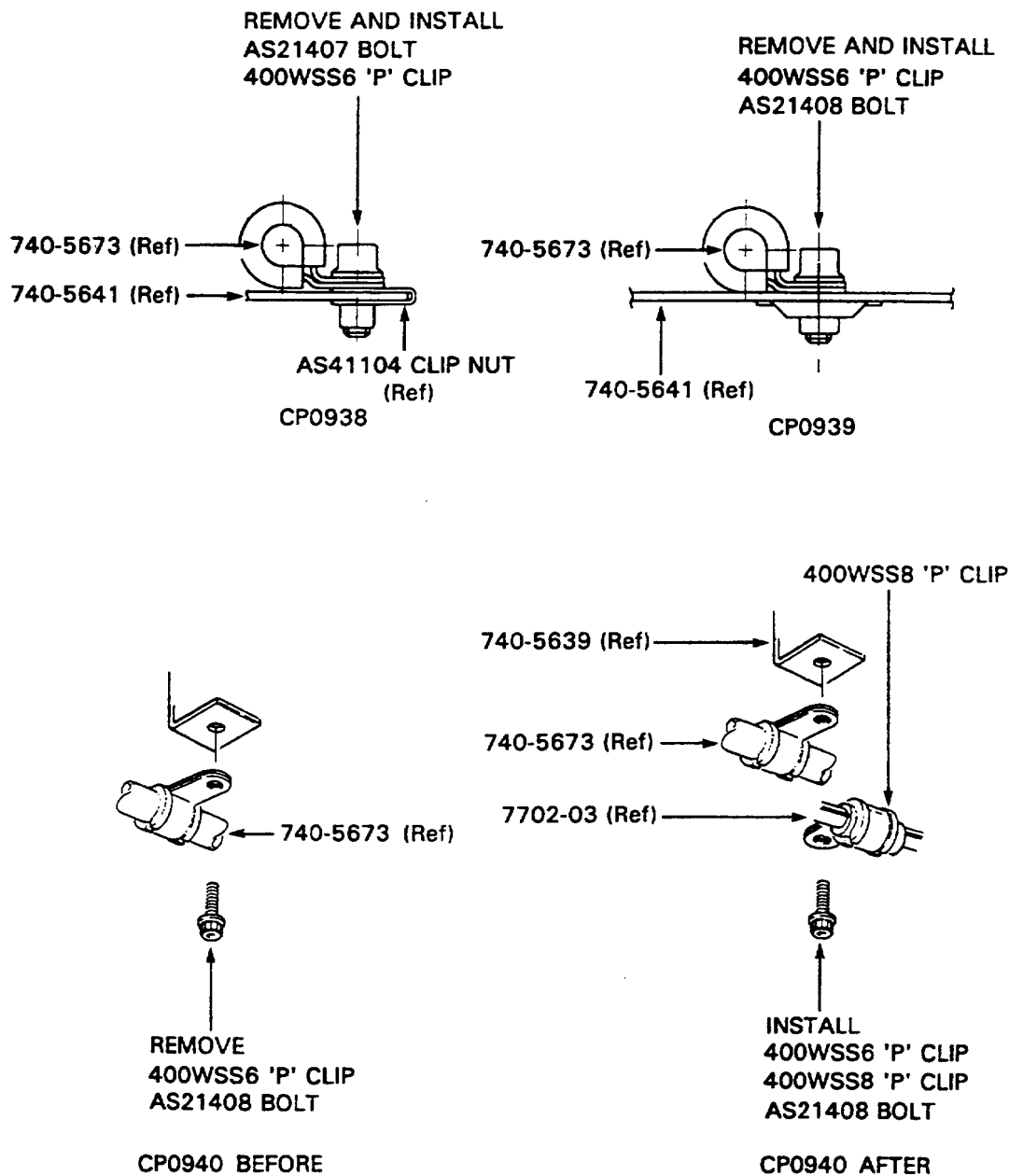
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ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.1 SHEET 6

V2500-NAC-71-0147



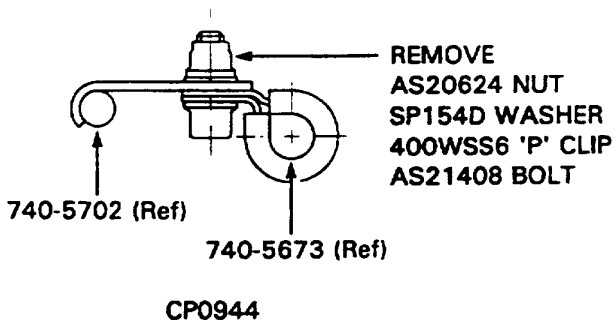
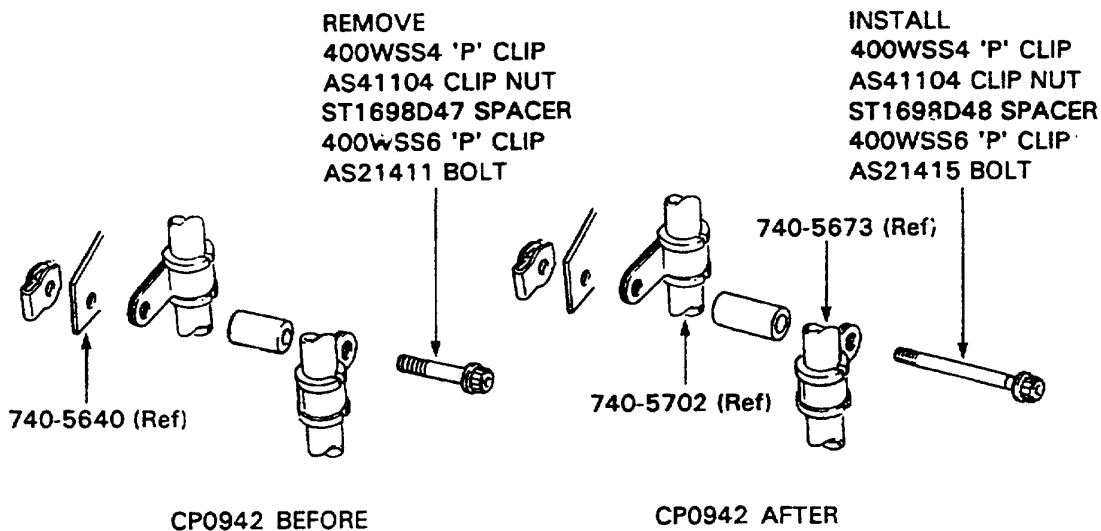
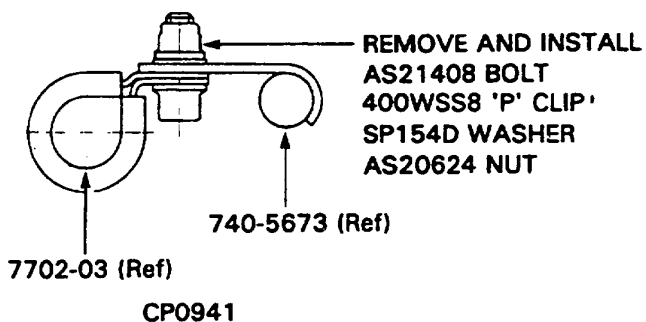
ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.1 SHEET 7

V2500-NAC-71-0147



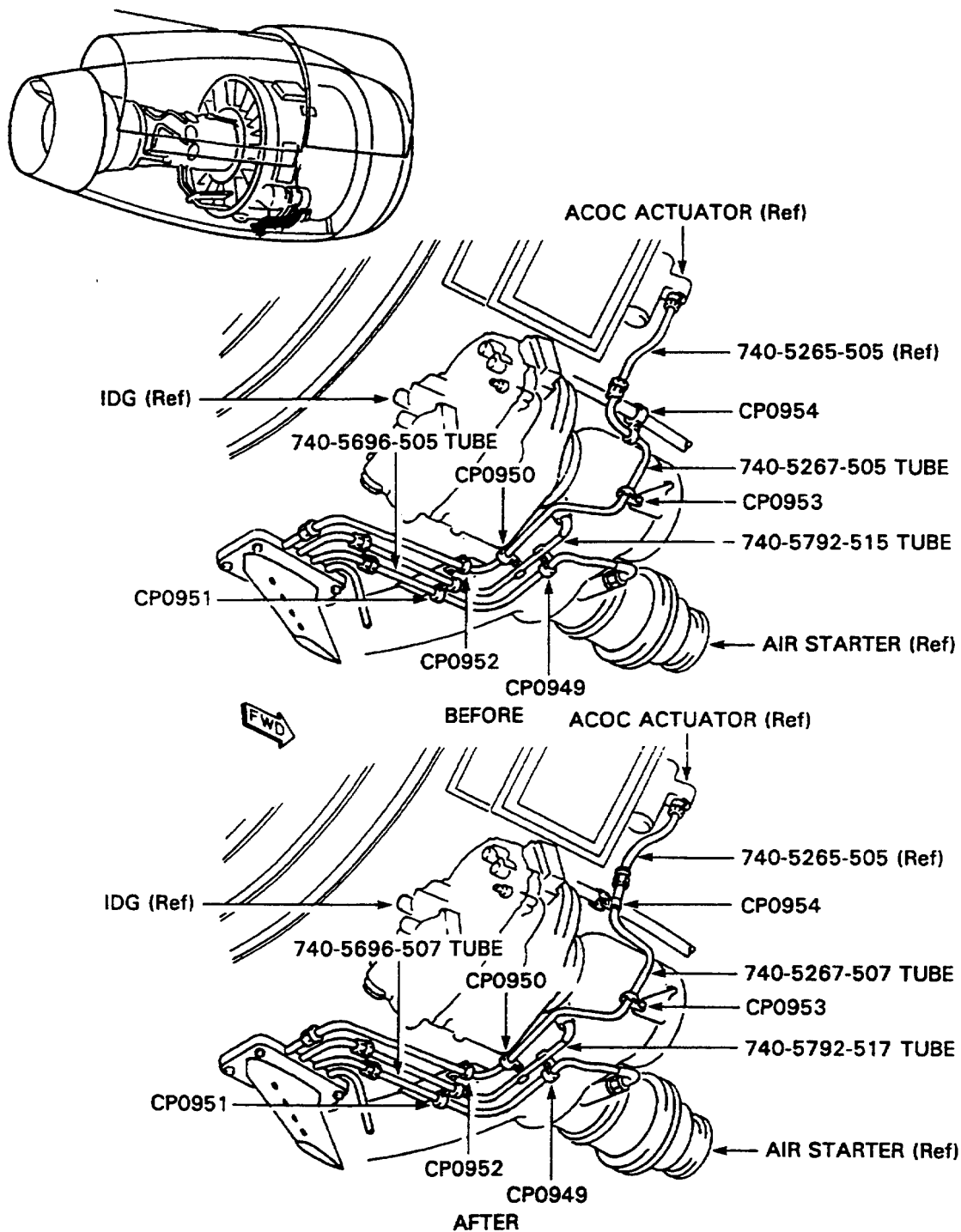
SERVICE BULLETIN

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ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.1 SHEET 8

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V2500-NAC-71-0147



REPLACEMENT OF DRAIN TUBES, RIGHT SIDE
Fig.2 SHEET 1

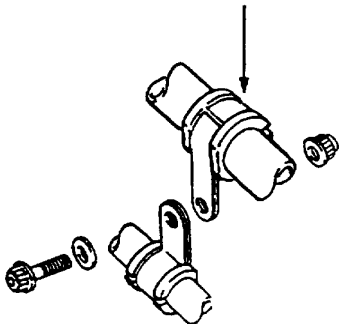
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SERVICE BULLETIN

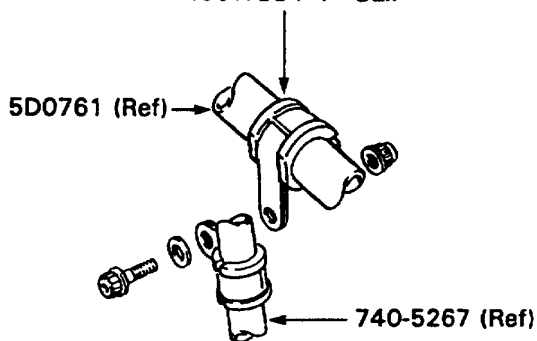
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REMOVE
400WSS16 'P' CLIP
SP154D WASHER
AS20624 NUT
AS21408 BOLT
400WSS4 'P' CLIP



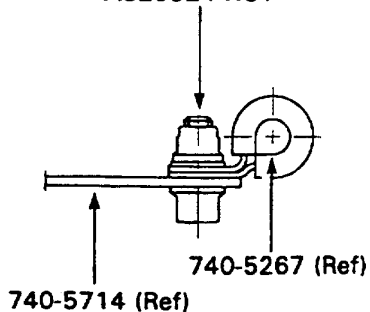
CP0954 BEFORE

INSTALL
400WSS16 'P' CLIP
SP154D WASHER
AS20624 NUT
AS21408 BOLT
400WSS4 'P' CLIP



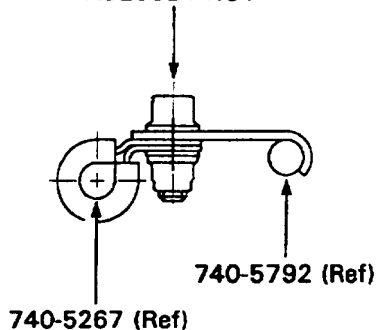
CP0954 AFTER

REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP
SP154D WASHER
AS20624 NUT



CP0953

REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP
SP154D WASHER
AS20624 NUT



CP0950

ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.2 SHEET 2

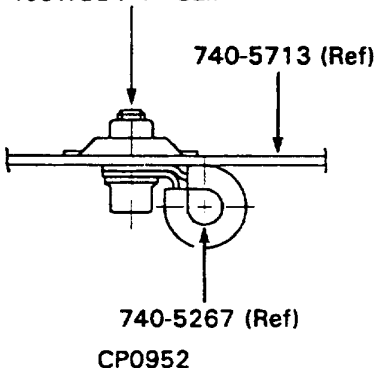
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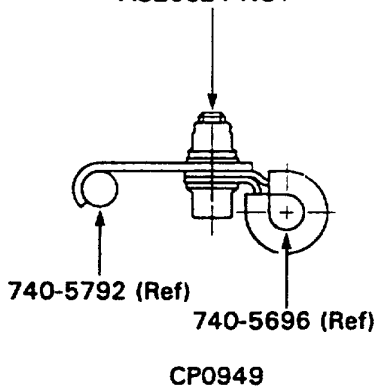


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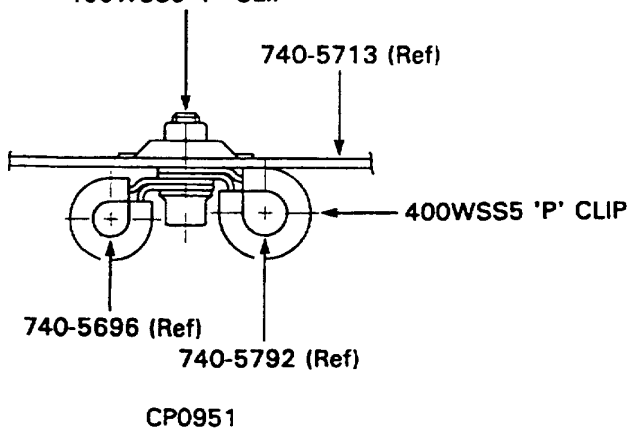
REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP



REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP
SP154D WASHER
AS20624 NUT

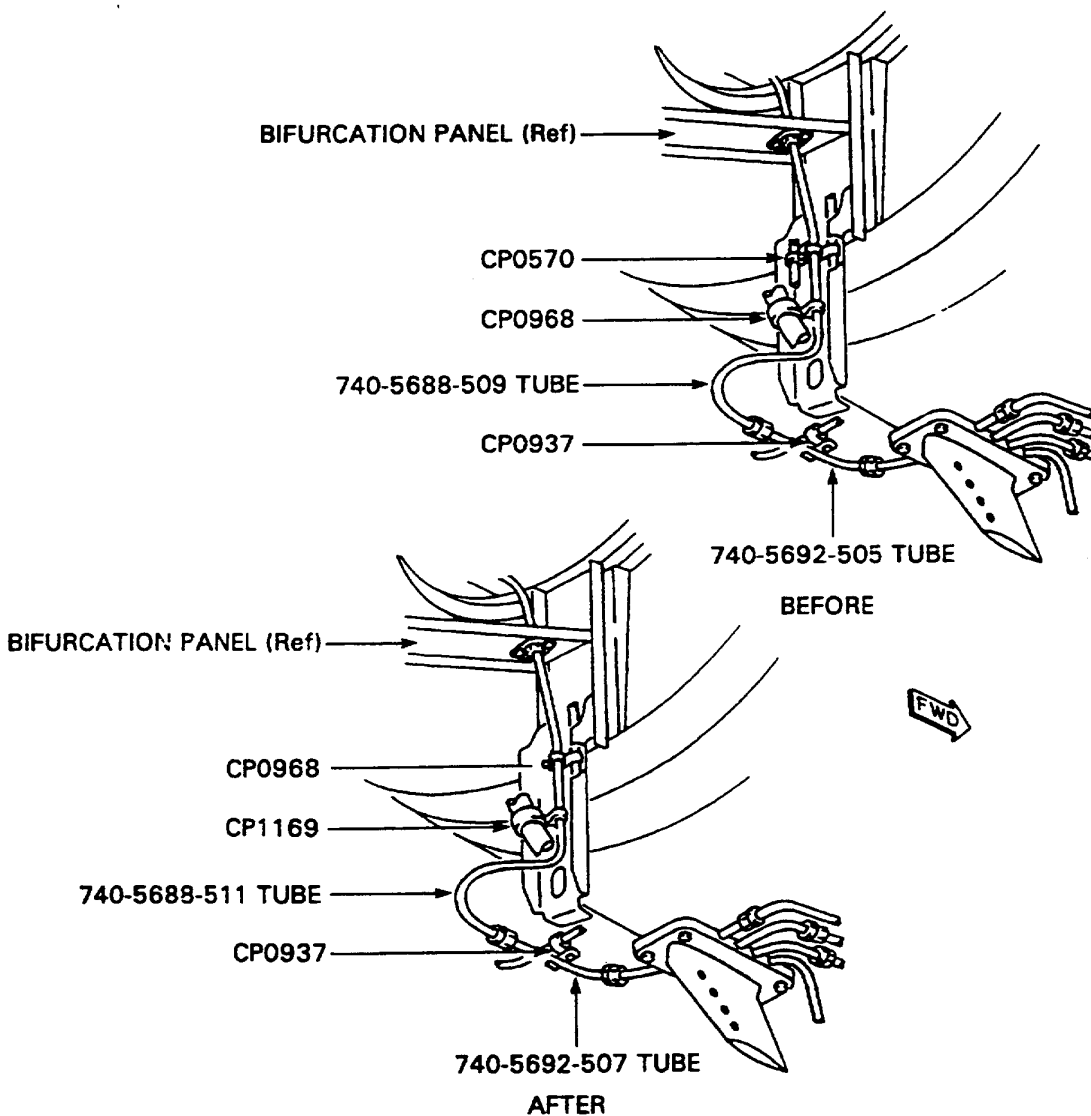
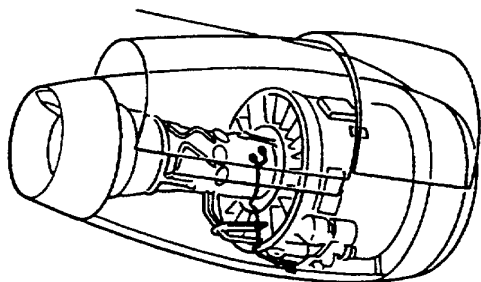


REMOVE AND INSTALL
AS21408 BOLT
400WSS4 'P' CLIP
400WSS5 'P' CLIP



ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.2 SHEET 3

V2500-NAC-71-0147

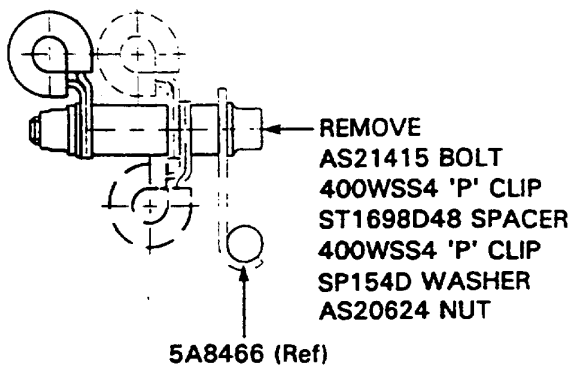


REPLACEMENT OF AFT DRAIN TUBES
Fig.3 SHEET 1

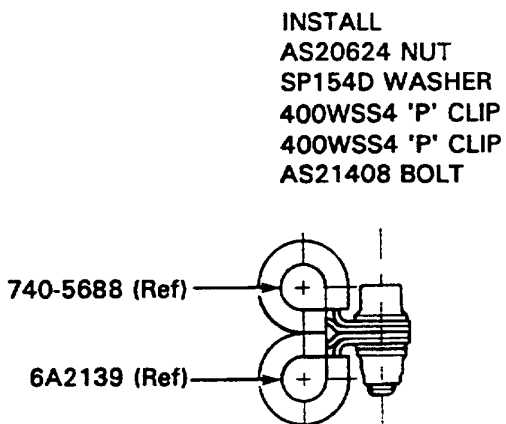
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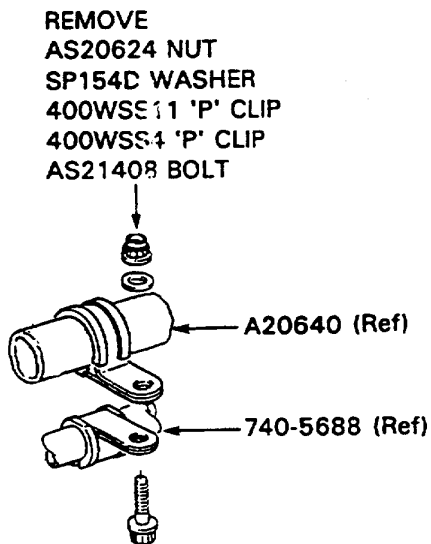
SERVICE BULLETIN



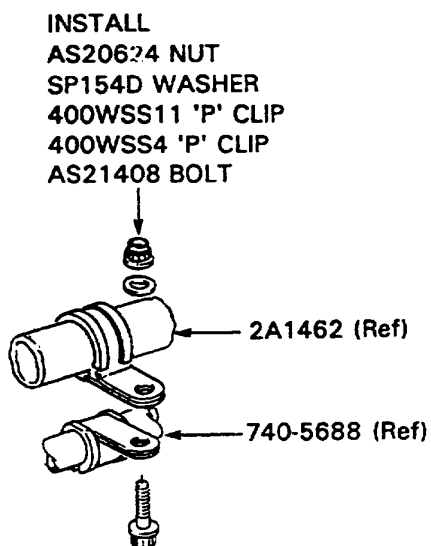
CP0570 BEFORE



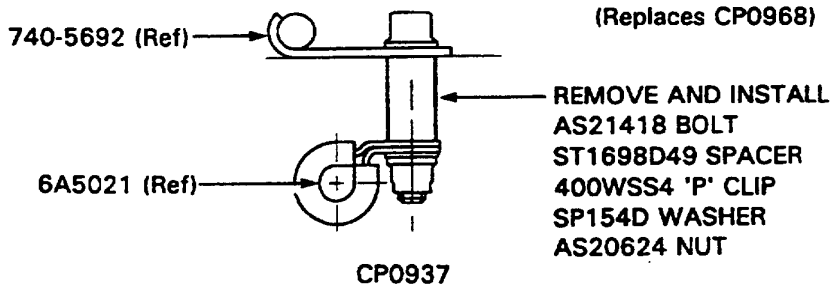
CP0968 AFTER
(Replaces CP0570)



CP0968 BEFORE



CP1169 AFTER
(Replaces CP0968)



ASSEMBLY/DISASSEMBLY OF CLIPPING POINTS
Fig.3 SHEET 2

ded00003360

V2500-NAC-71-0147



SERVICE BULLETIN

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	INSTR/ DISPOS
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Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with this Bulletin

None.

B. Parts affected by this Bulletin

740-5682-505 (71-71-42)	1	\$5,699.00	Collector Plate Assy	740-5682-503 (01-050)	(A)(1D) (S1)
740-5790-507 (71-71-48)	1	\$1,219.00	Tube Assy, Drain	740-5790-505 (01-100)	(A)(1D) (S1)
AS21421 (71-71-48)	1	\$6.00	Bolt, CP0948	AS21411 (01-125)	(A)(2D) (S1)
ST1698D50 (71-71-48)	1	\$61.00	Spacer, CP0948	ST1698D40 (01-128)	(A)(2D) (S1)
--- (71-71-48)	1		Washer, CP0931	SP154D (01-137)	(2D)(S1)
--- (71-71-48)	1		Nut, CP0931	AS20624 (01-139)	(2D)(S1)
--- (71-71-48)	1		Bolt, CP0931	AS21411 (01-141)	(2D)(S1)
--- (71-71-48)	1		Spacer, CP0931	ST1698D47 (01-143)	(2D)(S1)
--- (71-71-48)	1		Clip, Loop Type CP0931	400WSS4 (01-145)	(2D)(S1)
740-5791-505 (71-71-48)	1	\$1,075.00	Tube Assy Drain	740-5791-503 (01-500)	(A)(1D) (S1)
740-5261-507 (71-71-48)	1	\$1,107.00	Tube Assy, Drain	740-5261-505 (02-100)	(A)(1D) (S1)
740-5702-509 (71-71-48)	1	\$834.00	Tube Assy, Drain	740-5702-507 (03-100)	(A)(1D) (S1)
740-5688-511 (71-71-48)	1	\$1,217.00	Tube Assy, Drain	740-5688-509 (03-400)	(A)(1D) (S1)
740-5692-507 (71-71-48)	1	\$793.00	Tube Assy, Drain	740-5692-505 (03-700)	(A)(1D) (S1)
740-5673-503 (71-73-48)	1	\$212.00	Tube Assy, Drain	740-5673-501 (01-100)	(2D)(S1)
--- (71-73-48)	1		Bolt, CP0944	AS21408 (01-158)	(2D)(S1)
--- (71-73-48)	1		Clip, Loop Type CP0944	400WSS6 (01-159)	(2D)(S1)
--- (71-73-48)	1		Washer, CP0944	SP154D (01-161)	(2D)(S1)

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SERVICE BULLETIN

---	1	Nut, CP0944	AS20624	(2D)(S1)
(71-73-48)			(01-163)	
(740-5698-509	1	\$1,300.00	Tube Assy, Drain	740-5698-507 (A)(1D)
(71-73-48)			(01-500)	(S1)
740-5696-507	1	\$1,038.00	Tube Assy, Drain	740-5696-505 (A)(1D)
(71-73-48)			(02-100)	
740-5792-517	1	\$945.00	Tube Assy, Drain	740-5792-515 (A)(1D)
(71-71-48)			(02-500)	(S1)
740-5267-507	1	\$981.00	Tube Assy, Drain	740-5267-505 (A)(1D)
(71-73-48)			(03-500)	(S1)

RQ* = Quote only basis.

C. Instruction/Disposition Code Statements

(A) New part currently available.

<1D) Discard old part.

(2D) Old part can be used up on other applications.

(S1) New parts coded (S1) must replace old parts coded (S1) as a complete set.

NOTE: The estimated 1996 unit price shown is provided for planning purposes only and does not constitute a firm quotation. Consult the Rohr Price Catalog or contact Rohr's Spares Parts Sales Department for information concerning firm prices.

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