

IAE Propulsion System - Nacelle **SERVICE BULLETIN**

Date: February 4, 2000

Subject: Transmittal of Revision 1 to Service Bulletin Number V2500-NAC-36-0006

Service Bulletin Revision History:

<u>Event</u>	<u>Date</u>
Basic Issue	June 12/98
Revision 1	Feb. 04/00

Reasons for issuance of Revision:

- (1) To amend "Internal Reference No" to include EC 96VN213A.
- (2) To amend Section 2, "Accomplishment Instructions" and Section 3, "Material Information" to include a new part number for the Sense Tube "P" Clip at clipping point CP5923.
- (3) To correct the Service Bulletin Number in Section 2 Part D "Recording Instructions".
- (4) To add the new TA0210046FT04 "P" Clip part number at CP5923 (Figure 3 Sheet 2).

Effect on Past Compliance:

None.

List of Effective Pages

<u>Page No</u>	<u>Rev No</u>	<u>Date</u>
1	Rev 1	Feb. 04/00
2 thru 5	Basic	June 12/98
6	Rev 1	Feb. 04/00
7	Basic	June 12/98
8	Rev 1	Feb. 04/00
9 thru 17	Basic	June 12/98
18	Rev 1	Feb. 04/00
19 thru 22	Basic	June 12/98
23	Rev 1	Feb. 04/00

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Transmittal

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**International
Aero Engines**

V2500 Propulsion System — Nacelle

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NACELLE - POWERPLANT - TUBES, PRESSURE INDICATING -
TUBE CLIPS - REPLACEMENT OF:

MODEL APPLICATION

V2500-A1

V2500-A5

BULLETIN INDEX LOCATOR

36-00-00

COMPLIANCE CATEGORY CODE

5

INTERNAL REFERENCE No

96VN213/A

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1. Planning Information

A. Effectivity

(1) Airplane:

- (a) Airbus A320
- (b) Airbus A321

(2) Nacelle:

- (a) V2500-A1 Engine build-up units prior to Serial No.0337001.
- (b) V2500-A5 Engine build-up units prior to Serial No.0284001.

B. Reason

(1) Condition

There have been several reports from Operators indicating fretting of the Environmental Control Sense tubes at the clipping positions.

(2) Background

Investigation has shown that the fibreglass padding of the 'P' clips becomes brittle and may break off due to the engine temperatures and vibration levels. Lost padding would result in the remaining metal part of the 'P' clip vibrating against the ECS tubes to cause fretting.

(3) Objectives

To introduce new 'P' clips with improved temperature and vibration resistance characteristics to maintain engine reliability.

(4) Substantiation

Not Applicable.

(5) Effect of Bulletin on:

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



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(6) Supplemental Information

None.

C. Description

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

- (a) The old fibreglass 'P' clips are removed and replaced with new, more durable 'P' clamps on the ECS sense tubes.

D. Approval

The part number changes and/or part modifications described in paragraphs 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved for the equipment model(s) listed.

E. Compliance

Category 5

Accomplish when the nacelle or system is disassembled sufficiently to afford access to the affected sub-assembly (i.e. Accessories, Components) and to all affected spare sub-assemblies.

F. Manpower

Estimated man-hours to incorporate the full intent of this Service Bulletin:

VENUE

ESTIMATED MANHOURS

(1) In Shop

(b) To embody0.75 M/Hrs

Total.. 0.75 M/Hrs

NOTE: Man-hours are provided for planning purposes only.

G. Material - Cost and Availability

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

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



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H. Tooling - Cost and Availability

None required.

I. Weight and Balance

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

J. Electrical Load Data

Not affected.

K. References

Publication	Chapter/Section
A320/A321 Aircraft Maintenance Manual, Section	78-32-00

L. Other Publications Affected

Publication	Chapter/Section
A320/V2500-A1 Powerplant	36-21-49
Illustrated Parts Catalog (PIP-V2500-1IA)	
A320/A321/V2500-A5 Powerplant	36-21-49
Illustrated Parts Catalog (PIP-V2500-2IA)	
A320/V2500-A1 Engine	36-21-49
Illustrated Parts Catalog (S-V2500-1IA)	
A321/V2500-A5 Engine	36-21-49
Illustrated Parts Catalog (S-V2500-2IA)	



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2. Accomplishment Instructions

A. Pre-Requisite Instructions

- (1) Open the left thrust reverser half as instructed in the A320/A321 Aircraft Maintenance Manual, Task 78-32-00-010-010.

B. Modification Instructions

Part A Replacement of sense line 'P' clips on pre-Service Bulletin V2500-NAC-36-0001 standard engines - V2500 A1 only.

- (1) Remove the TAO25022FT04 'P' clip, AS21408 bolt and AS20624 nut from clipping point CP5864. Discard the 'P' clip. (Refer to Figure 1 sheet 1 and 2).
- (2) Install new C10GT3-04 'P' clamp and secure with the bolt and nut removed in previous step.
- (3) Remove the TAO25022FT04 'P' clip, AS21414 bolt, ST1698D-48 spacer and AS20624 nut from clipping point CP5907. Discard the 'P' clip.
- (4) Install new C10GT3-04 'P' clamp and secure with the bolt and nut removed in previous step.
- (5) Remove the TAO25022FT04 'P' clip, AS21406 bolt and AS20624 nut from clipping point CP5867. Discard the 'P' clip.
- (6) Install new C10GT3-04 'P' clamp and secure with the bolt and nut removed in previous step.
- (7) Remove the TAO25022FT04 'P' clip, AS21408 bolt and AS41104 clip nut from clipping point CP5866. Discard the 'P' clip. (Refer to Figure 1 sheet 3).
- (8) Install new C10GT3-04 'P' clamp and secure with the bolt and nut removed in previous step.
- (9) Remove the TAO25022FT04 'P' clip, AS21406 bolt and AS20624 nut from clipping point CP5494. Discard the 'P' clip.
- (10) Install new C10GT3-04 'P' clamp and secure with the bolt and nut removed in previous step.
- (11) Remove the TAO25022FT04 'P' clip, AS21408 bolt and AS41104 clip nut from clipping point CP5862. Discard the 'P' clip.
- (12) Install new C10GT3-04 'P' clamp and secure with the bolt and nut removed in previous step.

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- (13) Remove the TAO25022FT04 'P' clip, AS21411 bolt, ST1698D-47 spacer and AS41104 clip nut from clipping point CP5495. Discard the 'P' clip. (Refer to Figure 1 sheet 4).
- (14) Install new C10GT3-04 'P' clamp, spacer and secure with the bolt and nut removed in previous step.
- (15) Remove the TAO25022FT04 'P' clip, AS21407 bolt and AS41104 clip nut from 740-5073-505 bracket at clipping point CP5862. Discard the 'P' clip.
- (16) Install new C10GT3-04 'P' clamp and secure with the bolt and clip nut removed in previous step.
- (17) Remove the TAO25022FT04 'P' clip, AS21411 bolt, ST1698D-48 spacer, AS20624 nut and SP155-D washer from clipping point CP5863. Discard the 'P' clip.
- (18) Install new C10GT3-04 'P' clamp, spacer and secure with the bolt, nut and washer removed in previous step.
- (19) Torque all the bolts to 40 lbf in (4.52 Nm).

Part B Replacement of sense line 'p' clips on post Service Bulletin V2500-NAC-36-0001 standard engines - V2500-A1 only.

- (1) Do steps 2.B. (1) thru 2.B. (18).
- (2) Remove the TAO25022FT04 'P' clip, AS21408 bolt and AS20624 nut from clipping point CP5871. Discard the 'P' clip. (Refer to Figure 2 sheet 2).
- (3) Install new TA0210046FT04 'P' clamp and secure with the bolt and nut removed in previous step.
- (4) Torque all the bolts to 40 lbf in (4.52 Nm).

Part C Replacement of sense line 'P' clips - V2500-A5 only.

- (1) Remove the TAO25022FT04 'P' clip, AS21425 bolt, ST1698D-48 spacer, AS20624 nut and SP154-D washer from clipping point CP5923. Discard the 'P' clip. (Refer to Figure 3 sheets 1 and 2).
- R (2) Install new TA0210046FT04 'P' clamp, spacer and secure with the bolt, nut and washer removed in previous step.



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- (3) Remove the TAO25022FT04 'P' clip, R/R bolt, R/R spacer, R/R nut and R/R washer from clipping point CP6064. Discard the 'P' clip.
- (4) Install new C10GT3-04 'P' clamp, spacer and secure with the bolt, nut and washer removed in previous step.
- (5) Remove the TAO25022FT04 'P' clip, AS21408 bolt and AS41104 clip nut from clipping point CP5433. Discard the 'P' clip. (Refer to Figure 3 sheet 3).
- (6) Install new C10GT3-04 'P' clamp and secure with the bolt and clip nut removed in previous step.
- (7) Remove the TAO25022FT04 'P' clip, AS21406 bolt and AS41104 clip nut from 740-5464-501 bracket at clipping point CP5996. Discard the 'P' clip. (Refer to Figure 3 sheet 3).
- (8) Install new C10GT3-04 'P' clamp and secure with the bolt and clip nut removed in previous step.
- (9) Remove the TAO25022FT04 'P' clip, AS21408 bolt, AS20426 nut and SP154-D washer from 740-5070-503 bracket at clipping point CP5865. Discard the 'P' clip.
- (10) Install new C10GT3-04 'P' clamp and secure with the bolt, nut and washer removed in previous step.
- (11) Remove the TAO25022FT04 'P' clip, AS21406 bolt and AS41104 clip nut from the bracket at clipping point CP5997. Discard the 'P' clip. (Refer to Figure 3 sheet 4).
- (12) Install new C10GT3-04 'P' clamp and secure with the bolt and clip nut removed in previous step.
- (13) Remove the TAO25022FT04 'P' clip, AS21411 bolt, AS41104 clip nut, and ST1698D-47 spacer from 740-5070-503 bracket at clipping point CP5495. Discard the 'P' clip.
- (14) Install new C10GT3-04 'P' clamp and secure with the bolt, clip nut and washer removed in previous step.
- (15) Remove the TAO25022FT04 'P' clip, AS21407 bolt and AS41104 clip nut from 740-5073-505 bracket at clipping point CP5862. Discard the 'P' clip. (Refer to Figure 3 sheet 5).
- (16) Install new C10GT3-04 'P' clamp and secure with the bolt and clip nut removed in previous step.



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- (17) Remove the TAO25022FT04 'P' clip, AS21406 bolt and AS41104 clip nut from 740-5069-501 bracket at clipping point CP5931. Discard the 'P' clip.
- (18) Install new C10GT3-04 'P' clamp and secure with the bolt and clip nut removed in previous step.
- (19) Torque all the bolts to 40 lbf in (4.52 Nm).

C. Post-Requisite Instructions

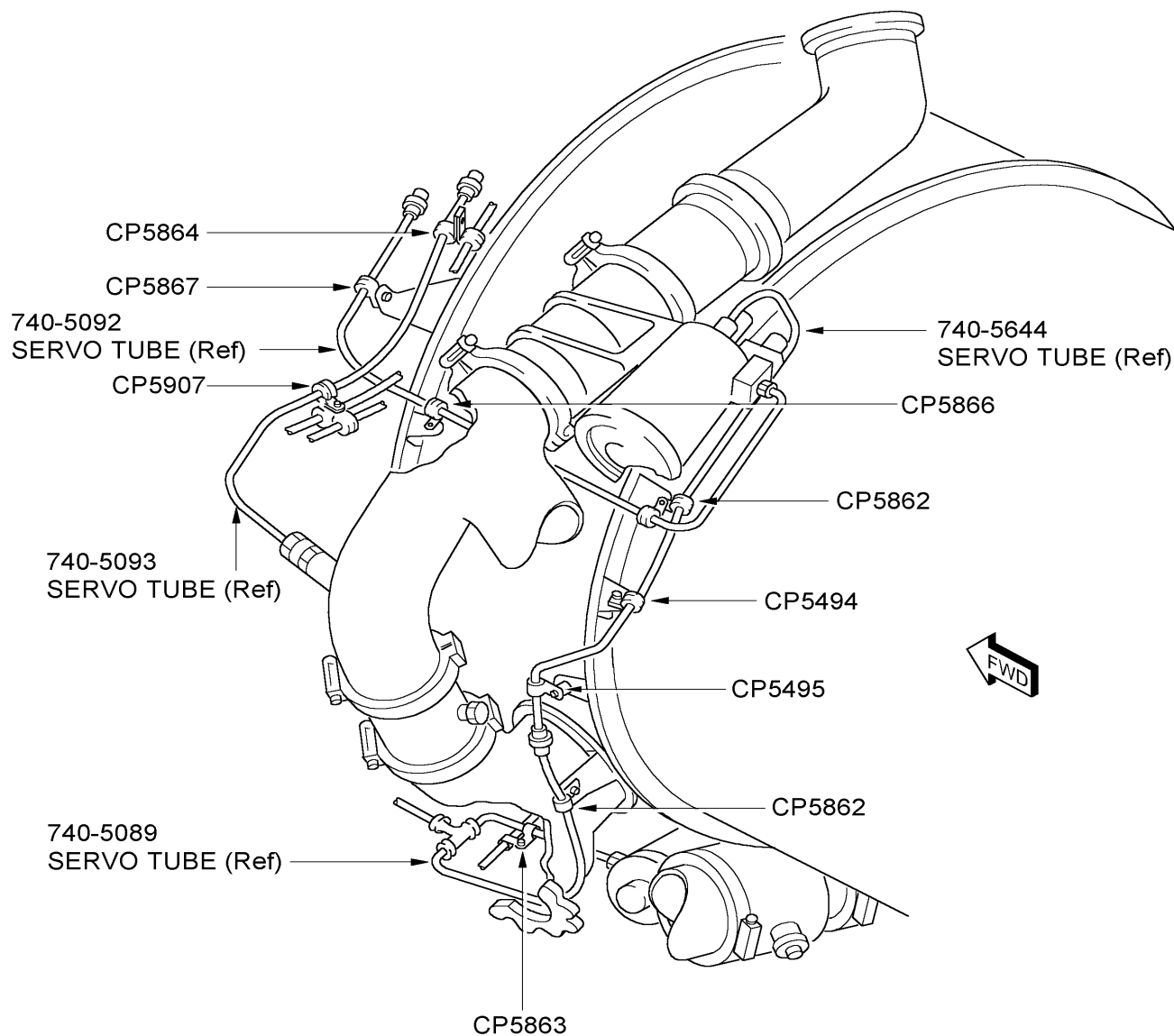
- (1) Close the left thrust reverser half as instructed in the A320/A321 Aircraft Maintenance Manual, Task 78-32-00-410-010.

D. Recording Instructions

- (1) Write in the Engine log or other records that the appropriate part/parts of Service Bulletin V2500-NAC-36-0006 has been done.

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PRE S.B. V2500-NAC-36-0001

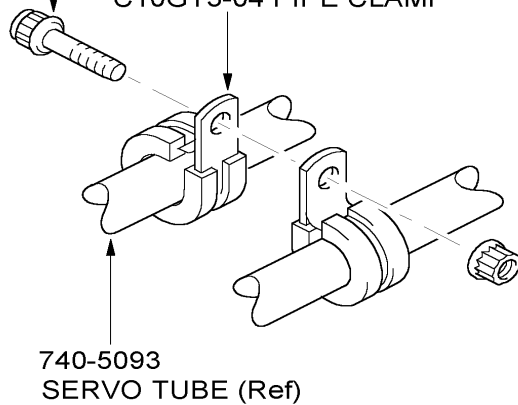
V2500-A1 ONLY

REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 1 SHEET 1

SERVICE BULLETIN

REMOVE AND INSTALL
AS21408 BOLT
AS20624 NUT

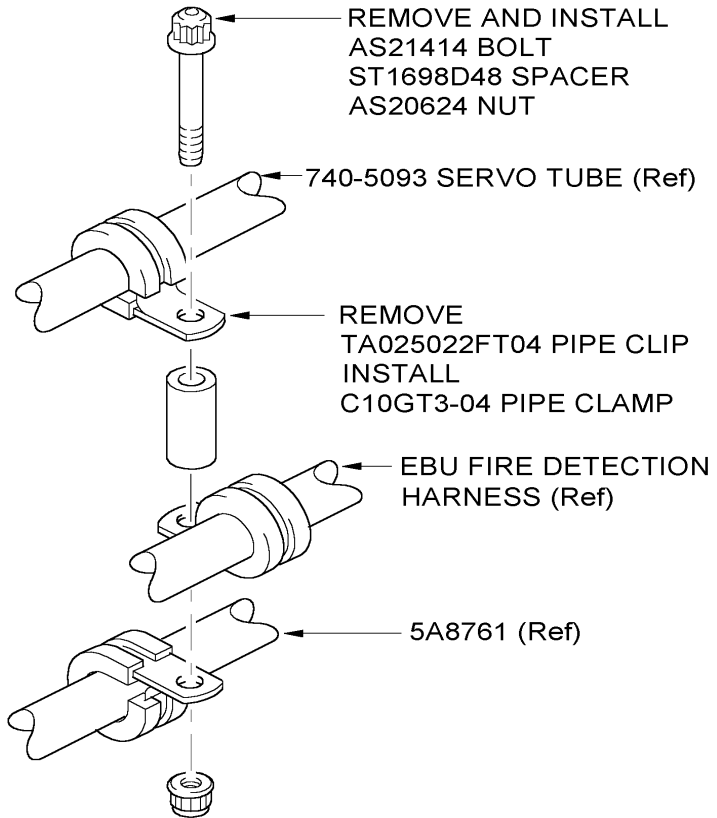
REMOVE
TA025022FT04 PIPE CLIP
INSTALL
C10GT3-04 PIPE CLAMP



CP5864

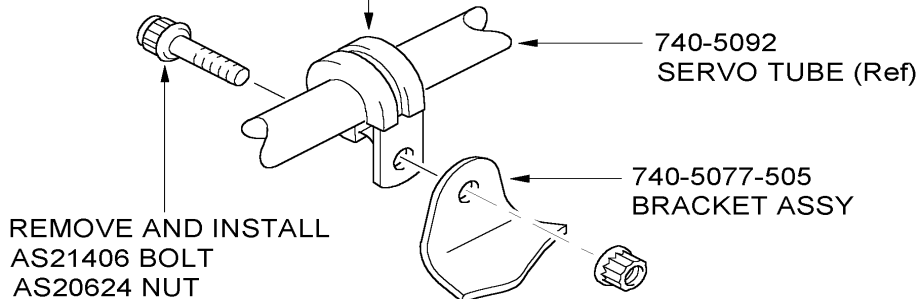


REMOVE AND INSTALL
AS21414 BOLT
ST1698D48 SPACER
AS20624 NUT



CP5907

REMOVE
TA025022FT04 PIPE CLIP
INSTALL
C10GT3-04 PIPE CLAMP

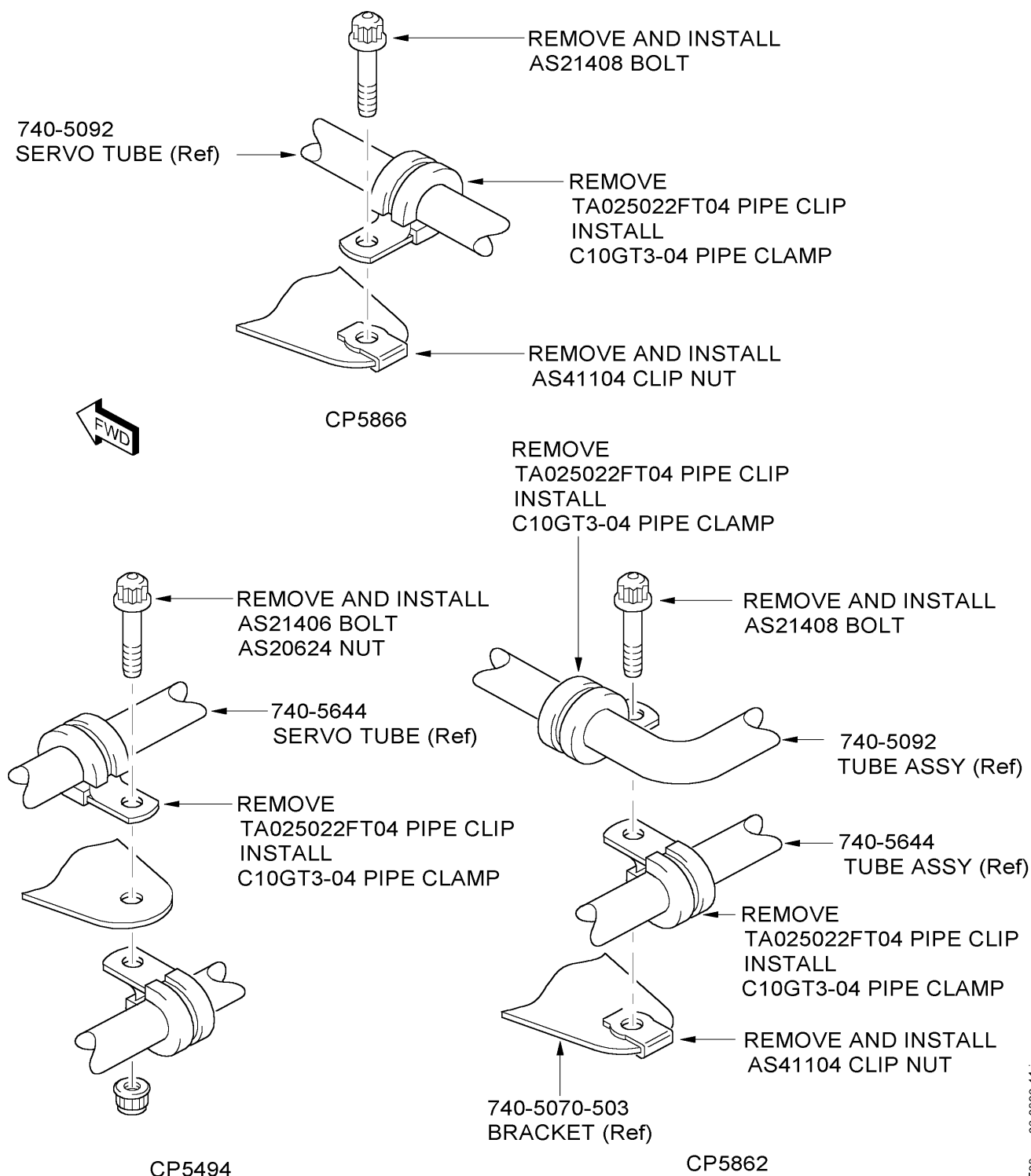


CP5867

REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 1 SHEET 2

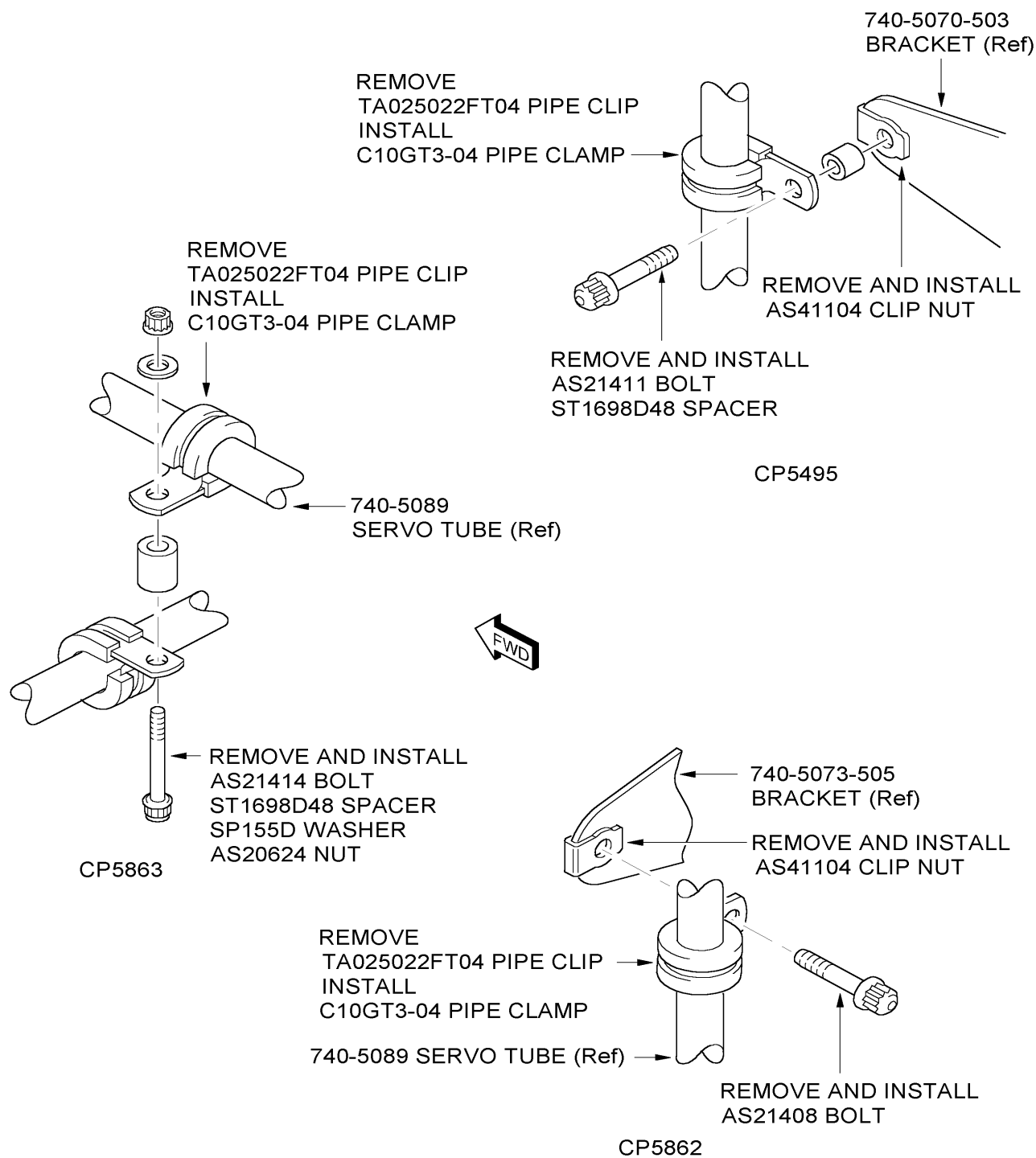
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SERVICE BULLETIN



REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 1 SHEET 3

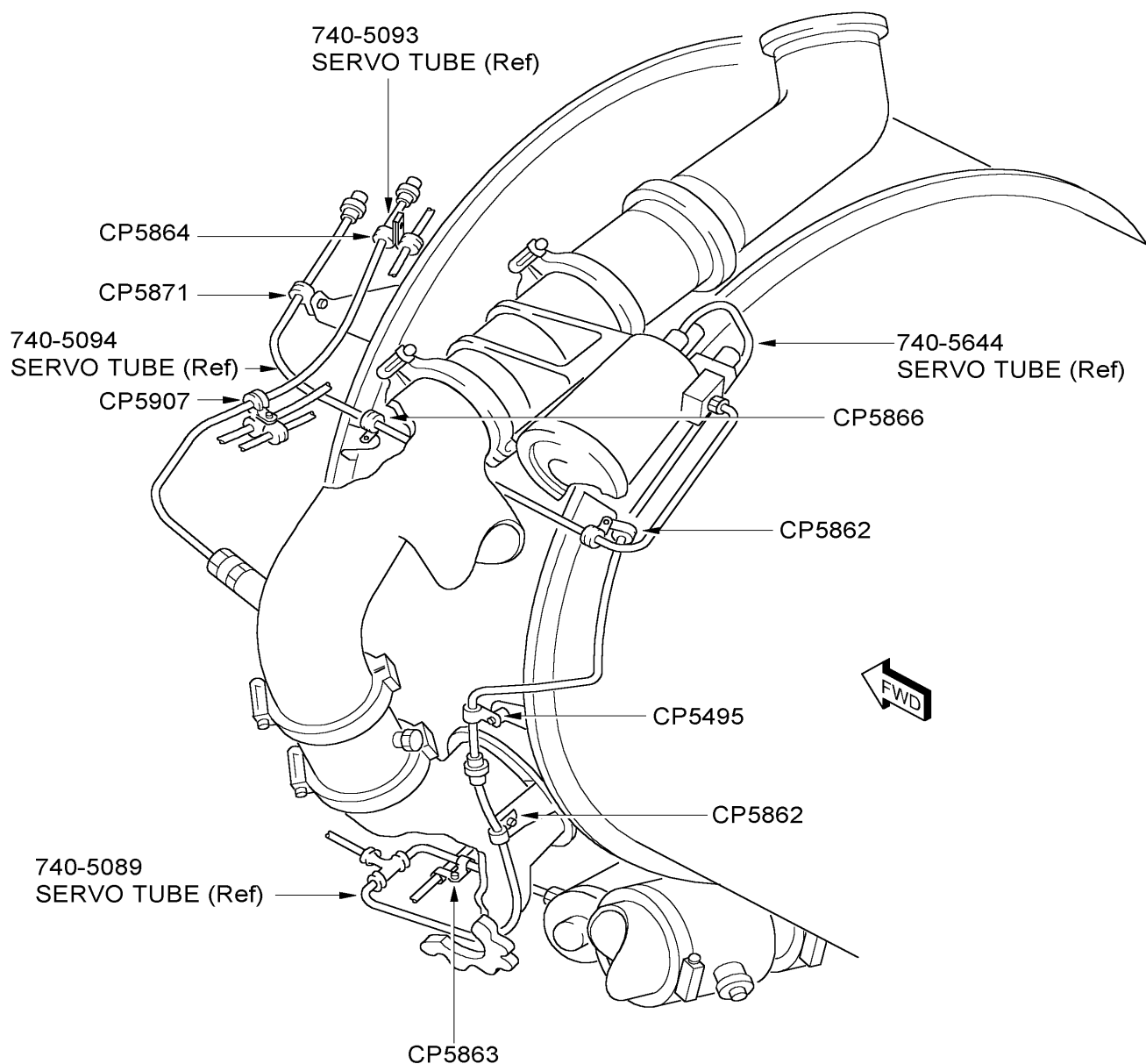
SERVICE BULLETIN



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REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 1 SHEET 4

SERVICE BULLETIN



POST S.B. V2500-NAC-36-0001

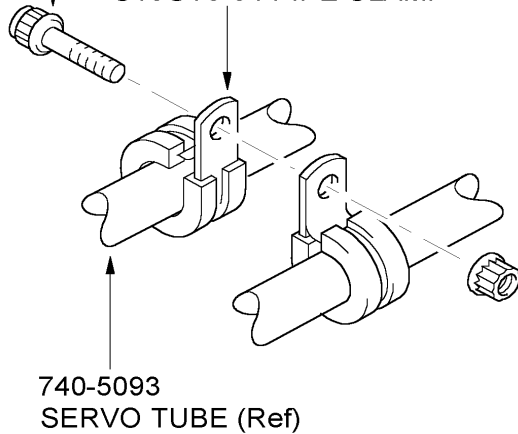
V2500-A1 ONLY

REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 2 SHEET 1

SERVICE BULLETIN

REMOVE AND INSTALL
AS21408 BOLT
AS20624 NUT

REMOVE
TA025022FT04 PIPE CLIP
INSTALL
C10GT3-04 PIPE CLAMP



CP5864

REMOVE AND INSTALL
AS21414 BOLT
ST1698D48 SPACER
AS20624 NUT

REMOVE
TA025022FT04 PIPE CLIP
INSTALL
C10GT3-04 PIPE CLAMP

740-5093 SERVO TUBE (Ref)

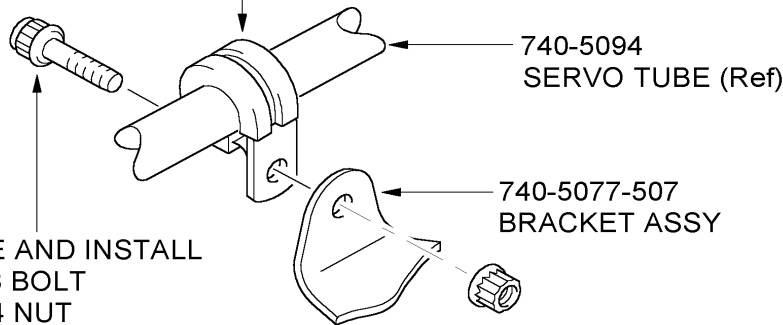
EBU FIRE DETECTION
HARNESS (Ref)

5A8761 (Ref)



CP5907

REMOVE
TA025022FT04 PIPE CLIP
INSTALL
C10GT3-04 PIPE CLAMP



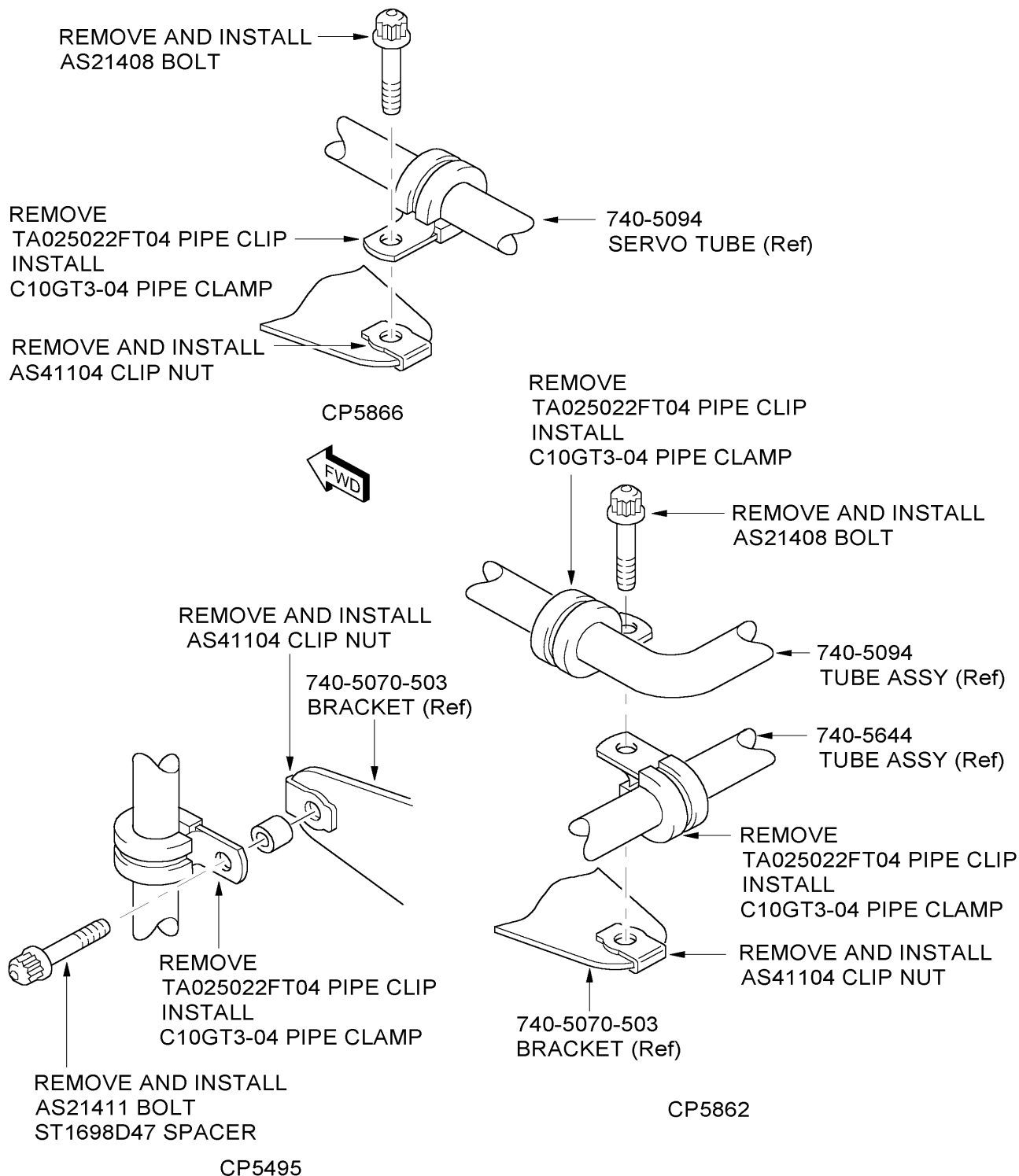
REMOVE AND INSTALL
AS21408 BOLT
AS20624 NUT

CP5871

REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 2 SHEET 2

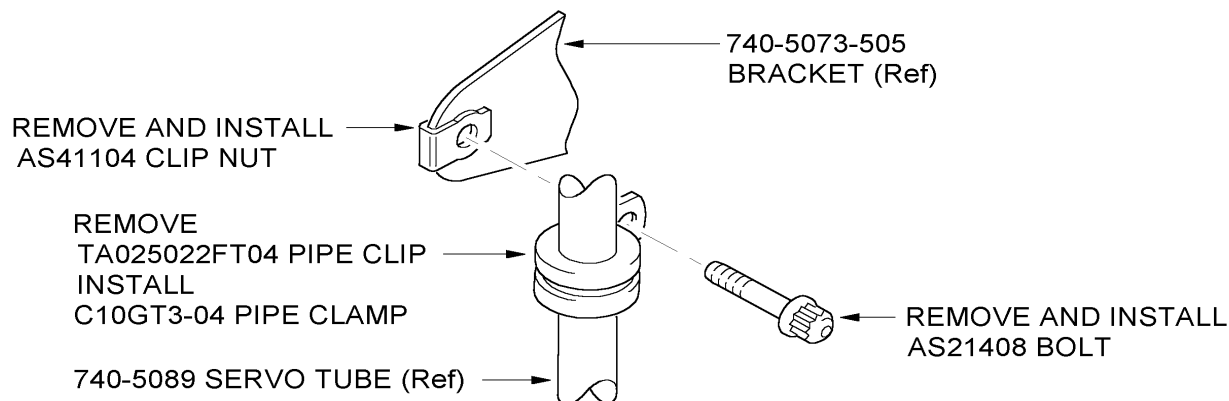
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SERVICE BULLETIN

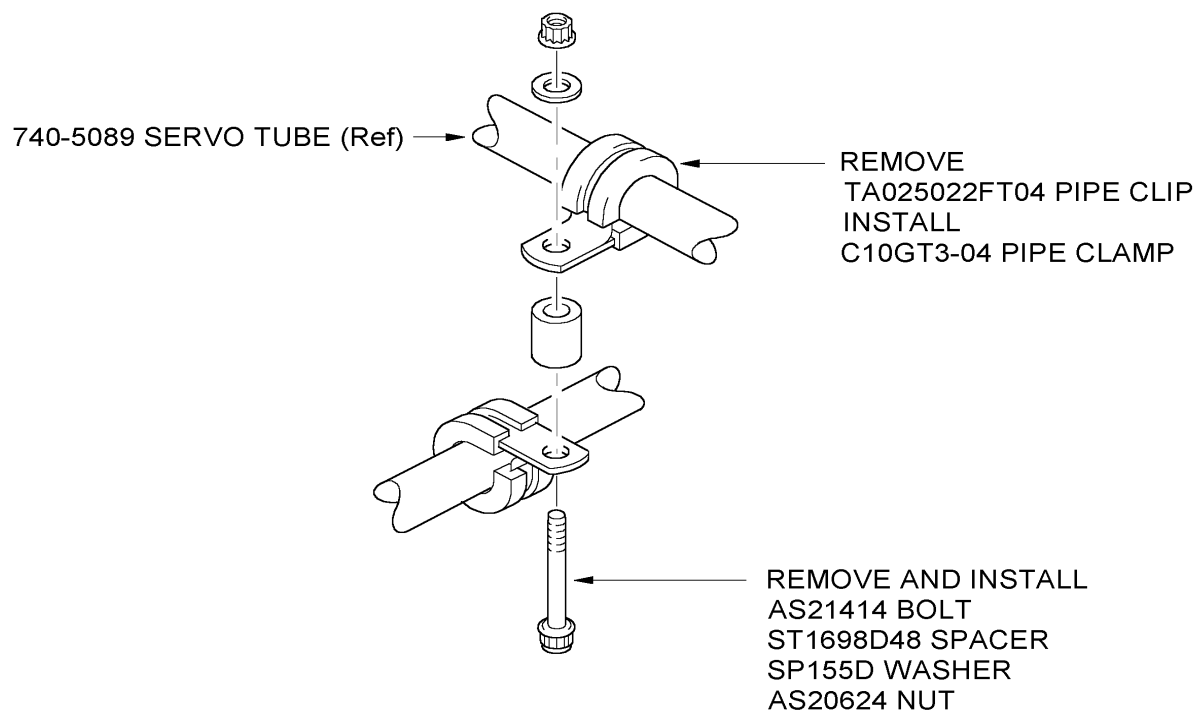


REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 2 SHEET 3

SERVICE BULLETIN



CP5862

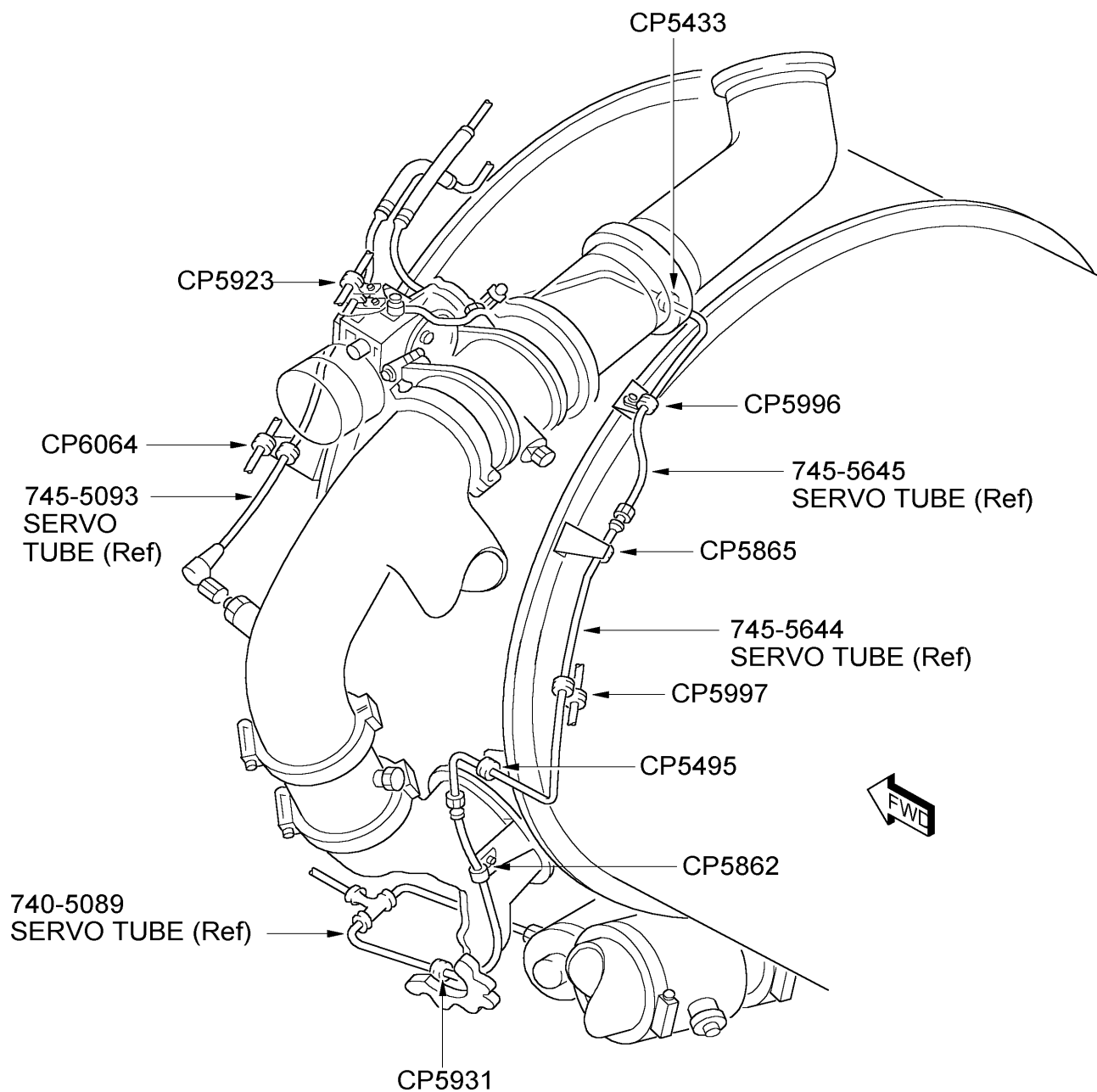


CP5863

REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 2 SHEET 4

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SERVICE BULLETIN



V2500-A5 ONLY

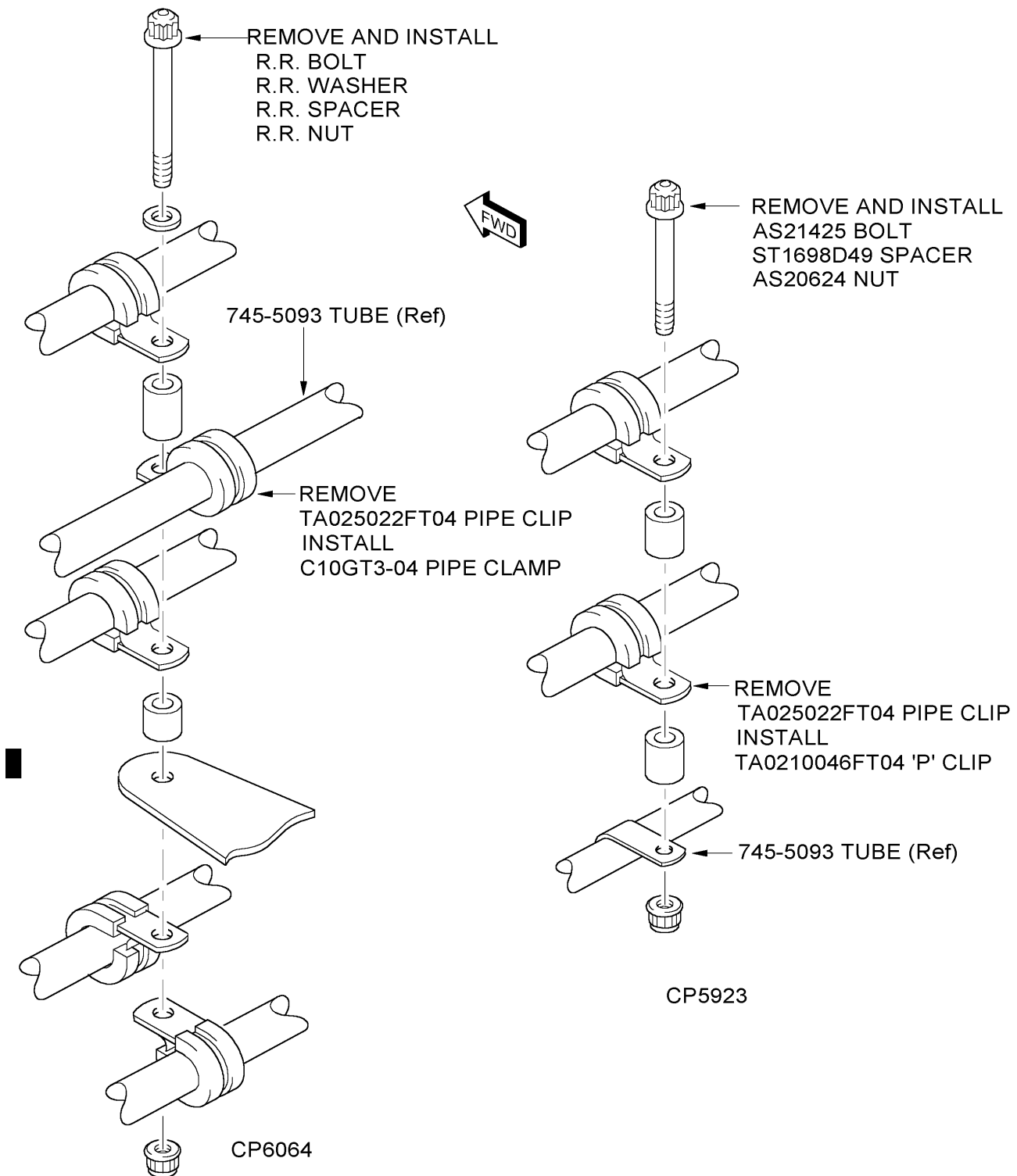
REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 3 SHEET 1



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REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 3 SHEET 2

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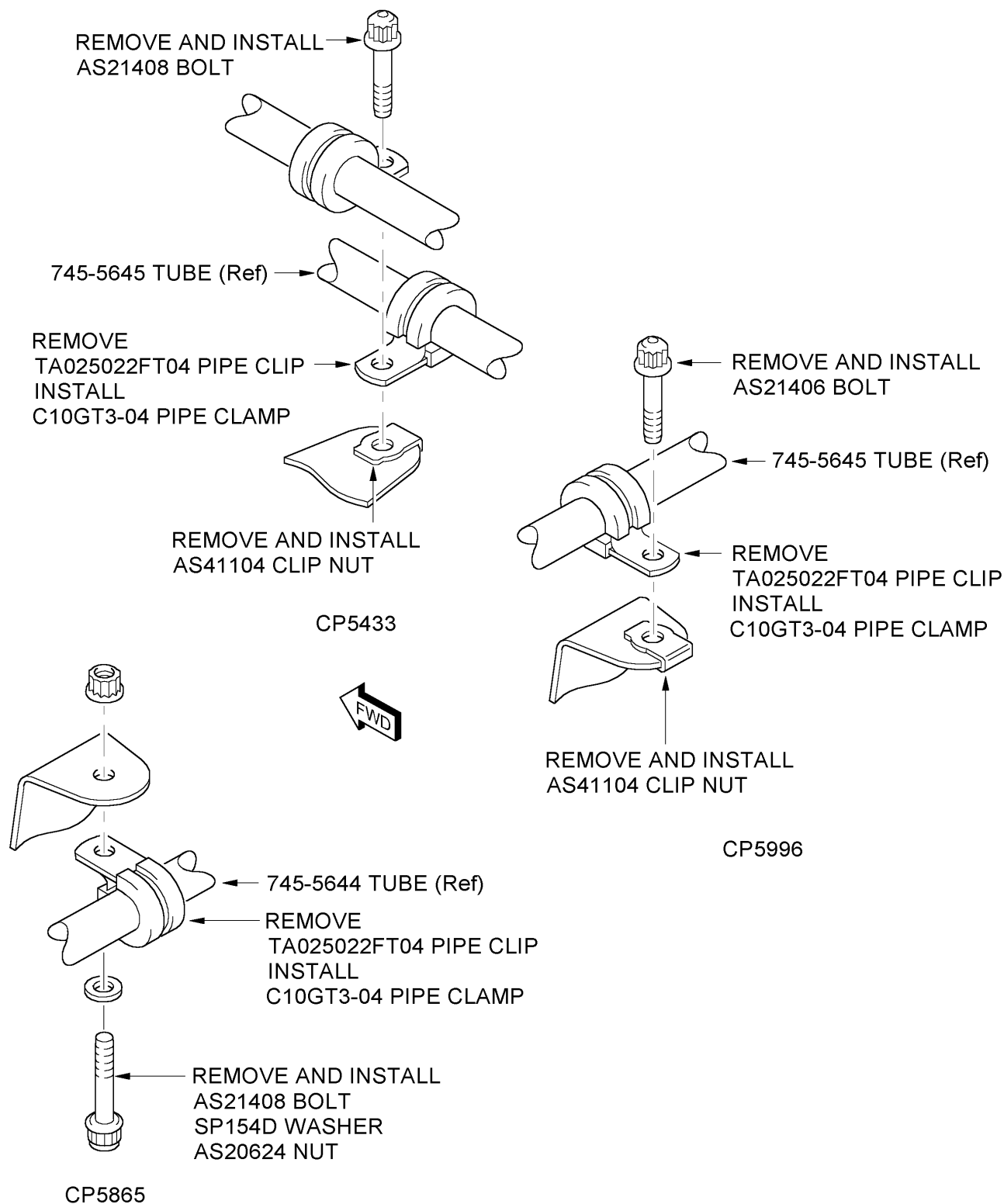
V2500-NAC-36-0006

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

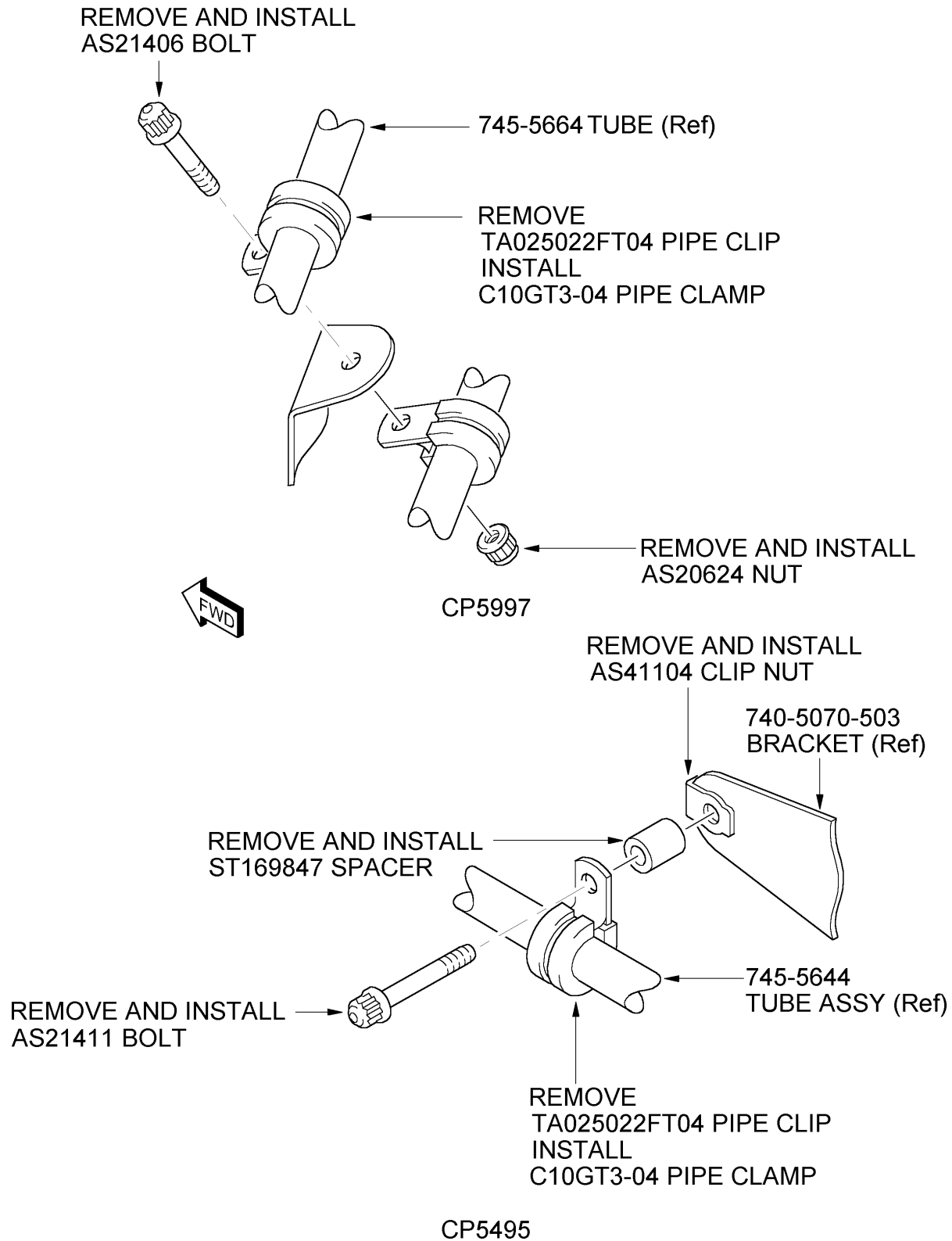
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SERVICE BULLETIN



REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 3 SHEET 3

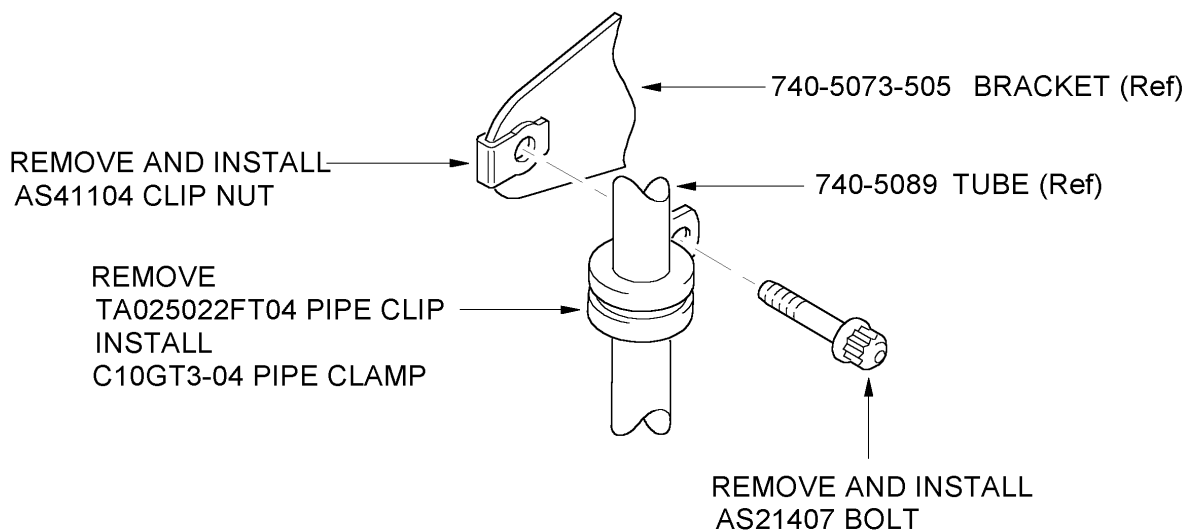
SERVICE BULLETIN



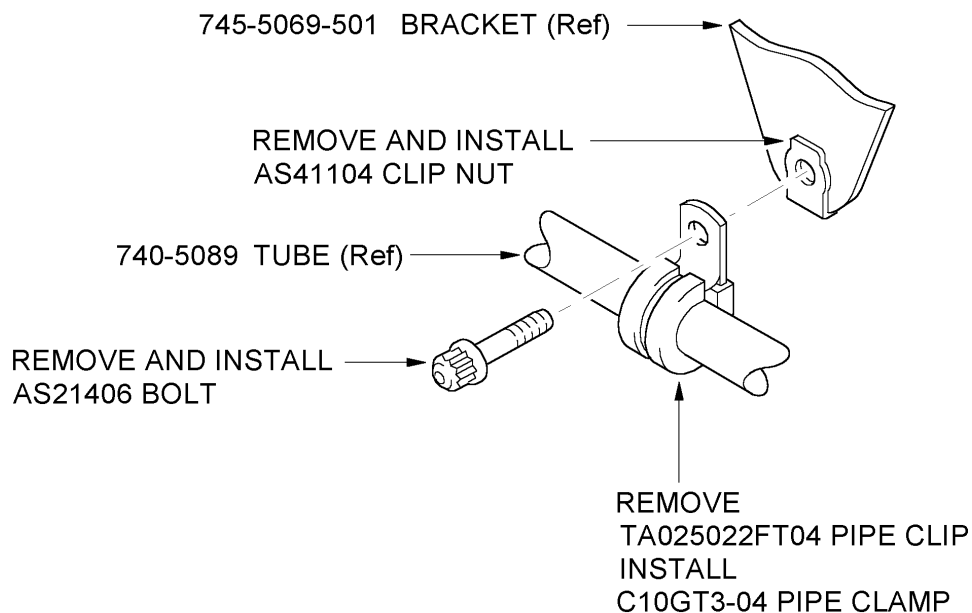
REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 3 SHEET 4

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SERVICE BULLETIN



CP5862



CP5931

REPLACEMENT OF SENSE TUBE 'P' CLIPS
FIGURE 3 SHEET 5

v2500-nac-36-0006-21.iso

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3. Material Information

Applicability: For each V2500 Nacelle to incorporate this Bulletin.

A. Kits associated with this Bulletin

None

B. Parts affected by this Bulletin applicable to the V2500-A1:

<u>NEW PART No</u> <u>(ATA No)</u>	<u>QTY</u>	<u>EST'D UNIT</u> <u>PRICE (\$)</u>	<u>KEYWORD</u>	<u>OLD PART No</u> <u>IPC No</u>	<u>INSTR/</u> <u>DISPOS</u>
C10GT3-04 (36-21-49)	1		'P' clip (CP5865)	TAO25022FT04 (02-128)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5865)	TAO25022FT04 (01-544)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5494)	TAO25022FT04 (01-535)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5495)	TAO25022FT04 (01-529)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5862)	TAO25022FT04 (01-137)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5863)	TAO25022FT04 (01-127)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5864)	TAO25022FT04 (02-510)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5871)	TAO25022FT04 (02-115)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5907)	TAO25022FT04 (02-515)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5866)	TAO25022FT04 (02-120)	(A) (B) (1D)

C. Parts affected by this Bulletin applicable to the V2500-A5:

C10GT3-04 (36-21-49)	1		'P' clip (CP5865)	TAO25022FT04 (01-529)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5997)	TAO25022FT04 (01-555)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5495)	TAO25022FT04 (01-535)	(A) (B) (1D)
C10GT3-04 (36-21-49)	1		'P' clip (CP5862)	TAO25022FT04 (01-137)	(A) (B) (1D)
C10GT3-04	1		'P' clip	TAO25022FT04	(A) (B)

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R

(36-21-49)		(CP5931)	(01-154)	(1D)
C10GT3-04	1	'P' clip	TAO25022FT04	(A)(B)
(36-21-49)		(CP6064)	(02-128)	(1D)
TA0210046FT04	1	'P' clip	TAO25022FT04	(A)(B)
(36-21-49)		(CP5923)	(02-560)	(1D)
C10GT3-04	1	'P' clip	TAO25022FT04	(A)(B)
(36-21-49)		(CP5433)	(02-570)	(1D)
C10GT3-04	1	'P' clip	TAO25022FT04	(A)(B)
(36-21-49)		(CP5996)	(02-579)	(1D)

D. Instructions/Dispositions Code Statements

- (A) New part is currently available.
- (B) New part may be used in lieu of old part but not vice-versa.
- (1D) Discard old part.

E. Materials required to incorporate this Bulletin

None