SERVICE BULLETIN

ENGINE INDICATING – ENGINE VIBRATION MONITOR (EVM) HARNESS – MODIFICATION OF CLIPPING POINTS CP0877, CP0879 AND CP1210

MODEL APPLICATION

V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5

BULLETIN ISSUE SEQUENCE

V2500 Series 77-0014

ATA NUMBER

71-51-42

77-32-43

Compliance Category

5

IAE Distribution Code

V2500

May 11/20

Summary

The purpose of this Service Bulletin is to reroute the Engine Vibration Monitor (EVM) Harness and the EEC and Ignition Supply Harness by modifying three shared clipping points. The new routing will prevent wear between the EVM Harness and the EEC and Ignition Supply Harness and between the EVM Harness and the Fire Extinguisher Nozzle.

Planning Information

Effectivity Data

Engine Models Applicable

V2500-A1
Engine Serial No. All V2500-A1 Engines.

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, and V2533-A5
Engine Serial Nos. V10001 thru V13190
Engine Serial Nos. V15001 thru V18931

Concurrent Requirements

For all V2500-A1 Engines, Service Bulletin V2500-ENG-71-0271 must be done prior to or concurrently with this Service Bulletin.

For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engine Serial No. prior to V11420, Service Bulletin V2500-ENG-71-0271 must be done prior to or concurrently with this Service Bulletin.

For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engine Serial No. prior to V12650, Service Bulletin V2500-ENG-71-0307 must be done prior to or concurrently with this Service Bulletin for Clipping Points 0877, 0879 and 1210 only.

Reason

1. Condition: The routing of the Engine Vibration Monitor (EVM) Harness can bring it into contact with the EEC and Ignition Supply Harness and the Fire Extinguisher Nozzle and may cause wear.
2. Background: Operators have reported damage of the EVM Harness and the EEC and Ignition and Supply Harness.
3. Objective: The modified clipping points on the EVM Harness and EEC and Ignition Supply Harness will reroute the harness and give sufficient clearances to prevent damage to the harnesses.
4. Substantiation: All hardware changes have been substantiated by satisfactory engineering analysis.
5. Effects of Bulletin on:

   Removal/Installation: Affected.

   Disassembly/Assembly: Affected.

   Cleaning: Not Affected.

   Inspection/Check: Not Affected.

   Repair: Not Affected.

Testing: Not Affected.

6. Supplemental Information

None.

Description

On each engine, the EVM Harness and EEC and Ignition Supply Harness are rerouted at clipping points CP0877, CP0879 and CP1210. Additionally, spacers and longer bolts are installed to clipping points CP0877 and CP0879.

Compliance

Category 5 - Recommended

Accomplish when the engine is disassembled sufficiently to afford access to the affected subassembly (i.e., modules, accessories, components, build groups) and to all affected spare subassemblies.

Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.

The aircraft Type Certificate (TC) holder has been informed of this change.

Manpower

1. In Service

   A. To Gain/Close Access ..... 0.5 hour

   B. Remove/ Modify the clipping points ..... 0.5 hour

   Total Necessary Man Hours ..... 1.0 hours

2. At Overhaul

   A. To Gain/Close Access ..... N/A.

   B. Remove/ Modify the clipping points ..... 0.5 hour

   Total Man Hours ..... 0.5 hour

   NOTE: Estimated labor hours are for planning purposes only. Labor reimbursement is not provided under the terms of this service bulletin.

Weight and Balance

1. Weight Change

   None.

2. Moment Arm

   No Effect.

3. Datum

   Engine Front Mount Centerline (Power Plant Station (PPS) 100)

Electrical Load Data

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

Software Accomplishment Summary

Not Applicable.

References

NOTE: In 2014 IAE converted the V2500 Technical Publications to a new system. As a result of the conversion, some manuals were consolidated. All manuals received new P&W part numbers. To facilitate the use of this Service Bulletin, a Technical Publications conversion table is provided in the Appendix.

1. V2500 Standard Practices Manual (SPP V2500-3IA), Chapter/Section 70-41-00.
2. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 71-51-42 and 77-32-43.
3. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 71-51-42 and 77-32-43.
4. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-00-32.
5. A319/A320/A321 Aircraft Maintenance Manual, Chapter/Section 12-32-24 and 71-13-00.
6. IAE V2500 Service Bulletin No. V2500-ENG-71-0271.
7. IAE V2500 Service Bulletin No. V2500-ENG-71-0307.
8. Collins Internal Reference RMN002621.

Other Publications Affected

NOTE: In 2014 IAE converted the V2500 Technical Publications to a new system. As a result of the conversion, some manuals were consolidated. All manuals received new P&W part numbers. To facilitate the use of this Service Bulletin, a Technical Publications conversion table is provided in the Appendix.

1. V2500 A1/A5 Series Engine Manual, PN 2A4407, Chapter/Section 72-00-32-020-002-A00, 72-00-32-020-002-B00, 72-00-32-020-002-C00, 72-00-32-420-004-A00, 72-00-32-420-004-B00, 72-00-32-420- 004-C00.
2. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 71-51-42-01 and 77-32-43-01 and 77-32-43-02.
3. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 71-51-42-01 and 77- 32-43-01 and 77-32-43-02.

Interchangeability of Parts

Refer to “Material Information”.

Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

Material Information

Material — Price and Availability

1. There is no kit provided to do this Service Bulletin.
2. Part availability information is provided in material data Instructions — Disposition.

Industry Support Program

Not Applicable.

The material data that follows is for each engine.

For V2500-A1 Engines:

New PN	Qty	Estimate of Unit Price ($)	Keyword	Old PN	Instructions — Disposition
AS21416	1	*	BOLT (CP0877)	AS21409 (77-32-43-01-118)	(A)(S1)
ST1698D48	1	*	SPACER (CP0877)	- (77-32-43-01-120)	(A)(S1)
AS21419	1	*	BOLT (CP0879)	AS21408 (77-32-43-02-126)	(A)(S1)
ST1698D49	1	*	SPACER (CP0879)	- (77-32-43-02-128)	(A)(S1)

The material data that follows is for each engine.

For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5 Engines:

New PN	Qty	Estimate of Unit Price ($)	Keyword	Old PN	Instructions — Disposition
-	1	*	WASHER (CP1210)	SP154D (71-51-42-01-473)	(S1)
AS21416	1	*	BOLT (CP0877)	AS21409 (77-32-43-01-118)	(A)(S1)
ST1698D48	1	*	SPACER (CP0877)	- (77-32-43-01-120)	(A)(S1)
AS21419	1	*	BOLT (CP0879)	AS21408 (77-32-43-02-126)	(A)(S1)
ST1698D49	1	*	SPACER (CP0879)	- (77-32-43-02-128)	(A)(S1)

Modification and Spares Information

Estimated part prices are provided when they are available at time of publication. The Estimate of Unit Price is only for planning purposes and does not constitute a firm quotation. An asterisk (*) is shown where part pricing information was unavailable. In either case, contact Collins Aerospace Spares at sparesales@utas.utc.com for a firm quotation..

Parts Modification Conditions

Spare Parts Availability

(A) The new part is available.

(S1) New parts coded (S1) must replace old parts coded (S1) as a COMPLETE SET per Engine (or Nacelle).

Vendor Services or Special Components/Materials

Not Applicable.

Tooling — Price and Availability

Special tools are not required to accomplish this Service Bulletin.

Reidentified Parts

Not Applicable.

Other Material Information Data

Not Applicable.

Accomplishment Instructions

Part A: V2500-A1 only - Modification of clipping points CP0877, CP0879 and CP1210

1. General

   None.

   WARNING: MAKE SURE THAT YOU OBEY ALL THE WARNINGS AND ALL THE CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

2. Preparation

   A. Make sure that the aircraft is electrically grounded, (Refer to AMM 12-34-24-869-002-A).

   B. Open the fan cowl doors 437AL, 438AR, 447AL and 448AR, (Refer to AMM TASK 71-13-00-010-010-A).

   C. Put the access platform(s) in position.

3. Rework Instructions

   WARNING: MAKE SURE THAT THE ENGINE IS SAFE FOR MAINTENANCE. THIS WILL PREVENT INJURIES TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT.

   A. At clipping point CP1210, remove the Bolt, PN AS21410 (1) and the Washer, PN SP154D (2), to release the EVM Harness and the EEC and Ignition Supply Harness from the Raft Assembly (ref). Refer to Figure 1, Sheet 1 and Sheet 2, View B (Before).

   B. At clipping point CP0877, remove the Bolt, PN AS21409 (5), the Washer, PN SP154D (2) and the Nut, PN AS20624 (6) to release the EVM Harnesses and the EEC and Ignition Supply Harness from the Raceway. Refer to Figure 1, Sheet 1 and Sheet 3, View C (Before).

   C. At clipping point CP0879, remove the Bolt, PN AS21408 (9), the Washer, PN SP154D (2) and the Nut, PN AS20624 (6) to release the EVM Harness and the EEC and Ignition Supply Harness from the Raceway. Refer to Figure 1, Sheet 1, and Sheet 4, View D (Before).

      NOTE: Lubricate all threaded fasteners with clean engine oil before installation of the clipping points.

   D. At clipping point CP1210, attach the EEC and Ignition Supply Harness and the EVM Harness to the raft assembly (ref) with the ‘P’ Clip, PN TA025074-02, or PN AS61932 (3), the ‘P’ Clip, PN TA025074-02 (4), the Bolt, PN AS21410 (1) and the Washer, PN SP154D (2). Refer to Figure 1, Sheet 2, View B (After).

   E. At clipping point CP0877, attach the EEC and Ignition Supply Harness and the EVM Harnesses to the Raceway with the two ‘P’ Clips, PNs TA025074-02, or PN AS61932 (3), the ‘P’ Clip, PN TA025074-02 (4), the Bolt, PN AS21416 (7), the Washer, PN SP154D (2), the Spacer ST1698D48 (8) and the Nut AS20624 (6). Refer to Figure 1, Sheet 3, View C (After).

   F. At clipping point CP0879, attach the EEC and Ignition Supply Harness and the EVM Harness to the raceway with the ‘P’ Clip, PN TA025074-02, or PN AS61932 (3), the ‘P’ Clip, PN TA025074-02 (4), the Bolt, PN AS21419 (10), the Washer, PN SP154D (2), the Spacer, PN ST1698D49 (11) and the Nut, PN AS20624 (6). Refer to Figure 1, Sheet 4, View D (After).

G. Confirm that the EVM Harness and the EEC and Ignition Supply Harness do not foul with the adjacent hardware.

H. Torque the Bolt, PN AS21410 (1) and the two Nuts, PN AS20624 (6) to 36 to 45 lb.fin (4 to 5 Nm). Refer to the Standard Practices Manual, Chapter 70-41-00.

4. Close up

A. Make sure that the work areas are clean and clear of tools and other items of equipment.

B. Remove the access platform(s).

C. Close the fan cowl doors 437AL, 438 AR, 447AL and 448AR, (Refer to AMM 71-13-00-410-010-A).

5. Recording Instructions

A. A record of accomplishment is necessary. Write in the Engine Log Book that Service Bulletin V2500-ENG-77-0014 has been done.

Part B: V2500-A5 only - Modification of clipping points CP0877, CP0879 and CP1210

1. General

None.

WARNING: MAKE SURE THAT YOU OBEY ALL THE WARNINGS AND ALL THE CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

2. Preparation

A. Make sure that the aircraft is electrically grounded, (Refer to AMM 12-34-24-869-002-A).

B. Open the fan cowl doors 437AL, 438AR, 447AL and 448AR, (Refer to AMM TASK 71-13-00-010-010-A).

C. Put the access platform(s) in position.

3. Rework Instructions

WARNING: MAKE SURE THAT THE ENGINE IS SAFE FOR MAINTENANCE. THIS WILL PREVENT INJURIES TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT.

NOTE: For Engine Serial No. prior to V12650, Service Bulletin V2500-ENG-71-0307 must be done prior to or concurrently with this Service Bulletin for Clipping Points 0877, 0879 and 1210 only.

A. At clipping point CP1210, remove the Bolt, PN AS21410 (1) and the Washer, PN SP154D (2), if applicable, to release the EVM Harness and the EEC and Ignition Supply Harness from the Raft Assembly (ref). Refer to Figure 2, Sheet 1 and Sheet 2, View B (Before).

B. At clipping point CP1210, if the ‘P’ Clip, PN TA025074-02 (4) is fitted to the EEC and Ignition Supply Harness then remove the ‘P’ Clip from the harness and replace with ‘P’ Clip, PN AS62202 (5). Refer to Figure 2, Sheet 2, View B (After).

C. At clipping point CP0877, remove the Bolt, PN AS21409 (6), the Washer, PN SP154D (2) and the Nut, PN AS20624 (8) to release the EVM Harnesses and the EEC and

Ignition Supply Harness from the Raceway. Refer to Figure 2, Sheet 1 and sheet 3, View C (Before).

D. At clipping point CP0877, if the 'P' Clip, PN TA025074-02 (7) is fitted to the EEC and Ignition Supply Harness then remove the 'P' Clip from the harness and replace with 'P' Clip, PN AS62203 (9). Refer to Figure 2, Sheet 3, View C (After).

E. At clipping point CP0879, remove the Bolt, PN AS21408 (12), the Washer, PN SP154D (2) and the Nut, PN AS20624 (8) to release the EVM Harness and the EEC and Ignition Supply Harness from the Raceway. Refer to Figure 2, Sheet 1 and Sheet 4, View D (Before).

F. At clipping point CP0879, if the 'P' Clip, PN TA025074-02 (7) is fitted to the EEC and Ignition Supply Harness then remove the 'P' Clip from the harness and replace with 'P' Clip, PN AS62203 (9). Refer to Figure 2, Sheet 4, View D (After).

NOTE: Lubricate all threaded fasteners with clean engine oil before installation of the clipping points.

G. At clipping point CP1210, attach the EEC and Ignition Supply Harness and the EVM Harness to the raft assembly (ref) with the 'P' Clip, PN TA025074-02, or PN AS61932 (3), the 'P' Clip AS62202 (5) and the Bolt AS21410 (1). Refer to Figure 2 sheet 2 view B (After).

H. At clipping point CP0877, attach the EEC and Ignition Supply Harness and the EVM Harnesses to the Raceway with the two 'P' Clips, PN TA025074-02, or PN AS61932 (3), the 'P' Clip, PN AS62203 (9) , the Bolt, PN AS21416 (10), the Washer, PN SP154D (2), the Spacer, PN ST1698D48 (11) and the Nut, PN AS20624 (8). Refer to Figure 2, Sheet 3, View C (After).

I. At clipping point CP0879, attach the EEC and Ignition Supply Harness and the EVM Harness to the raceway with the 'P' Clip, PN TA025074-02, or PN AS61932 (3), the 'P' Clip, PN AS62203 (9), the Bolt, PN AS21419 (13), the Washer, PN SP154D (2), the Spacer, PN ST1698D49 (14) and the Nut, PN AS20624 (8). Refer to Figure 2, Sheet 4, View D (After).

J. Confirm that the EVM Harnesses and the EEC and Ignition Supply Harness do not foul with the adjacent hardware.

K. Torque the Bolt AS21410 (1) and the two Nuts, PN AS20624 (8) to 36 to 45 lb.fin (4 to 5 Nm). Refer to the Standard Practices Manual, Chapter 70-41-00.

4. Close up

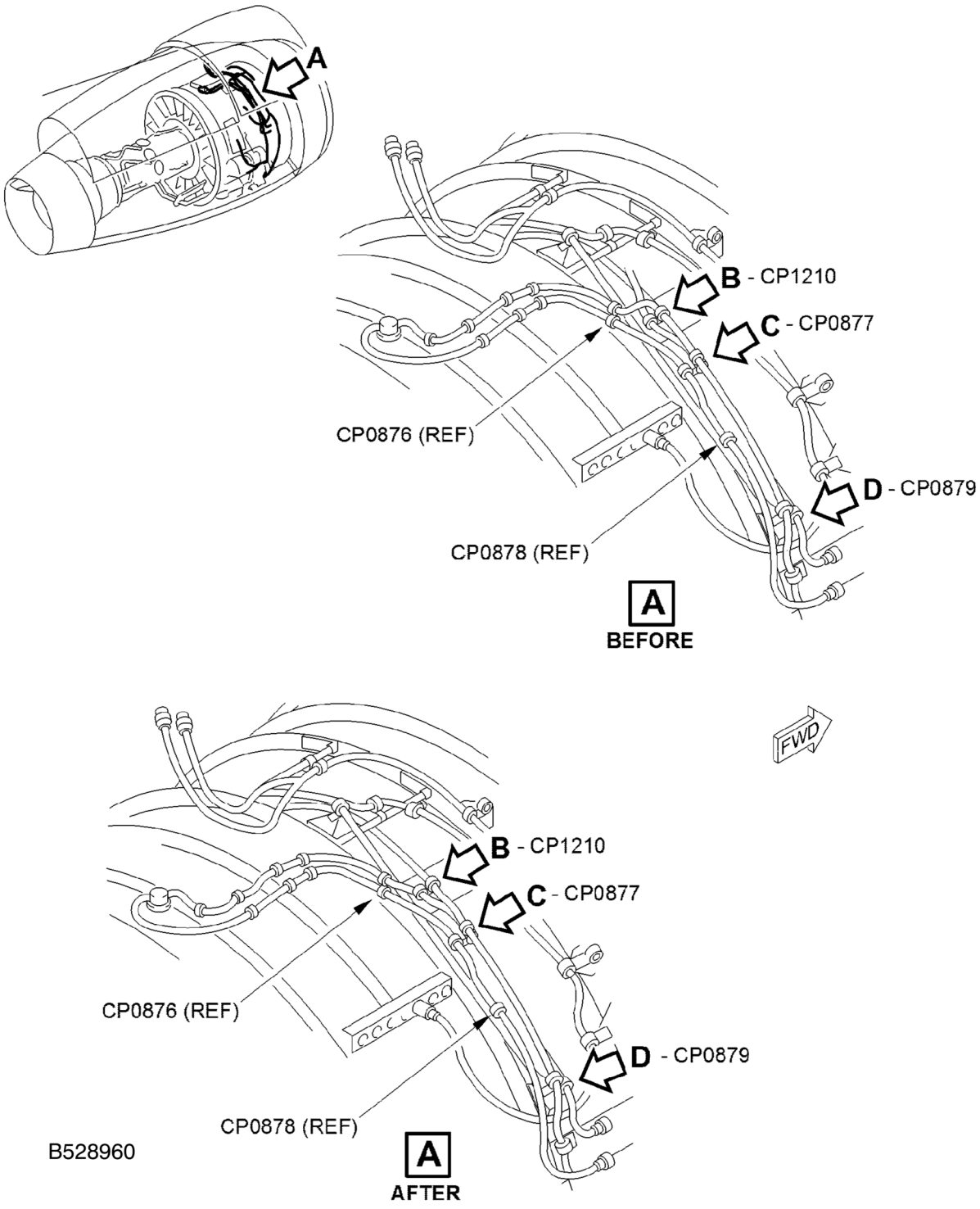
A. Make sure that the work areas are clean and clear of tools and other items of equipment.

B. Remove the access platform(s).

C. Close the fan cowl doors 437AL, 438 AR, 447AL and 448AR, (Refer to AMM 71-13-00-410-010-A).

5. Recording Instructions

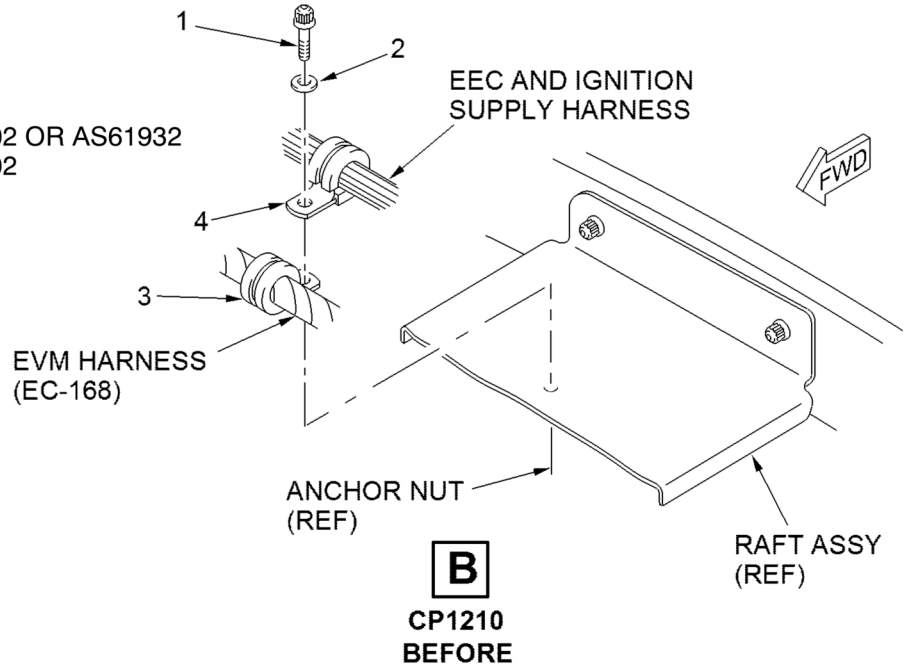
A. A record of accomplishment is necessary. Write in the Engine Log Book that Service Bulletin V2500-ENG-77-0014 has been done.

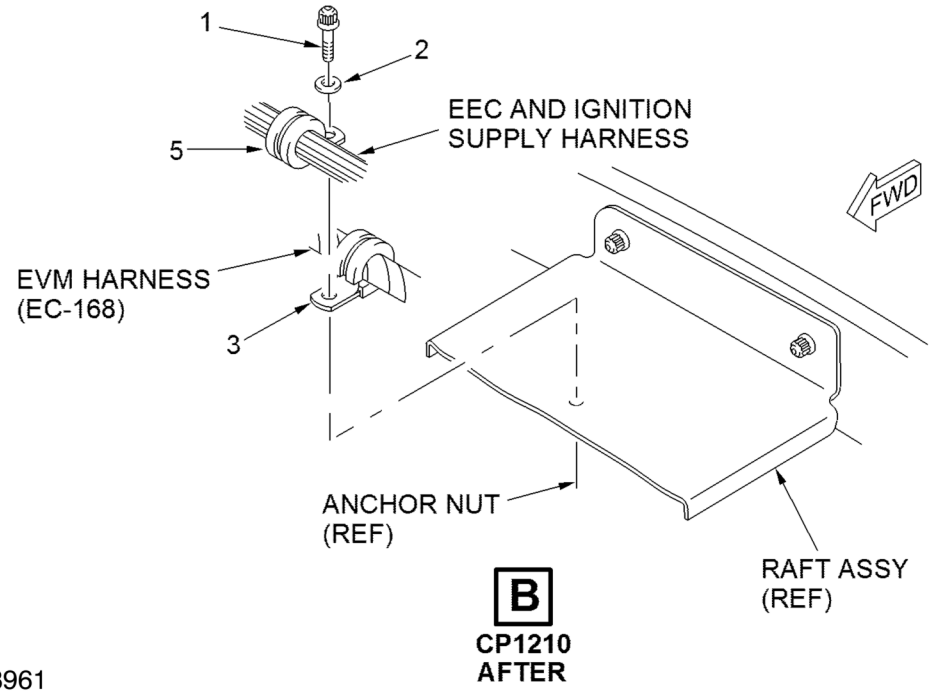


REROUTING OF THE EVM HARNESS - V2500-A1 ONLY
FIGURE 1 SHEET 1

LEGEND

1. BOLT AS21410
2. WASHER SP154D
3. "P" CLIP TA025074-02 OR AS61932
4. "P" CLIP TA025074-02





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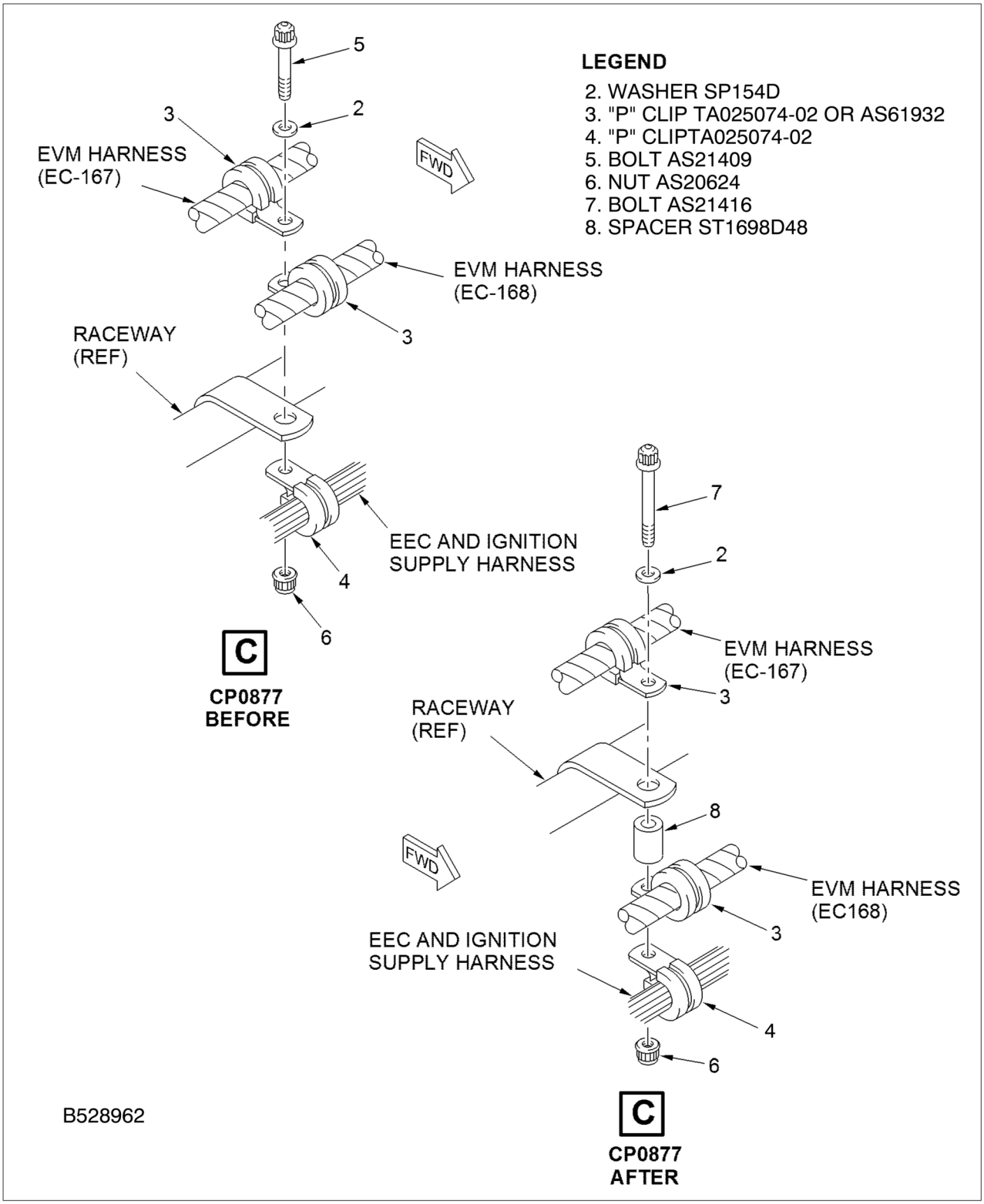
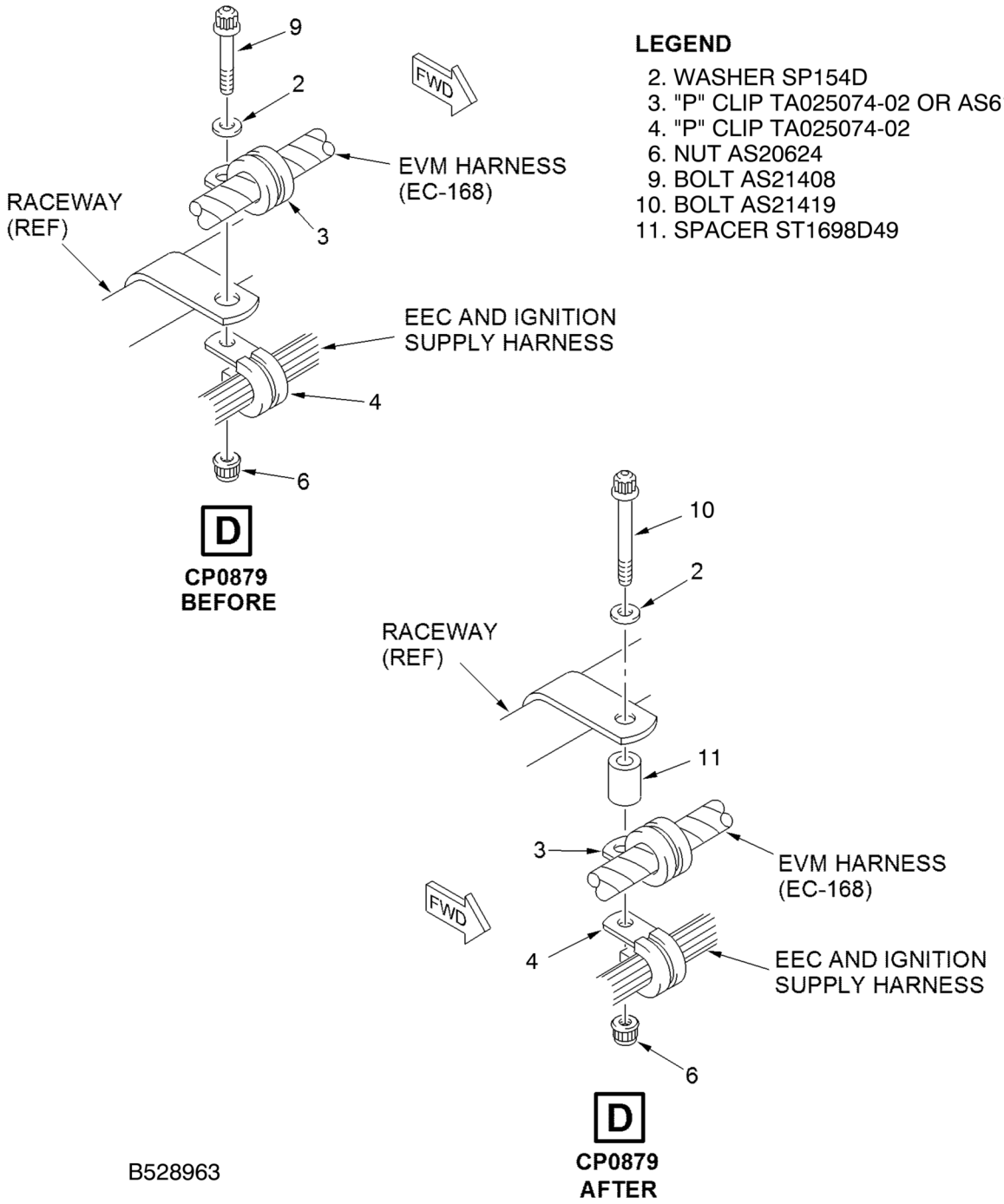
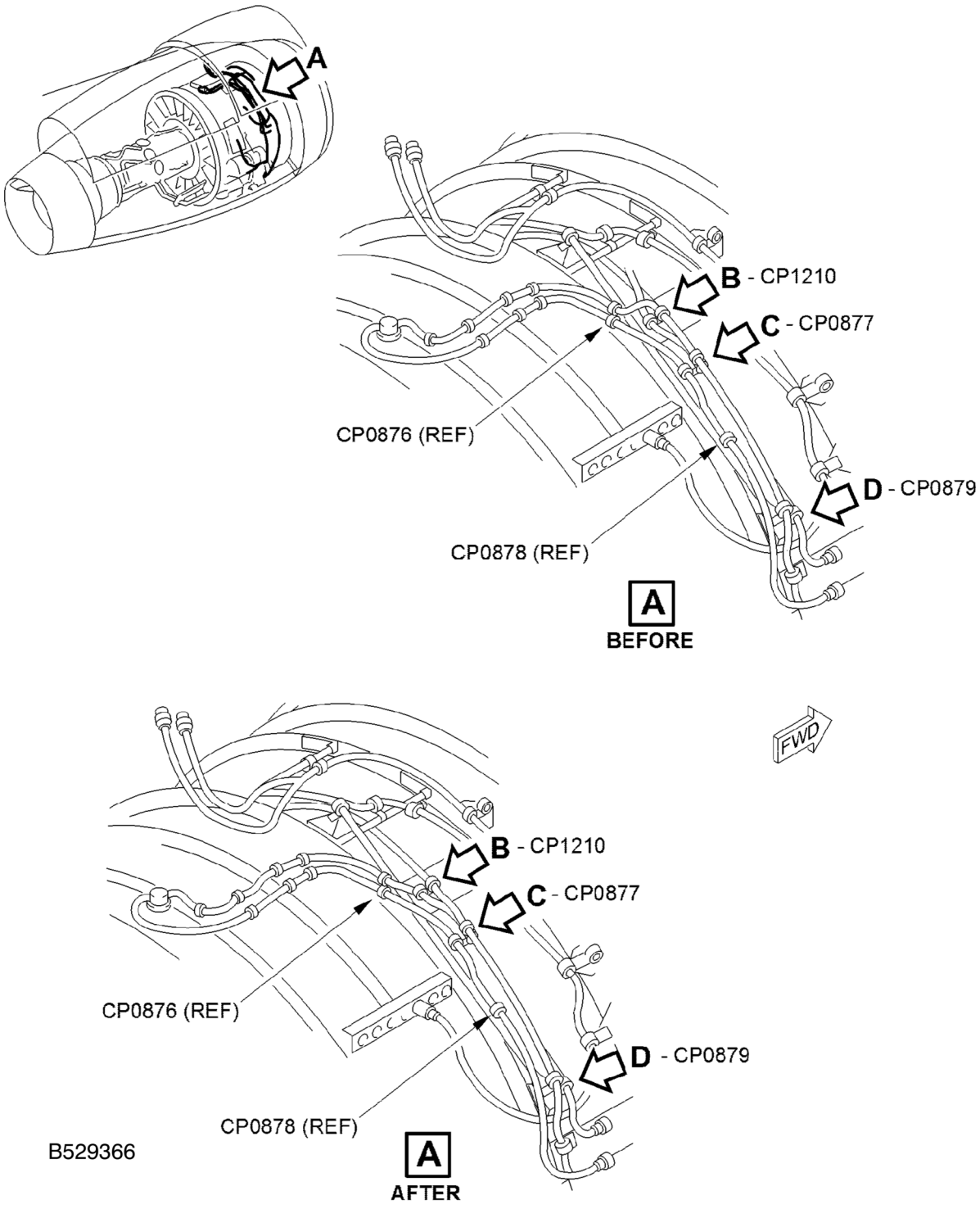
REROUTING OF THE EVM HARNESS - V2500-A1 ONLY
FIGURE 1 SHEET 2



REROUTING OF THE EVM HARNESS - V2500-A1 ONLY
FIGURE 1 SHEET 3



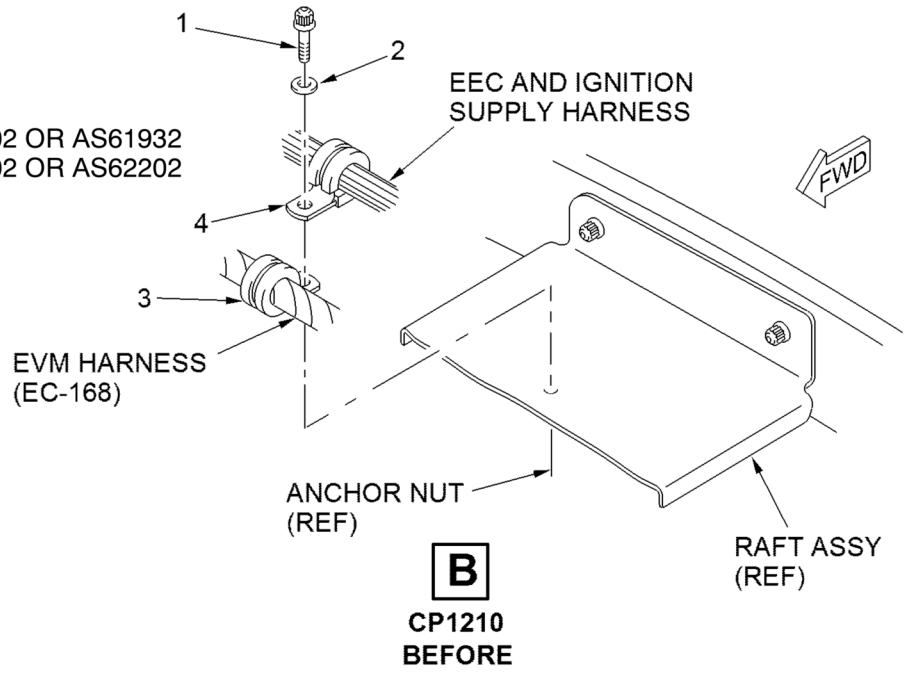
REROUTING OF THE EVM HARNESS - V2500-A1 ONLY
FIGURE 1 SHEET 4

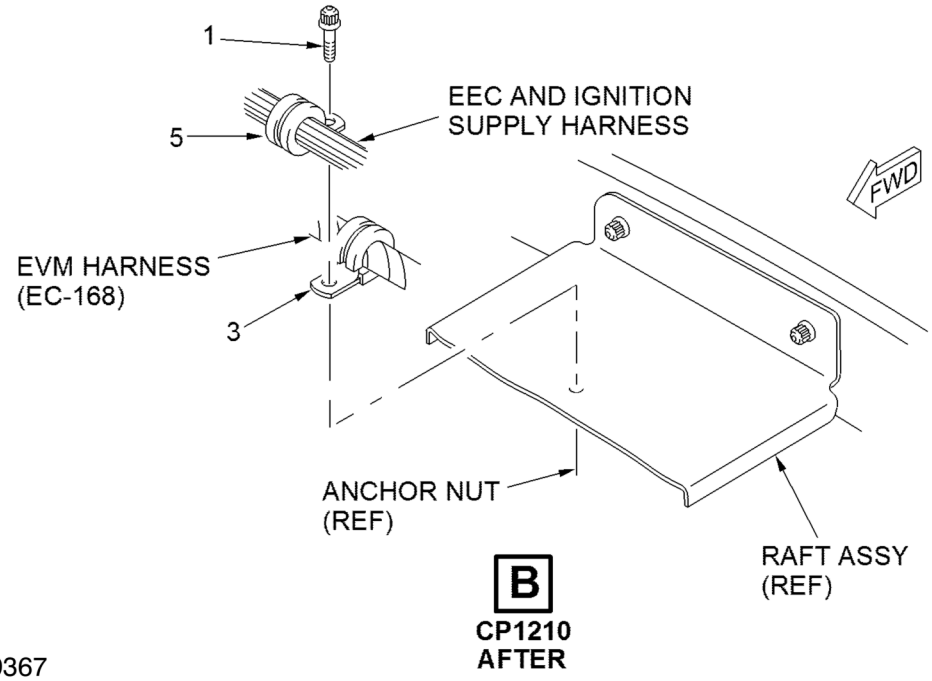


REROUTING OF THE EVM HARNESS - V2500-A5 ONLY
FIGURE 2, SHEET 1

LEGEND

1. BOLT AS21410
2. WASHER SP154D
3. "P" CLIP TA025074-02 OR AS61932
4. "P" CLIP TA025074-02 OR AS62202
5. "P" CLIP AS62202





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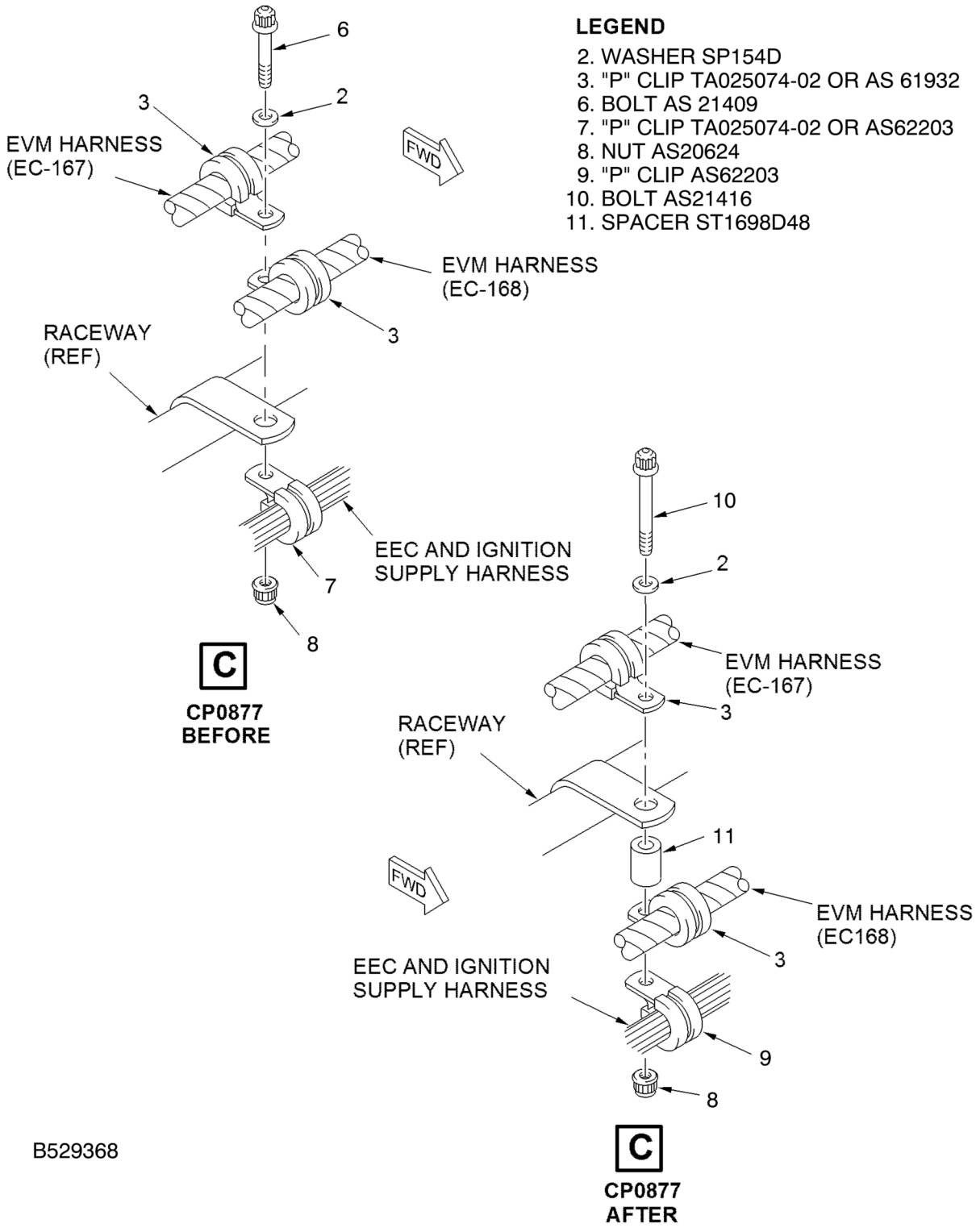
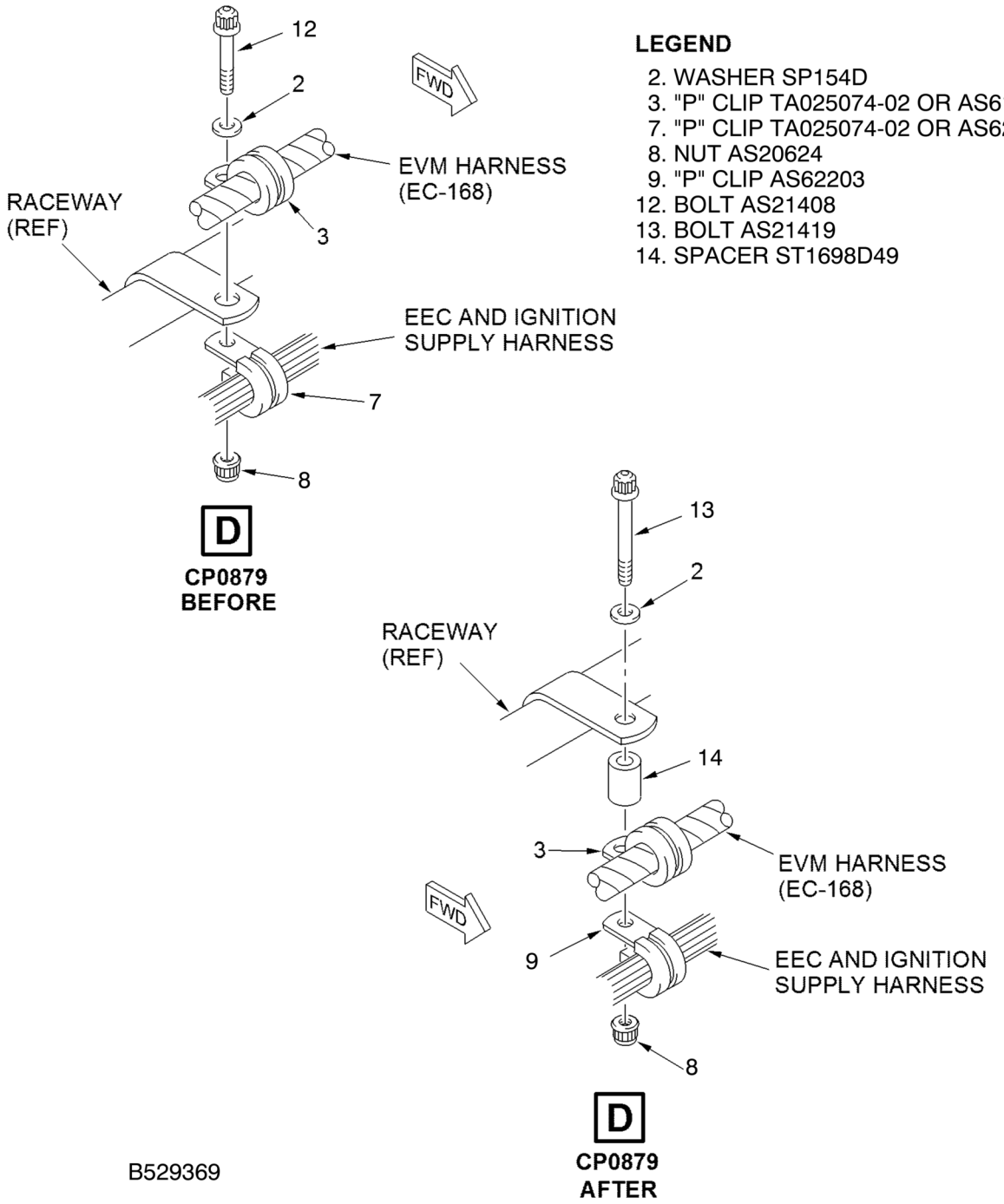
REROUTING OF THE EVM HARNESS - V2500-A5 ONLY
FIGURE 2, SHEET 2



REROUTING OF THE EVM HARNESS - V2500-A5 ONLY
FIGURE 2, SHEET 3



REROUTING OF THE EVM HARNESS - V2500-A5 ONLY
FIGURE 2, SHEET 4

Appendix

Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC10VN311 EC19VN306	PJ/BAB

Number values shown in parentheses adjacent to U.S. values are International System of units (SI) equivalents.

Technical Publications Cross Reference Table

Publication	Engine Model(s)	IAE IETM Pub Ref	P&W Part Number
ENGINE MANUAL — A1, A5	All	E-V2500-1IA	2A4407
CMM-EHC — A1, A5	All	EHC-V2500-1IA	2A4409
CMM-FN — A1, A5	All	FN-V2500-1IA	2A4410
CMM-MMC — A1, A5	All	MECH-V2500-1IA	2A4411
CMM-THD — A1, A5	All	THD-V2500-1IA	2A4412
TLM — A1, A5	All	T-V2500-1IA	2A4408
ENGINE MANUAL — D5	All	E-V2500-3IA	2A4416
CMM-EHC — D5	All	EHC-V2500-31A	2A4418
CMM-FN — D5	All	FN-V2500-3IA	2A4419
CMM-MMC — D5	All	MECH-V2500-3IA	2A4420
CMM-THD — D5	All	THD-V2500-3IA	2A4423
TLM — D5	All	T-V2500-3IA	2A4417
SPPM (SPM) — A1, A5, D5	All	SPP-V2500-1IA	2A4414
EIPC — A1	V2500-A1102Q00	S-V2500-1IA	2A4427

Publication	Engine Model(s)	IAE IETM Pub Ref	P&W Part Number
EIPC — A5	V2522/V2524/V2527M-AQ02	S-V2500-6IA	2A4428
	V2522/V2524/V2527M-AQ03	S-V2500-6IB	
	V2522/V2524/V2527M-SQ02	S-V2500-6SA	
	V2522/V2524/V2527M-SQ03	S-V2500-6SB	
	V2522/V2524/V2527M-SQ04	S-V2500-6NA	
	V2522/V2524/V2527M-SQ05	S-V2500-6NB	
	V2527/V2527E-AQ02	S-V2500-7IA	
	V2527/V2527E-AQ03	S-V2500-7IB	
	V2527/V2527E-SQ02	S-V2500-7SA	
	V2527/V2527E-SQ03	S-V2500-7SB	
	V2527/V2527E-SQ04	S-V2500-7NA	
	V2527/V2527E-SQ05	S-V2500-7NB	
	V2530-AQ02	S-V2500-2IA	
	V2530-AQ03	S-V2500-2IB	
	V2530-SQ02	S-V2500-2SA	
	V2530-SQ03	S-V2500-2SB	
	V2530-SQ04	S-V2500-2NA	
	V2530-SQ05	S-V2500-2NB	
	V2533-AQ02	S-V2500-5IA	
	V2533-AQ03	S-V2500-5IB	
	V2533-SQ02	S-V2500-5SA	
	V2533-SQ03	S-V2500-5SB	
	V2533-SQ04	S-V2500-5NA	
	V2533-SQ05	S-V2500-5NB	
EIPC — D5	V2525/V2528-AQ02	S-V2500-3IA	2A4426
	V2525/V2528-AQ03	S-V2500-3IB	
	V2525/V2528-AQ04	S-V2500-3IC	