P U B L I C A T I O N T R A N S M I T T A L

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DATE: Jul.21/06

V2500-A5 SERIES NACELLE SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin NV2500-71-0295 and the Initial Issue of the Supplement

Bulletin Initial Issue

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	Page 1 and 2 of the Summary	Initial Issue
	Pages 1 to 16 of the Service Bulletin	Initial Issue

Supplement Initial Issue

Remove	Incorporate	Reason for change
	Page 1	Initial Issue

V2500-NAC-71-0295

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
If any have not been received please advise Customer Data Services, Rolls-Royce plc, Derby, England

LIST OF EFFECTIVE PAGES

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International Aero Engines

SERVICE BULLETIN

NACELLE – POWERPLANT – CORE ENGINE – REWORK OF THE CORE FIRE DETECTOR AND THE REROUTING OF THE FIRE DETECTION HARNESSES

SUMMARY

1. PLANNING

A. EFFECTIVITY

V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial Number V12329.

V2527-A5, V2527E-A5 Engines prior to Serial Number V12329.

V2530-A5, V2533-A5 Engines prior to Serial Number V12329.

B. CONCURRENT REQUIREMENTS

For Engines prior to Serial Number V11626 Service Bulletins V2500-ENG-79-0088, V2500-NAC-71-0273 and V2500-NAC-71-0276 must be done prior this Service Bulletin.

For operators with Kidde Fire Detection Systems, Kidde Service Bulletin 473873-2-26-470 'Modification of the Fire Detector Assembly 473873-2' must be done concurrently with this Service Bulletin.

C. REASON

Problem:

When the 'Oil in the Turbine' modification is incorporated, minimum clearances between the Fire Detection Harnesses and adjacent hardware in the Core / Bifurcation area may not be achieved.

Evidence:

When the 'Oil in the Turbine' modification was incorporated in production, inspections indicated that, in some instances, minimum clearances between the Fire Detection Harnesses and adjacent hardware in the Core / Bifurcation area were not achieved.

Substantiation:

A trial fit has shown that the harness rerouting, the reclocking of the connectors and the reworking of the Core Fire Detector provide sufficient clearances with adjacent hardware.

Objective:

To provide sufficient clearances between the Fire Detection Harnesses and adjacent hardware.

D. DESCRIPTION

The changes introduced by this Service Bulletin are as follows:

(1) The Fire Detection Harness clipping point CP6120 is deleted.

(2) Four washers installed between the Fire Detector Responders and the Fire Detector Bracket are removed.

(3) The Fire Detector is reworked.

(4) The connectors on the Fire Detection Harness and the Core Service Harness are reclocked.

(5) The Fire Detector, the Fire Detection Harnesses and the Core Service Harness are re-identified.

(6) The Fire Detection Harnesses are rerouted through existing clipping point CP6078.

E. COMPLIANCE

Category 7

Accomplish when supply of superseded parts has been depleted.

F. MANPOWER

Estimated man-hours to incorporate the intent of this Service Bulletin on each engine:

In Service

Not applicable.

At Overhaul

2.0 hours.

G. INTERCHANGEABILITY OF PARTS

Affected (Refer to section 2. Material Information).

2. MATERIAL INFORMATION

Part Prices

None.

International Aero Engines

SERVICE BULLETIN

NACELLE - POWERPLANT - CORE ENGINE - REWORK OF THE CORE FIRE DETECTOR AND THE REROUTING OF THE FIRE DETECTION HARNESSES

Printed in Great Britain

1. Planning Information

A. Effectivity

(1) Airbus A319

(a) V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial Number V12329.

(2) Airbus A320

(a) V2527-A5, V2527E-A5 Engines prior to Serial Number V12329.

(3) Airbus A321

(a) V2530-A5, V2533-A5 Engines prior to Serial Number V12329.

B. Concurrent Requirements

(1) For Engines prior to Serial Number V11626 the following Service Bulletins must be done prior to this Service Bulletin:

(a) V2500-ENG-79-0088 'Re-route of Number 4 Bearing Scavenge Tube'.

(b) V2500-NAC-71-0273 'Replacement and rerouting of several EBU Systems to accommodate the rerouting of the Oil Scavenge Tubes'.

(c) V2500-NAC-71-0276 'Rework of Electrical Harness and Bracket Assembly to accommodate the rerouting of the Oil Scavenge Tubes'.

(d) For operators with Kidde Fire Detection Systems, Kidde Service Bulletin 473873-2-26-470 'Modification of the Fire Detector Assembly 473873-2' must be done concurrently with this Service Bulletin.

C. Reason

(1) Problem

When the 'Oil in the Turbine' modification is incorporated, minimum clearances between the Fire Detection Harnesses and adjacent hardware in the Core / Bifurcation area may not be achieved.

(2) Evidence

When the 'Oil in the Turbine' modification was incorporated in production, inspections indicated that, in some instances, minimum clearances between the Fire Detection Harnesses and adjacent hardware in the Core / Bifurcation area were not achieved.

(3) Substantiation

A trial fit has shown that the harness rerouting, the reclocking of the connectors and the reworking of the Core Fire Detector provide sufficient clearances with adjacent hardware.

(4) Objective

To provide sufficient clearances between the Fire Detection Harnesses and adjacent hardware.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Affected (Refer to paragraph 1.0. Other Publications Affected).

(c) Overhaul

Affected (Refer to paragraph 1.0. Other Publications Affected).

(d) Repair Schemes

Not affected.

(e) Interchangeability

Affected (Refer to paragraph 1.B. Concurrent Requirements).

(f) Fits and Clearances

Affected (Refer to paragraph 1.D. Description and section 3. Accomplishment Instructions).

(6) Supplement Information

(a) The installation of the Post-Service Bulletin configuration requires instructions to clip the Fire Detection Harnesses to Clipping Point CP6078 and to reclock the Harness Connectors to a new orientation.

(b) Pre-Service Bulletin 7827-02 Fire Detector (Meggitt) is not interchangeable with Post-Service Bulletin 7827-03 Fire Detector (Meggitt).

(c) Pre-Service Bulletin 473873-2 Fire Detector (Kidde) is not interchangeable with Post-Service Bulletin 473873-8 Fire Detector (Kidde).

(d) The Post-Service Bulletin configuration will improve clearances between the Fire Detection Harnesses and adjacent hardware in the Core / Bifurcation area.

D. Description

The changes introduced by this Service Bulletin are as follows:

(1) The Fire Detection Harness clipping point CP6120 is deleted.

(2) Four washers installed between the Fire Detector Responders and the Fire Detector Bracket are removed.

(3) The Fire Detector is reworked.

(4) The connectors on the Fire Detection Harness and the Core Service Harness are reclocked.

(5) The Fire Detector, the Fire Detection Harnesses and the Core Service Harness are re-identified.

(6) The Fire Detection Harnesses are rerouted through existing clipping point CP6078.

E. Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

F. Approval

The technical content of this Service Bulletin has been approved under the authority of the EASA Design Organisation Approval No EASA.21J.031.The authorising IAE documents are EC 04VN761 and 04VN761-02.

G. Manpower

Estimated man-hours to incorporate the intent of this Service Bulletin on each engine:

(1) In Service

Not Applicable.

(2) At Overhaul

2.0 hours.

NOTE: Manpower estimate is provided for planning purposes only. No labor allowance is provided under the terms of this Service Bulletin offering.

H. Material - Cost and Availability

Modification kit is not required. The parts required to accomplish this Service Bulletin are to be procured from operator stock or purchased as single line items. Refer to Section 2. Material Information and the Supplement to this Service Bulletin.

I. Tooling - Cost and Availability

None.

J. Industry Support Information

Not applicable.

K. Weight and Balance

Not affected.

L. Electrical Load Data

Not affected.

M. Software Accomplishment Summary

Not applicable.

N. References

(1) A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual (M-V2500-1IA) Chapter/Sections 26-12-00, 26-12-17, 70-23-11, 70-23-15 and 71-13-00.

(2) Overhaul Processes And Consumable Index (IAE PCI-V2500-1IA) Section II.

(3) IAE engineering changes EC 04VN761 and 04VN761-02.

(4) Kidde Service Bulletin 473873-2-26-470 'Modification of the Fire Detector Assembly 473873-2'.

(5) V2500-ENG-79-0088 'Re-route of Number 4 Bearing Scavenge Tube'.

(6) V2500-NAC-71-0273 'Replacement and rerouting of several EBU Systems to accommodate the rerouting of the Oil Scavenge Tubes'.

(7) V2500-NAC-71-0276 'Rework of Electrical Harness and Bracket Assembly to accommodate the rerouting of the Oil Scavenge Tubes'.

O. Other Publications Affected

(1) A320/V2500-A1/A5 Engine Illustrated Parts Catalog, Chapter/Sections 26-12-17, 71-52-41, 71-52-42, 73-11-49, 75-22-49 and 79-22-49 will be revised.

(2) A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual (M-V2500-1IA) Chapter/Sections 26-12-17, 71-52-41 and 71-52-42.

(3) A320/V2500-A1/A5 Component Maintenance Manual for the V2500 A1 and A5 Engine Electrical Harnesses and Cables (EHC-V2500-1IA), Chapter/Sections 71-52-41 and 71-52-42 will be revised.

(4) A320/V2500-A1 A319/A320/A321/V2500-A5 Engine Manual (E-V2500-1IA) Chapter/Sections 72-00-40 and 72-00-50 will be revised.

P. Interchangeability of Parts

(1) Affected (Refer to section 2. Material Information).

2. Material information

A. Kits required consist of the following parts

None.

B. Parts to be reworked

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
Applicability: For each V2500 A5 Engine to incorporate this Service Bulletin:						
All V2500 A5 Engines						
26-12-17						
01-100	7827-03	1	Fire Detector (Meggitt Safety Systems, Inc.)	-	7827-02	(A)(S1)(S2)(1D)
01-100	473873-8	1	Fire Detector (Kidde Aerospace)	-	473873-2	(A)(S1)(S2)(2D)
71-52-41						
01-005	745-5967 -517	1	Core Service Harness	-	745-5967 -515	(A)(S1)(S3)(1D)
02-001	745-5967 -517	REF	Core Service Harness	-	745-5967 -515	(S3)(1D)
02-010	745-5861 -511	REF	Fire Detection Harness (System A)	-	745-5861 -509	(S3)(1D)
71-52-42						
01-005	745-5862 -505	1	Fire Detection Harness (System A)	-	745-5862 -503	(A)(S1)(S3)(1D)
01-005	745-5862 -9901	REF	Fire Detection Harness (System B)	-	745-5862 -901	(S1)(S3)(1D)

C. New production parts

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
Applicability: For each V2500 A5 Engine to incorporate this Service Bulletin:						
All V2500 A5 Engines						
26-12-17						
01-240	AS21420	1	Bolt	-	AS48022	(A)(B)(S1)
01-250	AS21420	1	Bolt	-	AS48022	(A)(B)(S1)
73-11-49						
09-165	4W0116	1	Bolt	-	4W0103	(A)(B)(S1)
09-170	UP10481	1	Spacer	-	-	(A)(S1)
79-22-49						
01-600	AS62504	1	Loop Clamp	-	-	(A)(S1)

D. Redundant parts:

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
Applicability: For each V2500 A5 Engine to incorporate this Service Bulletin:						
All V2500 A5 Engines						
26-12-17						
01-246	-	2	Washer	-	AN960C10	(B)(S1)
01-256	-	2	Washer	-	AN960C10	(B)(S1)
75-22-49						
10-069	-	1	Loop Clamp	-	TA025074-04 (Alt AS61902)	(B) (S1)

E. Instructions/Dispositions Code Statements

(A) Parts are currently available.

(B) Old part can be used on other applications.

(S1) Old parts coded (S1) and new parts coded (S1) are two way interchangeable as a complete set.

(S2) New part is interchangeable with old part, but old part is not interchangeable with new part.

(S3) Old and new parts are not physically interchangeable.

(1D) Old part can be reworked to new part as instructed in this Service Bulletin.

(2D) Old part can be reworked to new part as instructed in Kidde Aerospace Service Bulletin 473873-2-26-470 'Modification of the Fire Detector Assembly 473873-2'.

F. Materials required to incorporate this Bulletin

CoMat 10-039 or or CoMat 10-040	Engine Oil
CoMat 06-131	Marking Pen

NOTE: To identify the consumable materials, refer to the Overhaul Processes and Consumable Index PCI-V2500-1IA.

3. Accomplishment Instructions

A. Pre-requisite Instructions

WARNING: DO NOT TOUCH THE ENGINE COMPONENTS FOR A SHORT TIME AFTER THE ENGINE IS SHUT DOWN. THE COMPONENTS STAY HOT AND CAN CAUSE INJURY.

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

(1) Open the Fan Cowl Doors. Refer to the Aircraft Maintenance Manual, Task 71-13-00-010-010.

B. Rework Instructions

(1) At Clipping Point CP6120, remove the AS20624 Nut, the AS21412 Bolt and the TA025074-04 P-Clip to release the Fire Detection Harness from the 740-5290-503 Bracket. Refer to Figure 1, view B.

NOTE: Lubricate all Bolts and Nuts with Engine Oil CoMat 10-039 or CoMat 10-040.

NOTE: Torque all Bolts and Nuts as instructed in the Aircraft Maintenance Manual, Chapter 70-23-11.

(2) Install the 740-5290-503 Bracket to the 6A6196 Tube with the AS21412 Bolt and the AS20624 Nut. Torque the Nut to 20 - 25 lbf in. (2 - 3 Nm).

(3) Disconnect the 4001WD1-A Electrical Connector and the 4001WD2-A Electrical Connector from the Fire Detector. Refer to Figure 1, view D.

(4) Install the applicable covers/caps/plugs to the electrical connectors and electrical receptacles.

(5) At two locations, remove the AS20624 Nut, the SP155D Washer, the two AN960C10 Washers and the AS48022 Bolt to release the Support Tube from the 740-5290-503 Bracket. Refer to Figure 1, view C.

(6) At two locations, install the Support Tube to the 740-5290-503 Bracket with the AS21420 Bolt, the SP155D Washer and the AS20624 Nut. Torque the Nut to 20 - 25 lbf in. (2 - 3 Nm).

(7) For operators with Meggitt Fire Detection Systems, rework the 7827-02 Meggitt Fire Detector as follows:

(a) Make a mark of the cut line on the Fire Detector Support Tube. Refer to Figure 1, view E.

(b) Use a tube cutter to remove the end of the Support Tube. Make sure that you do not damage adjacent hardware. If necessary, remove the Fire Detector as instructed in the Aircraft Maintenance Manual, Task 26-12-17-000-010.

(c) Deburr the cut metal edges of the Tube.

(d) Use a vibro-etcher to re-identify the Fire Detector to 7827-03 on the support tube near to the existing 7827-02 marking.

(e) If required, install the Fire Detector as instructed in the Aircraft Maintenance Manual, Task 26-12-17-400-010.

(8) For operators with Kidde Fire Detection Systems, rework the 473873-2 Kidde Fire Detector to 473873-8 as instructed in Kidde Service Bulletin 473873-2-26-470. If required, install the Fire Detector as instructed in the Aircraft Maintenance Manual, Task 26-12-17-400-010.

NOTE: To clock the 4001WD1-A Electrical Connector correctly, looking on the plug face, set the major keyway of the connector at the 4 o'clock position when the backshell is at the 12 o'clock position.

NOTE: To achieve maximum clearance with adjacent hardware set the saddle clamps of the 4001WD1-A Electrical Connector at approximately the 12 o'clock position.

(9) Clock the 4001WD1-A Electrical Connector on the 745-5861-509 Fire Detection Harness to achieve maximum clearance. Refer to Figure 1, view D.

NOTE: To clock the 4001WD2-A Electrical Connector correctly, looking on the plug face, set the major keyway of the connector at the 9 o'clock position when the backshell is at the 12 o'clock position.

NOTE: To achieve maximum clearance with adjacent hardware set the saddle clamps of the 4001WD2-A Electrical Connector at approximately the 12 o'clock position.

(10) Clock the 4001WD2-A Electrical Connector on the 745-5862-503/901 Fire Detection Harness to achieve maximum clearance.

(11) Use the marking pen (CoMat 06-131) to re-identify the 745-5967-515 Core Service Harness to 745-5967-517. Put the Service Bulletin number V2500-NAC-71-0295 on the identification sleeve of the harness.

(12) Use the marking pen (CoMat 06-131) to re-identify the 745-5861-509 Fire Detection Harness to 745-5861-511. Put the Service Bulletin number V2500-NAC-71-0295 on the identification sleeve of the harness.

(13) Use the marking pen (CoMat 06-131) to re-identify the 745-5862-901 Fire Detection Harness to 745-5862-9901 or the 745-5862-503 Fire Detection Harness to 745-5862-505. Put the Service Bulletin number V2500-NAC-71-0295 on the identification sleeve of the harness.

(14) At Clipping Point CP6078, remove the AS20624 Nut, the K8831 Washer and the 4W0103 Bolt. Refer to Figure 1, view F.

NOTE: Distribute the slack in the Harness to prevent stress loads on the Harness Connectors.

NOTE: Make sure that the Harnesses are correctly routed. Refer to Figure 1, sheet 1.

(15) At Clipping Point CP6078, install the Fire Detection Harnesses with the AS62504 P-Clip, the 4W0116 Bolt, the K8831 Washer, the UP10481 Spacer and the AS20624 Nut. Torque the Nut to 20 - 25 lbf in. (2 - 3 Nm). Refer to Figure 1, view F.

(16) Connect the 4001WD1-A Electrical Connector and the 4001WD2-A Electrical Connector to the Fire Detector. Refer to the Aircraft Maintenance Manual, Task 70-23-15-912-010.

(17) Confirm that a minimum clearance of 0.25 in. (6,35 mm) between the Fire Detection Harness and adjacent hardware is achieved.

(18) Make sure that the work area is clean and clear of tools and other items.

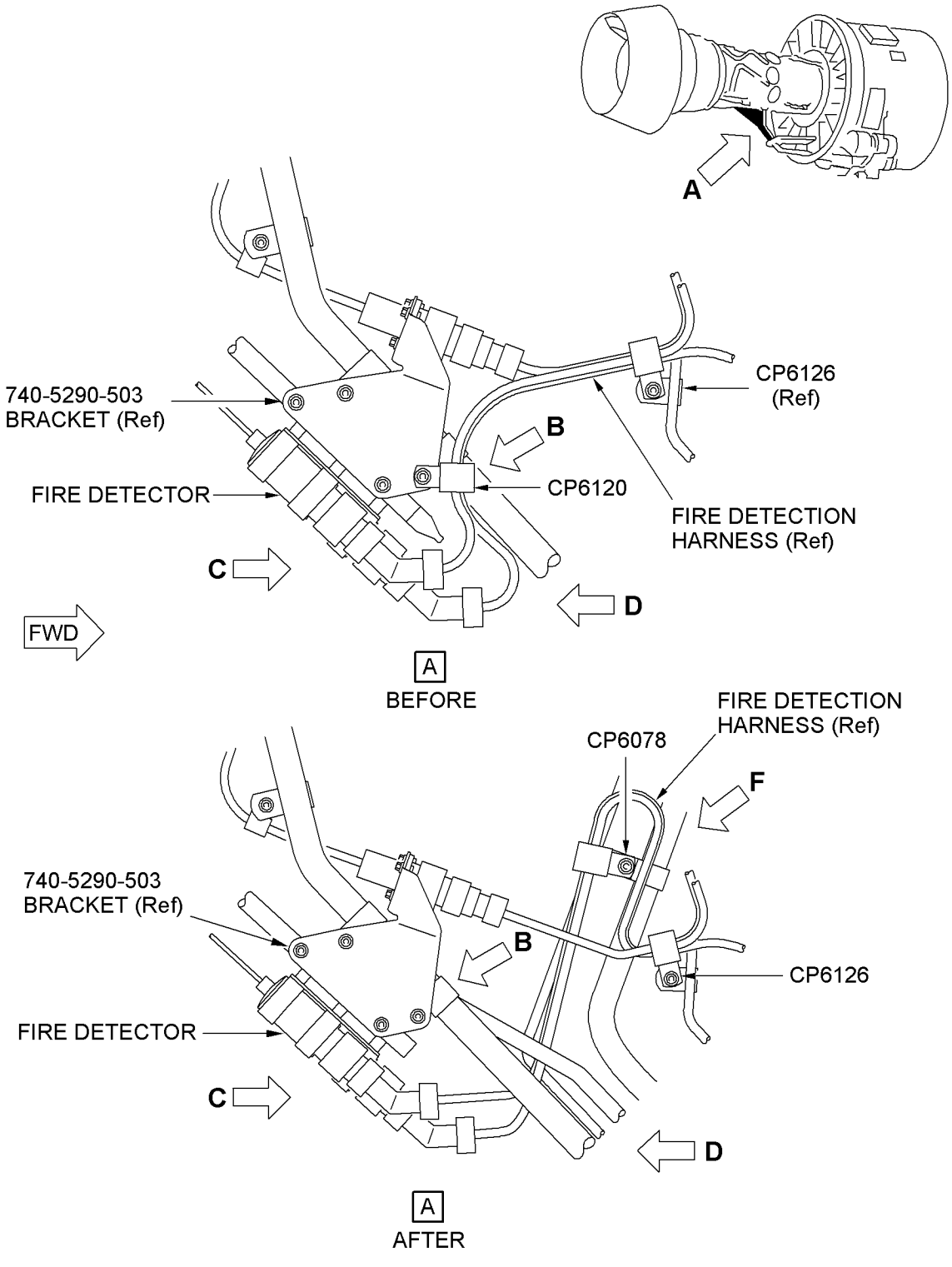
C. Post-requisite Instructions

(1) Close the Fan Cowl Doors as instructed in the A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual, Task 71-13-00-410-010.

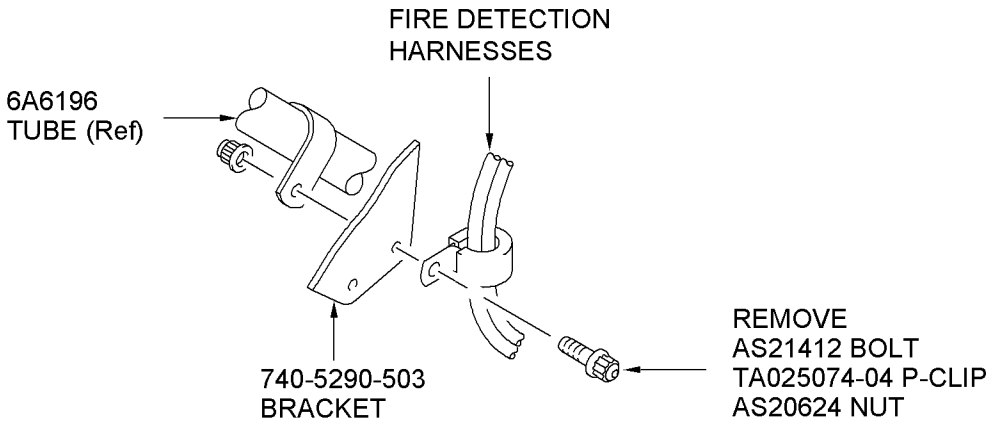
(2) Do the Fire Detection tests as instructed in the Aircraft Maintenance Manual, Subtask 26-12-00-710-001.

D. Recording Instructions

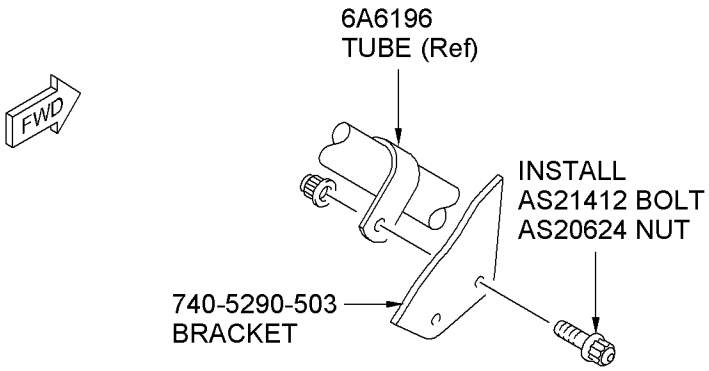
(1) A record of accomplishment is necessary. Write in the Aircraft Log Book that Service Bulletin V2500-NAC-71-0295 has been done.



Rerouting of the Fire Detection Harness and the Core Service Harness
Figure 1 (Sheet 1 of 5)



B
CP6120
BEFORE



B
CP6120
AFTER

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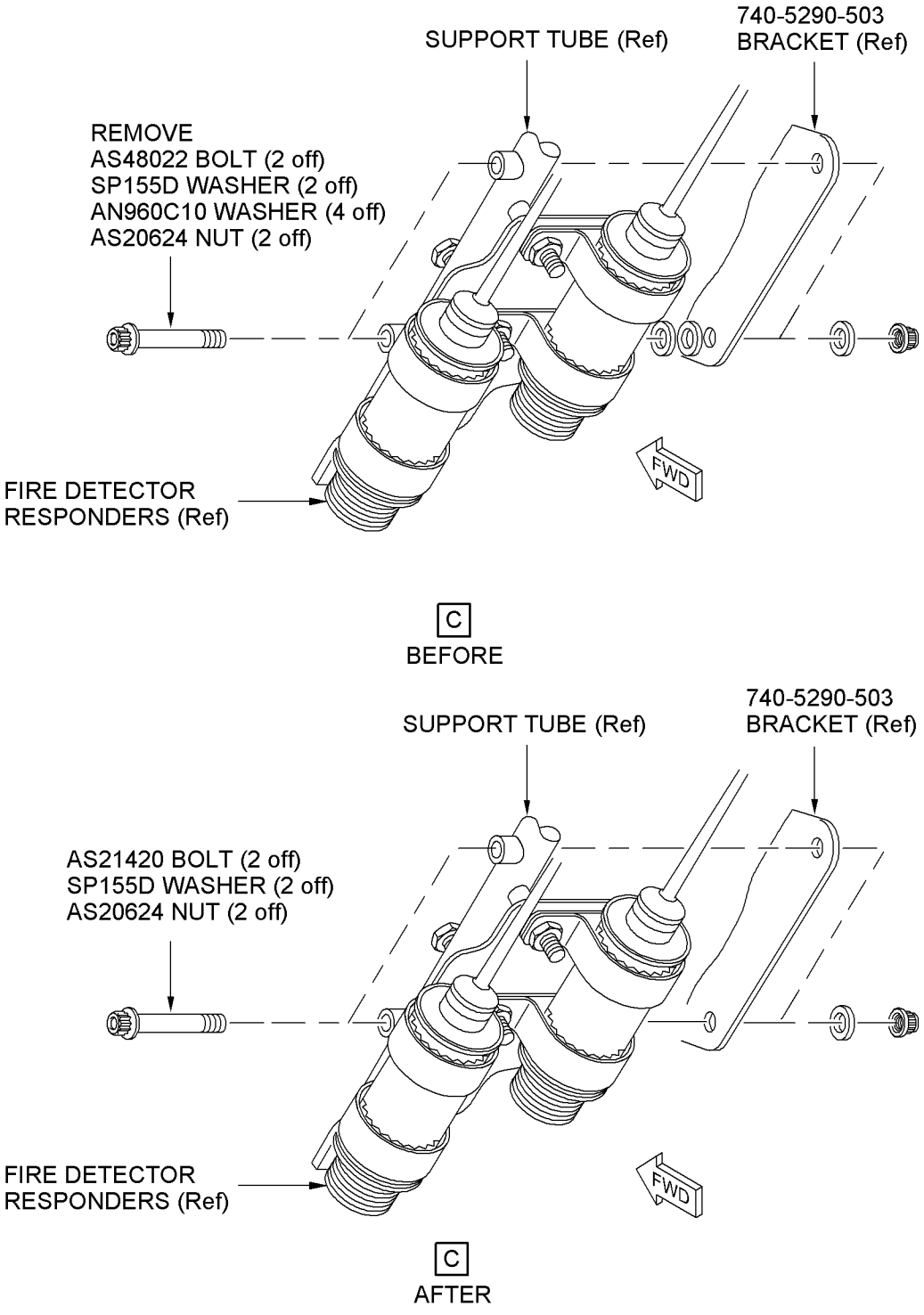
Rerouting of the Fire Detection Harness and the Core Service Harness
Figure 1 (Sheet 2 of 5)



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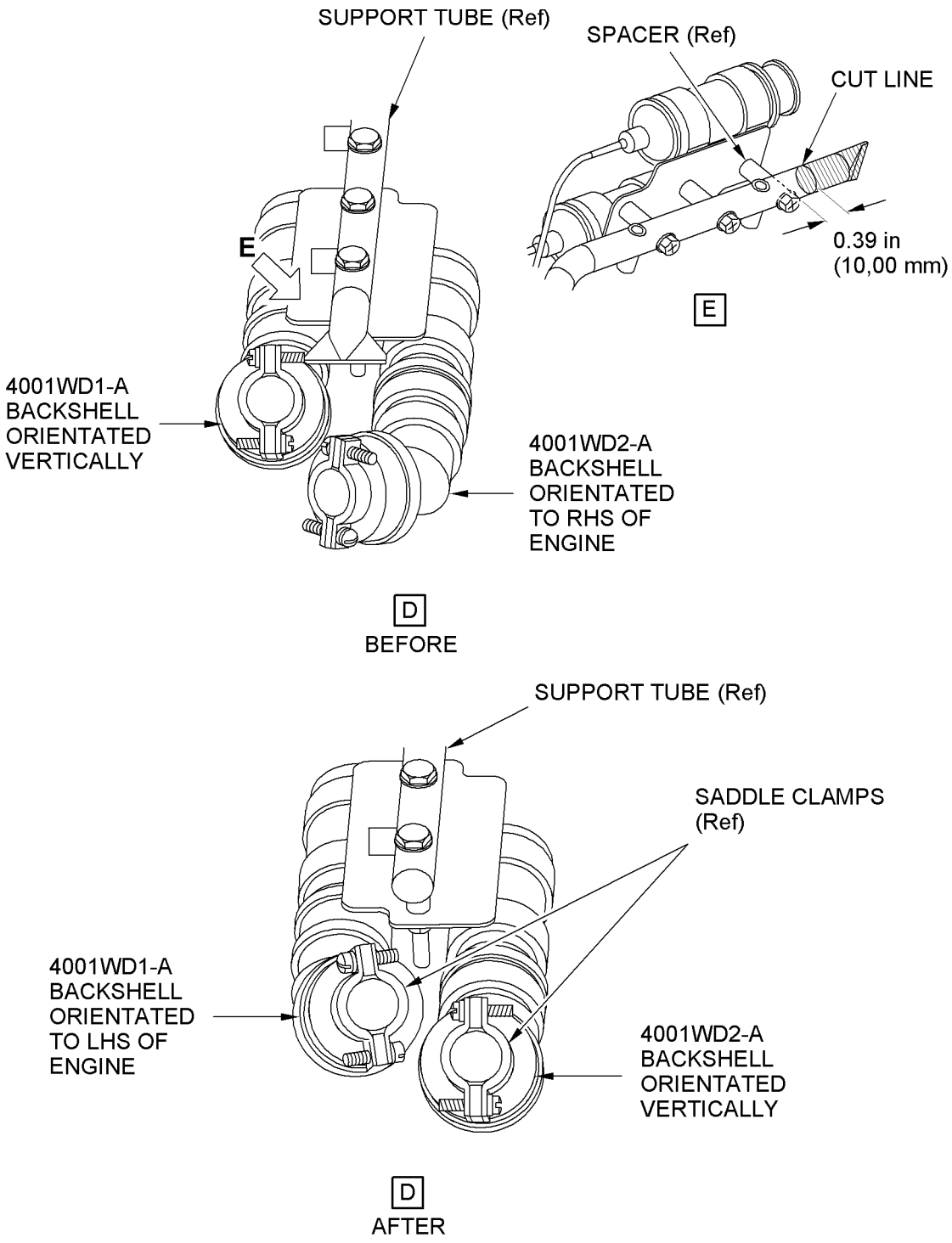
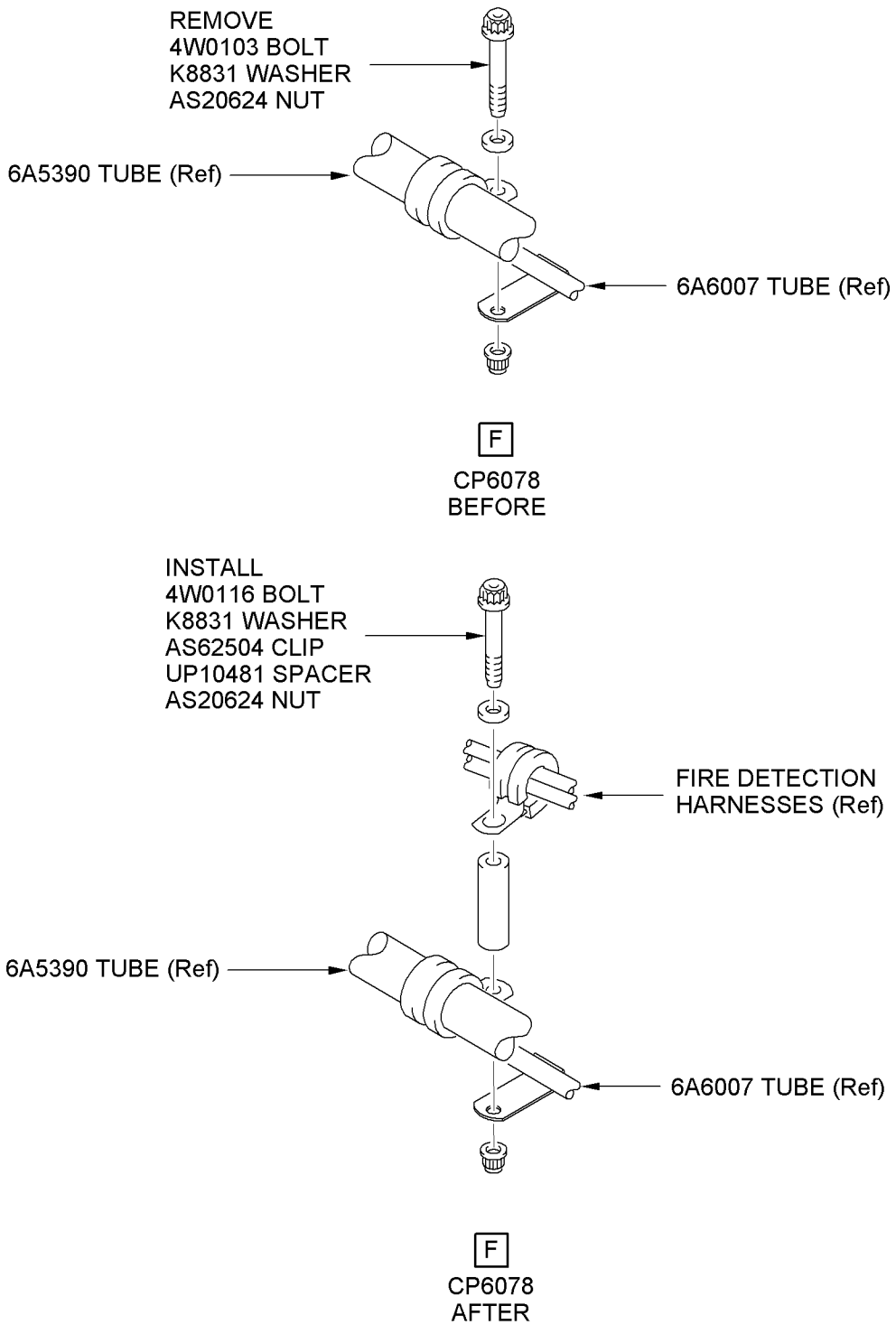
Rerouting of the Fire Detection Harness and the Core Service Harness
Figure 1 (Sheet 3 of 5)



Rerouting of the Fire Detection Harness and the Core Service Harness
Figure 1 (Sheet 4 of 5)



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Rerouting of the Fire Detection Harness and the Core Service Harness
Figure 1 (Sheet 5 of 5)

International Aero Engines

SERVICE BULLETIN

NACELLE – POWERPLANT – CORE ENGINE – REWORK OF THE CORE FIRE DETECTOR AND THE REROUTING OF THE FIRE DETECTION HARNESSES

SUPPLEMENT – PRICES AND AVAILABILITY

The prices (if shown) are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to Goodrich Spares and/or current price catalogue for current prices.

1. Modification Kit:

Not applicable.

2. New Production Parts:

Part No.	Description	Unit Price US Dollars
AS21420	Bolt	Price on request
4W0116	Bolt	Price on request
UP10481	Spacer	Price on request
AS62504	Loop Clamp	Price on request