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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V2500-A1/A5 PROPULSION SYSTEMS SERVICE BULLETIN

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This document transmits the Initial Issue of Service Bulletin EV2500-73-0166 and the Initial Issue of the Supplement

Bulletin Initial Issue

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Supplement Initial Issue

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CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
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ENGINE FUEL AND CONTROL - FUEL SYSTEM AIR TUBES - INTRODUCTION OF NON-VENTED BURNER TO EEC PRESSURE (PB) SENSE LINE TUBE ASSEMBLIES

1. Planning Information

A. Effectivity

(1) Airbus A319

V2522-A5, V2524-A5, V2527M-A5 Engines

(2) Airbus A320

(a) V2500-A1 Engines

(b) V2527-A5, V2527E-A5 Engines

(3) Airbus A321

V2530-A5, V2533-A5 Engines

B. Concurrent Requirements

None.

C. Reason

(1) Condition

Engine Sensor fault indications may occur at cruise, top of descent.

The sensor fault is attributed to all or a combination of one or more of the following reasons:

(a) Freezing of water contained within the Pb sense line.

(b) Freezing of moisture within the EEC Pb sensor.

(c) Contamination build-up on the sensor inlet screen and within the Pb sensor.

The above mentioned contributors result in maintenance actions leading to the aircraft becoming non-despatchable, delays and/or cancellation of subsequent flights and may also result in enforced EEC removals and, in certain cases, return of the EEC to the vendor for servicing.

(2) Background

The Engine sensor fault has been experienced on engines in-service.

(3) Objective

Incorporation of this Service Bulletin (Modification) is designed to maintain engine reliability.

(4) Substantiation

The changes introduced by this modification have been the subject of satisfactory engineering analysis and have been successfully used on other Rolls-Royce engines.

(5) Effect of Bulletin on:

(a) Operation

Not affected

(b) Maintenance

Not affected

(c) Overhaul

Not affected

(d) Repair Schemes

Not affected

(e) Interchangeability

Not affected

(f) Fits and Clearances

Not affected

D. Description

(1) The changes introduced are:

(a) Two revised tube assemblies are introduced similar to the existing items except for the following changes:

(i) The vent holes in both the tube assembly's moisture traps have been deleted.

E. Compliance

Category Code 8

Selected Operators only - A1 and A5 Engines.

This Service Bulletin is released for purpose of Controlled Service Use.

F. Approval

The part number changes and/or part modification are given in section 2 and 3 of this Service Bulletin. They comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

G. Manpower

(1) In service

1 hour 30 minutes (approx.).

(2) At overhaul

Not affected.

NOTE: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material Price and Availability

Modification kit not required; parts supplied as single line items.

I. Tooling Price and Availability

Special tools are not required.

J. Industry Support Information

None.

K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

None.

(3) Datum

Engine front mount centreline (Power Plant Station PPS 100).

L. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

M. Software Accomplishment Summary

Not applicable.

N. References

(1) IAE Engineering Change Number 02VR004.

(2) ATA Locator - 73-22-49.

(3) Aircraft Maintenance Manual, 71-13-00, Maintenance Practices, 78-32-00, Maintenance Practices, 70-23-11, Torque Tightening Techniques and 70-40-11, Installation of Locking Devices.

(4) Component Maintenance Manual, THD, 73-22-49, Cleaning, Inspection/Check and Repair.

(5) Aircraft Maintenance Manual, 73-22-49, Inspection/Check PB 601.

(6) Engine Illustrated Parts Catalogue (EIPC), 73-22-49.

(7) Airbus Illustrated Parts Catalogue (IPC).

(8) Airbus aircraft modification No.32991.

O. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC) 1IA, 2IA, 2IB, 5IA, 5IB, 6IA, 6IB, 7IA and 7IB, Chapter/Section 73-22-49, will be revised.

(2) Component Maintenance Manual, THD, 73-22-49, Cleaning, Inspection/Check and Repair.

(3) Aircraft Maintenance Manual, 73-22-49, Inspection/Check PB 601.

P. Interchangeability of Parts

Not affected.

2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts affected by this bulletin:

All Engines

73-22-49

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
06100	6A8090	1	Tube assy, Burner to EEC	-	5A8799	(A)(S1)
06218	6A8092	1	Receptacle assy, moisture	-	5A0454	(A)(S1)
07100	6A8091	1	Tube assy, Burner to EEC	-	5A8800	(A)(S1)
07218	6A8092	1	Receptacle assy, moisture	-	5A0454	(A)(S1)

C. Instruction disposition codes:

(A) New part will be made available from September 2002.

(S1) Old and new parts are freely and fully interchangeable.

3. Accomplishment Instructions

A. Prerequisite Instructions

(1) Open the Fan Cowls (Aircraft Maintenance Manual, 71-13-00, Maintenance Practices, TASK 71-13-00-010-010).

(2) Open the Thrust Reverser halves (Aircraft Maintenance Manual, 78-32-00, Maintenance Practices, TASK 78-32-00-010-010).

B. Remove upper tube 5A8800 (73-22-49, 07-100)

(1) Remove bolts, washers, nut, clip nut and clips at clip positions CP1027 and CP1028.

(2) Cut the lockwire and disconnect the nut on 5A8800 tube, from 5A9093 tube (73-22-49, 06-100).

(3) Cut the lockwire and disconnect the nut on flexible hose (73-22-49, 07-500) from tube 5A8800.

(4) Cut the lockwire and remove locknut MS9201-05 (73-22-49, 07-110) from the support bracket (73-22-49, 03-800).

(5) Remove tube 5A8800 from the engine.

C. Remove flexible hose connecting sense line to EEC (73-22-49, 07-500)

(1) Cut the lockwire and disconnect connector on flexible hose from EEC (73-22-34, 01-280).

(2) Remove flexible hose from the engine.

D. Remove lower tube 5A8799 (73-22-49, 06-100)

(1) Remove bolts, washers, nuts and clips at clip positions CP0544, CP0565, CP1037 and CP0561.

(2) Cut the lockwire and disconnect the nut on tube 5A8762 (73-22-49, 05-500) from tube 5A8799.

(3) Cut the lockwire and disconnect the nut on tube 5A8799 from tube 5A9093 (73-22-49, 06-500).

(4) Remove the two bolts 4W0163 (73-22-49, 06-106) and the two nuts 4W0002 (73-22-49, 06-102) which attach the tube 5A8799 to the bifurcation panel.

(5) Remove tube 5A8799 from the engine.

E. Purge tube 5A9093 (73-22-49, 06-500)

(1) Purge the inside of tube 5A9093 with nitrogen or dry air to remove any contaminants and/or moisture (Refer to Aircraft Maintenance Manual, 73-22-49, Inspection/Check PB 601).

F. Clean flexible hose (73-22-49, 07-500)

(1) Clean the flexible hose in accordance with Component Maintenance Manual, THD, TASK 73-22-49-100-104.

G. Install flexible hose connecting sense line to EEC (73-22-49, 07-500)

(1) Install the flexible hose at EEC end of sense line to the newly installed (new or refurbished) EEC.

(2) Torque tighten connector on flexible hose to 145 - 155 lbfin (16,38 - 17,51 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(3) Safety connector on flexible hose with CoMat 02-126 lockwire (Refer to Aircraft Maintenance Manual, 70-40-11, Installation of Locking Devices, TASK 70-40-11-911-012).

H. Install upper tube assembly 6A8091 (73-22-49, 07-100)

(1) Install tube assembly 6A8091 to support bracket (73-22-49, 03-800) with locknut MS9201-05 (73-22-49, 07-110).

(2) Connect the nut on tube assembly 6A8091 to tube 5A9093 (73-22-49, 06-100).

(3) Install bolts, washers, nut, clip nut and clips at clip positions CP1027 and CP1028.

(4) Torque tighten locknut MS9201-05 to 145 - 155 lbfin (16,38 - 17,51 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(5) Safety MS9201-05 locknut with CoMat 02-126 lockwire (Refer to Aircraft Maintenance Manual, 70-40-11, Installation of Locking Devices, TASK 70-40-11-911-012).

(6) Torque tighten nut on tube assembly 6A8091 to 165 - 185 lbfin (18,64 - 20,90 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(7) Safety nut on tube assembly 6A8091 with CoMat 02-126 lockwire (Refer to Aircraft Maintenance Manual, 70-40-11, Installation of Locking Devices, TASK 70-40-11-911-012).

(8) Connect the connector on flexible hose (73-22-49, 07-500) to tube assembly 6A8091.

(9) Torque tighten connector on flexible hose to 145 - 155 lbfin (16,38 - 17,51 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(10) Safety connector on flexible hose with CoMat 02-126 lockwire (Refer to Aircraft Maintenance Manual, 70-40-11, Installation of Locking Devices, TASK 70-40-11-911-012).

(11) Torque tighten nut and bolt at clip positions CP1027 and CP1028 to 36 - 40 lbfin (4,07 - 4,52 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

I. Install lower tube assembly 6A8090 (73-22-49, 06-100)

(1) Install tube assembly 6A8090 to bifurcation panel with two bolts 4W0163 (73-22-49, 06-106) and two nuts 4W0002 (73-22-49, 06-102).

(2) Torque tighten the two nuts to 85 - 95 lbfin (9,60 - 10,73 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(3) Install bolts, washers, nuts, and clips at clip positions CP0561, CP1037, CP0565 and CP0544.

(4) Connect nut on tube 6A8090 to tube 5A9093.

(5) Torque tighten nut to 165 - 185 lbfin (18,64 - 20,90 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(6) Safety the nut with CoMat 02-126 lockwire (Refer to Aircraft Maintenance Manual, 70-40-11, Installation of Locking Devices, TASK 70-40-11-911-012).

(7) Connect nut on tube 5A8762 (73-22-49, 05-500).

(8) Torque tighten nut to 165 - 185 lbfin (18,64 - 20,90 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

(9) Safety the nut with CoMat 02-126 lockwire (Refer to Aircraft Maintenance Manual, 70-40-11, Installation of Locking Devices, TASK 70-40-11-911-012).

(10) Torque tighten nuts at clip positions CP0561, CP1037, CP0565 and CP0544 to 36 - 40 lbfin (4,07 - 4,52 Nm) (Refer to Aircraft Maintenance Manual, 70-23-11, Torque Tightening Technique).

J. Post requisite instructions

(1) Close the Thrust Reverser halves (Aircraft Maintenance Manual, 78-32-00, Maintenance Practices, TASK 78-32-00-410-010).

(2) Close the Fan Cowls (Aircraft Maintenance Manual, 71-13-00, Maintenance Practices, TASK 71-13-00-410-010).

K. Rework Instructions

None.

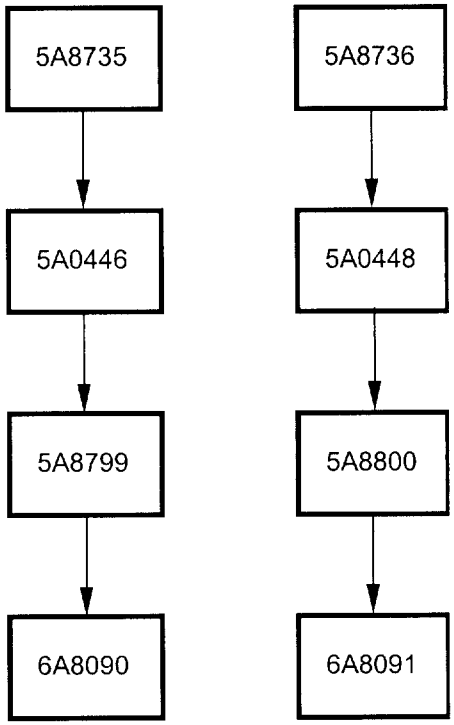
L. Recording Instructions

A record of accomplishment is necessary.

Pb Sense Line Tube Assemblies

V2500-A1 Engines only

Baseline



V2500-ENG-73-0011
Fuel and Control - Rework the PS3 burner air tube assembly to incorporate enlarged moisture trap drain holes.

V2500-ENG-73-0019
Fuel and Control - Incorporate burner pressure (Pb) sensor tubes with revised holes.

V2500-ENG-73-0166
Engine Fuel and Control - Fuel System Air Tubes - Introduction of non-vented burner to EEC pressure (Pb) sense line tube assemblies.

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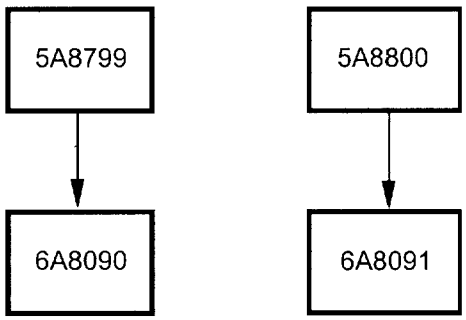
Family Tree
Fig.1

Pb Sense line tube assemblies

V2500-A5 Engines only

Baseline



V2500-ENG-73-0166
Engine Fuel and Control - Fuel System Air Tubes - Introduction of non-vented burner to EEC pressure (Pb) sense line tube assemblies.

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Family Tree
Fig.2

ENGINE FUEL AND CONTROL - FUEL SYSTEM AIR TUBES - INTRODUCTION OF NON-VENTED BURNER TO EEC PRESSURE (PB) SENSE LINE TUBE ASSEMBLIES

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 IAE Spares and/or current price catalogue for current prices.

1. Modification Kit

Not applicable. Parts supplied as single line items

2. New Production or Rework Parts

Part No.	Desc.	Unit Price US Dollars
6A8090	Tube assy	Price supplied on request
6A8091	Tube assy	Price supplied on request
6A8092	Receptacle assy	Price supplied on request