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Printed in Great Britain

V2500-A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin EV2500-73-0168

Bulletin Initial Issue

Remove

Incorporate
Pages 1 to 6 of the
Service Bulletin

Reason for change
Initial issue

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Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
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LIST OF EFFECTIVE PAGES

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ENGINE – FUEL AND CONTROL – LP/HP FUEL PUMPS – INTRODUCTION OF A REVISED LP/HP FUEL PUMP WITH SAND CAST LP IMPELLER HOUSING – MOD 73-0168

1. Planning Information

A. Effectivity

(1) Airbus A319

V2522-A5, V2524-A5 Engines prior to Serial No. V10822

(2) Airbus A319CJ

V2527M-A5 Engines prior to Serial No. V10822

(3) Airbus A320

V2527-A5, V2527E-A5 Engines prior to Serial No. V10822

(4) Airbus A321

V2530-A5, V2533-A5 Engines prior to Serial No. V10822

(5) Boeing – Long Beach Division MD-90

V2525-D5, V2528-D5 Engines prior to Serial No. V20286

(6) ATA Location

73-12-41

B. Concurrent Requirements

None.

C. Reason

(1) Problem

A design review of the LP/HP Fuel Pump has indicated that manufacture of the LP Impeller Housing may be optimised.

(2) Objective

Incorporation of this Service Bulletin is designed to simplify manufacture.



(3) Substantiation

The changes introduced by this Service Bulletin have been the subject of successful vendor rig testing of a representative development standard of pump and extensive engineering assessment by the vendor and IAE Engineering.

(4) Effect of Bulletin on Workshop Procedures:

(a) Removal/Installation

Affected (See Supplemental Information)

(b) Disassembly/Assembly

Not affected

(c) Cleaning

Not affected

(d) Inspection/Check

Not affected

(e) Repair

Not affected

(f) Testing

Not affected

(5) Supplemental Information

The Removal/Installation will be revised to add the new configuration of this Service Bulletin

D. Description

(1) This Service Bulletin covers the fitment to engines of a LP/HP fuel pump, supplied by Sundstrand Aerospace, incorporating design changes to facilitate pump manufacture.

(2) The changes introduced are:

(a) A revised LP/HP fuel pump similar to the existing unit except for the following:



(b) A revised LP impeller housing similar to the existing housing except that the casting process is changed from investment casting to sand casting.

(c) Due to the rougher sand cast finish of the above LP impeller housing, the impeller discharge passage has been enlarged to optimise fuel flow.

(3) Units incorporating this Service Bulletin will be identified by a new type number (see 2.A. Material Information).

E. Compliance

Category Code 7

Accomplish when the supply of superseded parts has been depleted.

F. Approval

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

G. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

(1) In Service

Not applicable

(2) At overhaul

Not applicable

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

No additional time will be required to maintain the new configuration

H. Weight and Balance

(1) Weight Change

Plus 0.3lb (0,14kg)

(2) Moment Arm

13.3in. (337mm) forwards



(3) Datum

Engine Front Mount Centreline (Power Plant Station – PPS 100)

I. Electrical Load Data

Not affected

J. Software Accomplishment Summary

Not applicable

K. References

(1) IAE Engineering Change Number 99VI002

(2) Vendor Service Bulletins Hamilton Sunstrand 5010216-73-05 and 5009913-73-6.

(3) Engine Manual:

(a) 72-00-60-050-008, Removal 12, Config 2

(b) 72-00-60-450-008, Installation 12, Config 2

(4) Engine Maintenance Manual:

(a) 73-12-41, Removal/Installation (A1/A5)

(b) 73-12-01, Removal/Installation (D5)

L. Other Publications Affected

V2500 Engine Illustrated Parts Catalogue (IPC) S-V2500-1IA, S-V2500-2IA, S-V2500-3IA, 73-12-41.

M. Interchangeability of Parts

Not affected



2. Material Information

A. Units affected by this Bulletin:

Applicability : For each V2500 engine to incorporate this Bulletin.

The type of equipment affected by this Service Bulletin is listed below for information only:

73-12-41

A5 Models

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
01100	5009913G	1	Pump, fuel LP/HP	5009913F (V99167)	(A)(S1)

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D5 Models

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
01100	5010216G	1	Pump, fuel LP/HP	5010216F (V99167)	(A)(S1)

B. Instructions disposition codes:

(A) New standard of unit will be available from January 2000.

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

NOTE: The unit prices, if shown, are an estimate and they are given for the purpose of planning only.

For actual prices, refer to IAE Price Catalogue or contact IAE's spare parts sales department.



3. Accomplish Instructions

A. Rework Instructions

None

B. Assembly Instructions

The revised LP impeller housing introduced by this Service Bulletin is interchangeable with the existing. Remove and install in accordance with current overhaul procedures and maintenance practices (Engine Manual, 72-00-60, Removal and Installation, Config 2 and Engine Maintenance Manual, 73-12-41, Removal/Installation (A1/A5) and 73-12-01 (D5)).

C. Recording Instructions

- (1) A record of accomplishment is necessary. Refer to Vendor Service Bulletins Hamilton Sunstrand 5010216-73-5 and 5009913-73-6.



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Engine Fuel and Control - Fuel Gear Pump - Introduction of New Boost Pump Housing Assembly

1. Planning Information

A. Effectivity

Hamilton Sundstrand Fuel Gear Pump, model 025847, part number 5010216 series, serial numbers 7001 through 7007, used on IAE V2500-D5 engines.

B. Reason

To introduce a new boost pump housing assembly. The original housing assembly was manufactured using an investment casting process. The new housing assembly is manufactured using a sand cast process. The new housing assemblies will have a rougher surface finish. Pump performance is not affected.

C. Description

The old housing assembly, part number 5009950, may be replaced with new housing assembly, part number 1700696, at the next replacement. This service bulletin provides the instructions necessary to replace the housing assembly, identify the fuel gear pump, and test the fuel gear pump.

D. Compliance

Incorporation of this service bulletin is recommended when the supply of old housing assemblies is depleted.

E. Approval

This service bulletin contains no modification information that revises the approved configuration and therefore does not require Federal Aviation Administration (FAA) or other regulatory agency approval.

F. Manpower

No additional man-hours will be required to incorporate this service bulletin during housing assembly replacement.

G. Material - Cost and Availability

Total estimated price for the replacement housing assembly is \$6,350.00. Replacement housing assemblies are currently available in limited quantities. Initial quantities will be shipped within 15 days after receipt of order.

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H. Tooling - Price and Availability

No tooling other than that required for shop maintenance of the fuel gear pump is required to do this modification.

I. Weight and Balance

The weight of the fuel gear pump will increase by approximately 0.2 pound (0.09 kilogram).

J. Electrical Load Data

Not affected.

K. References

Hamilton Sundstrand Component Maintenance Manual (CMM) 73-18-42, Hamilton Sundstrand Standard Practices Manual (SPM) Bulletin 985, and Hamilton Sundstrand Engineering Change 36700E.

L. Other Publications Affected

Hamilton Sundstrand CMM 73-18-42 will be revised to incorporate this service bulletin.

2. Accomplishment Instructions

A. Disassembly

- (1) Disassemble the fuel gear pump assembly (refer to CMM 73-18-42, DISASSEMBLY) to obtain boost pump housing assembly (260, IPL Figure 1).

B. Assembly

- (1) Assemble the fuel gear pump assembly (refer to CMM 73-18-42, ASSEMBLY) using new boost pump housing assembly 1700696.

C. Identification

- (1) Mark the symbol 73-5 on identification plate (620) (refer to SPM Bulletin 985, ASSEMBLY).
- (2) If the fuel gear pump assembly is part number 5010216F, mark out the letter F and add the letter G (refer to SPM Bulletin 985, ASSEMBLY)

D. Test

- (1) Do a test of the fuel gear pump assembly (refer to CMM 73-18-42).

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3. Material Information

NOTE: Refer to Hamilton Sundstrand CMM 73-18-42 for expendable parts information.

New P/N	Qty Per Unit	Unit List Price (Note 1)	Key Word	Old P/N	Disposition/ Instructions
5010216G Same (Note 2)	RF	Not Applicable	Fuel Gear Pump Assembly	5010216F 5010216B/C/D/E	Modify and identify (Note 3)
1700696	1	\$6,350.00	Boost Pump Housing Assembly	5009950	Remove old, install new

Note 1: Prices noted are valid at the time of original bulletin issue. Refer to the latest catalog for current prices.

Note 2: Refer to paragraph 2.C. for identification instructions.

Note 3: End item interchangeability is not affected.

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Engine Fuel and Control - Fuel Gear Pump - Introduction of New Boost Pump Housing Assembly

1. Planning Information

A. Effectivity

Hamilton Sundstrand Fuel Gear Pump, model 025840, part number 5009913 series, serial numbers 3001 through 3220 and 4001 through 4273, used on IAE V2500-A5 engines.

B. Reason

To introduce a new boost pump housing assembly. The original housing assembly was manufactured using an investment casting process. The new housing assembly is manufactured using a sand cast process. The new housing assemblies will have a rougher surface finish. Pump performance is not affected.

C. Description

The old housing assembly, part number 5009950, may be replaced with new housing assembly, part number 1700696, at the next replacement. This service bulletin provides the instructions necessary to replace the housing assembly, identify the fuel gear pump, and test the fuel gear pump.

D. Compliance

Incorporation of this service bulletin is recommended when the supply of old housing assemblies is depleted.

E. Approval

This service bulletin contains no modification information that revises the approved configuration and therefore does not require Federal Aviation Administration (FAA) or other regulatory agency approval.

F. Manpower

No additional man-hours will be required to incorporate this service bulletin during housing assembly replacement.

G. Material - Cost and Availability

Total estimated price for the replacement housing assembly is \$6,350.00. Replacement housing assemblies are currently available in limited quantities. Initial quantities will be shipped within 15 days after receipt of order.

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H. Tooling - Price and Availability

No tooling other than that required for shop maintenance of the fuel gear pump is required to do this modification.

I. Weight and Balance

The weight of the fuel gear pump will increase by approximately 0.2 pound (0.09 kilogram).

J. Electrical Load Data

Not affected.

K. References

Hamilton Sundstrand Component Maintenance Manual (CMM) 73-18-41, Hamilton Sundstrand Standard Practices Manual (SPM) Bulletin 985, and Hamilton Sundstrand Engineering Change 35164E.

L. Other Publications Affected

Hamilton Sundstrand CMM 73-18-41 will be revised to incorporate this service bulletin.

2. Accomplishment Instructions

A. Disassembly

- (1) Disassemble the fuel gear pump assembly (refer to CMM 73-18-41, DISASSEMBLY) to obtain boost pump housing assembly (230, IPL Figure 1).

B. Assembly

- (1) Assemble the fuel gear pump assembly (refer to CMM 73-18-41, ASSEMBLY) using new boost pump housing assembly 1700696.

C. Identification

- (1) Mark the symbol 73-6 on identification plate (590) (refer to SPM Bulletin 985, ASSEMBLY).
- (2) If the fuel gear pump assembly is part number 5009913F, mark out the letter F and add the letter G (refer to SPM Bulletin 985, ASSEMBLY)

D. Test

- (1) Do a test of the fuel gear pump assembly (refer to CMM 73-18-41).

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3. Material Information

NOTE: Refer to Hamilton Sundstrand CMM 73-18-41 for expendable parts information.

New P/N	Qty Per Unit	Unit List Price (Note 1)	Key Word	Old P/N	Disposition/ Instructions
5009913G Same (Note 2)	RF	Not Applicable	Fuel Gear Pump Assembly	5009913F 5009913B/C/D/E	Modify and identify (Note 3)
1700696	1	\$6,350.00	Boost Pump Housing Assembly	5009950	Remove old, install new

Note 1: Prices noted are valid at the time of original bulletin issue. Refer to the latest catalog for current prices.

Note 2: Refer to paragraph 2.C. for identification instructions.

Note 3: End item interchangeability is not affected.

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