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

International Aero Engines

628 Hebron Avenue, Suite 400
Glastonbury, CT 06033, USA.
Tel: +1 (860) 368-3823
Fax: +1 (860) 755-6876

DATE: Oct. 9/12

V2500-A1/A5/D5 SERIES PROPULSION SYSTEM NON-MODIFICATION SERVICE BULLETIN

This document transmits the Revision 2 of Non-Modification Service Bulletin V2500-ENG-73-0213.

Document History

Non-Modification Service Bulletin Revision Status

Initial Issue	Jul.19/10.
Revision 1	Jan.31/12.

Non-Modification Service Bulletin Revision 2

Remove	Incorporate	Reason for change
All pages of the Non-Modification Service Bulletin.	Pages 1 to 7 of the Non-Modification Service Bulletin.	To update the Effectivity. To update the Material Information. To update the Accomplishment Instructions.
All pages of the Supplement.	Page 1 of the Supplement (Added Data).	To add references.

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
If any have not been received please advise IAE International Aero Engines AG

All pages of the Hamilton Sundstrand Service Bulletin.	Hamilton Sundstrand Service Bulletin EEC150-20-73-35.	No change.
All pages of the Hamilton Sundstrand Service Bulletin.	Hamilton Sundstrand Service Bulletin EEC150-1-73-38.	Revision 1.

SERVICE BULLETIN

NON-MODIFICATION SERVICE BULLETIN - ENGINE FUEL AND CONTROL - EEC150-1 AND EEC150-20 ELECTRONIC ENGINE CONTROL (EEC) WITH ELECTRICALLY ERASABLE PROGRAMMABLE READ-ONLY MEMORY (EEPROM) WEAR OUT

1. Planning Information

A. Effectivity Data

(1) Airbus A319

R (a) V2522-A5, V2524-A5, V2527M-A5

For Engines With The Following EEC Part Numbers:

2A3840, 2A3898, 2A3909, 2A3910, 2A4028, 2A4029, 2A4253 or 2A4254

(2) Airbus A320

(a) V2500-A1

For Engines With The Following EEC Part Numbers:

2A3418, 2A3419, 2A3420, 2A3422, 2A3905, 2A3906, 2A3907, 2A3908, 2A3417 or 2A3902

R (b) V2527-A5, V2527E-A5

For Engines With The Following EEC Part Numbers:

2A3840, 2A3898, 2A3909, 2A3910, 2A4028, 2A4029, 2A4253 or 2A4254

(3) Airbus A321

R (a) V2530-A5, V2533-A5

For Engines With The Following EEC Part Numbers:

2A3840, 2A3898, 2A3909, 2A3910, 2A4028, 2A4029, 2A4253 or 2A4254

(4) Boeing MD-90

(a) V2525-D5, V2528-D5

For Engines With The Following EEC Part Numbers:

2A3920 or 2A3922

B. Concurrent Requirements

There are no concurrent requirements.

C. Description

The EEC is disassembled and the EEPROM parts on both processor modules are examined for EEPROM type. If a part is identified as a 10,000 write cycle endurance part, it will be replaced with a 100,000 write cycle endurance part. EECs returned for a failure associated with the fault EEPROMs will have all EEPROM parts replaced regardless of write cycle endurance capability.

D. Compliance

Category VB

Vendor Bulletin - See Reference 3, Hamilton Sundstrand Service Bulletin No. EEC150-20-73-35 for Compliance Category Code.

Vendor Bulletin - See Reference 4, Hamilton Sundstrand Service Bulletin No. EEC150-1-73-38 for Compliance Category Code.

NOTE: Step (3) in the Accomplishment Instructions determines the details for the incorporation of this Service Bulletin.

E. Approval

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 models given.

F. Manpower

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

Venue	Estimated Man-hours
In Service:	Not Applicable

At Overhaul:

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

(1) To determine the EEC hours:

5 minutes

(2) To remove the EEC for modification:

15 minutes

(3) To install the EEC:

30 minutes

(4) Total:

50 minutes.

G. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.

(3) Datum

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

H. Electrical Load Data

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

I. Software Accomplishment Summary

Not Applicable.

J. References

(1) V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA and S-V2500-7IB), Chapter/Section 73-22-34.

(2) V2500 Engine Illustrated Parts Catalogs (S-V2500-2SA, S-V2500-2SB, S-V2500-5SA, S-V2500-5SB, S-V2500-6SA, S-V2500-6SB, S-V2500-7SA, S-V2500-7SB), Chapter/Section 73-22-34.

R (3) Hamilton Sundstrand Service Bulletin No. EEC150-20-73-35; EEC150-20
R Electronic Engine Control - E2 Wearout

(4) Hamilton Sundstrand Service Bulletin No. EEC150-1-73-38; EEC150-1 Electronic Engine Control - E2 Wearout

(5) Internal Reference No: Engineering Change 09VC091.

(6) Internal Reference No: Engineering Authority 11VC148.

K. Other Publications Affected

None.

L. Interchangeability of Parts

The modified part is fully and freely interchangeable with unmodified parts.

M. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

2. Material Information

A. Tooling - Price and Availability

Special tooling is not required to accomplish this Service Bulletin.

B. Industry Support Program

Not Applicable.

C. The material data that follows is for each engine.

(1) The kit required consists of the following parts:

None.

(2) Parts to be reworked:

All EEC150-1 and EEC150-20 units that qualify for this modification.

(3) New production parts:

None.

(4) Redundant parts:

Not applicable.

(5) Instruction disposition codes:

(a) Part number not changed with this modification.

D. Modification and Spares Information

R See Reference 3, Service Bulletin No. EEC150-20-73-35 and Reference 4, Service
R Bulletin No. EEC150-1-73-38 for estimated prices. The Estimate of Unit Price is only for planning purposes and does not constitute a firm quotation. Contact Hamilton Sundstrand for firm quotations.

R Spare Parts Availability

R (I) This is the IAE Part Number.

R (V) This is the Hamilton Sundstrand Part Number.

3. Accomplishment Instructions

(1) Check the EEC data plate to see if it has been marked with "SB35", or "SB38". If either SB is marked on the data plate, no further action is required.

R NOTE: Refer to Reference 3, Hamilton Sundstrand Service Bulletin No.
R EEC150-20-73-35; EEC150-20 Electronic Engine Control - E2 Wearout
R and Reference 4, Hamilton Sundstrand Service Bulletin No.
R EEC150-1-73-38; EEC150-1 Electronic Engine Control - E2 Wearout.

(2) Determine EEC hours by either of the following methods:

(a) Use Estimation: Multiply fleet hours per year by fraction of a year that the unit was in service.

(b) Use the Multi-Purpose Control and Display Unit (MCDU) Readout in Cockpit: From the FADEC main menu, access the TROUBLE SHOOTING page and then the AIRCRAFT DATA page. Read the EEC elapsed time displayed in hours. Note that for EEC150-1 the aircraft data page is titled AIRCRAFT DATA & EEC P/N.

(3) If the EEC has accumulated 30,000 hours of service or more, and the EEC has been removed from the engine for any overhaul reasons, then the EEPROM of the EEC should be replaced the next time the EEC is at a repair shop that has approval to perform component level repairs.

NOTE: It is not required to remove the EEC from the engine solely to incorporate this Service Bulletin.

(4) Send the EEC to a fully authorized repair facility to perform the rework. This Service Bulletin will be done at charge to the operator and units should be returned to one of the following addresses:

NOTE: The designation by IAE of an authorized rework vendor indicates that the vendor has demonstrated the necessary capability to carry out the work. However, IAE makes no warranties or representations concerning the qualifications or quality standards of the vendors to carry out the rework, and accepts no responsibility whatsoever for any work that may be carried out by a rework vendor, other than IAE. Authorized rework vendors do not act as agents or representatives of IAE.

Hamilton Sundstrand Corporation

A United Technologies Company

One Hamilton Road

Dock W

Windsor Locks, CT 06096-1010

USA

or

Hamilton Sundstrand - Corporation

A United Technologies Company

Worldwide Repair - Maastricht

Horsteweg 7

6199 AC Maastricht Airport

The Netherlands

R (a) For EEC150-20, see Reference 3, Hamilton Sundstrand Service Bulletin
R No. EEC150-20-73-35 for the purchase order to perform this Service
R Bulletin.

(b) For EEC150-1, see Reference 4, Hamilton Sundstrand Service Bulletin No. EEC150-1-73-38 for the purchase order to perform this Service Bulletin.

(5) Recording Instructions

(a) A record of accomplishment is required.

International Aero Engines

SERVICE BULLETIN

NON-MODIFICATION SERVICE BULLETIN - ENGINE FUEL AND CONTROL - EEC150-1 AND EEC150-20 ELECTRONIC ENGINE CONTROL (EEC) WITH ELECTRICALLY ERASABLE PROGRAMMABLE READ-ONLY MEMORY (EEPROM) WEAR OUT

Added Data

Internal Reference Information

	Revision No.	Reference Document	Origination
	Original	IENO9VCO91	DL/RCW
	1	EA11VC148	DTL/JDH
R	2	EA11VC148	DTL/CMS

R Reference 3, Hamilton Sundstrand Service Bulletin No. EEC150-20-73-35 and

R Reference 4, Hamilton Sundstrand Service Bulletin No. EEC150-1-73-38, follow:

Hamilton Sundstrand
A United Technologies Company

SERVICE BULLETIN

ENGINE FUEL AND FUEL CONTROL - EEC150-20 ELECTRONIC ENGINE CONTROL - E2 WEAR OUT

REVISIONS

Revision 1

This revision changes adds the following statement to the end of the solution statement on page 3, “once accumulated 30,000 hours of service. See ACCOMPLISHMENT INSTRUCTIONS to determine EEC hours.” This revision adds the Pratt & Whitney reference number to the page 4. This revision changes references to ”Xicor” to “vendor” and adds new part prefix X28HC64 to the ACCOMPLISHMENT INSTRUCTIONS on page 6.

Units previously modified according to this bulletin do not require remodification according to this bulletin revision.

This bulletin has been reproduced in its entirety. Discard the bulletin you now have and replace it with this copy. The tabulation below is provided for record keeping and traceability of bulletin issues.

Issue	Date
Basic	Mar 17/09
Revision 1	May 17/11

1. Planning Information

A. Effectivity

Table 1. Effective Parts

All Hamilton Sundstrand EEC150-20 Electronic Controls Incorporating Part Number:
808050-X-YYY

NOTE: The EEC150-20 is used Boeing MD-90, Airbus A319, A320, and A321 aircraft that use the IAE V2500-D5 and V2500-A5 engines. “X” identifies all available hardware configurations. “YYY” identifies all available software configurations.

(1) Parts shown in Table 2 have been inspected and do not contain the suspect EEPROMs. These parts were processed prior to release of this Service Bulletin and require the identification markings in the ACCOMPLISHMENT INSTRUCTIONS of this Service Bulletin.

(a) Refer to Table 2 for compliant EEC serial numbers.

Table 2. EEC Compliance

Compliant Serial Numbers:		
2520-0761	2520-0038	2520-0912

B. Concurrent Requirements

(1) None

C. Reason

(1) Problem

(a) Unscheduled EEC removals and flight delays due to EEC false Overheat faults. These faults require EEC replacement since the fault cannot be cleared.

(2) Cause

(a) Unexpected failure of fault EEPROMs U1106 and U1107 of EECs with more than 30,000 hours since the EEPROM was last replaced.

(3) Solution

(a) Replace the fault EEPROMs U1106 and U1107 once accumulated 30,000 hours of service. See ACCOMPLISHMENT INSTRUCTIONS to determine EEC hours.

(4) Substantiation

(a) Substantiated by Hamilton Sundstrand Engineering.

D. Description

(1) EEC150-20 is disassembled, U1106 and U1107 on both processor modules are examined for EEPROM type. If the EEPROM type are identified as 10,000 write cycle endurance parts, they will be replaced with 100,000 write cycle endurance parts. EECs returned for failure associated with fault EEPROM will have parts replaced regardless of write cycle endurance capability 10,000 or 100,000 writes.

E. Compliance

(1) Code 4 -Do this Service Bulletin the first time the EEC150-20 is at a maintenance base that can do the procedures regardless of other planned maintenance action.

F. Approval

(1) The part number changes and/or 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 EEC150-20 Electronic Engine Controls listed.

G. Manpower

(1) Approximately 2.0 man-hours are necessary to perform the Service Bulletin procedures. This estimate does not include time required to perform functional tests.

H. Material - Cost and Availability

(1) None

I. Weight and Balance

(1) None

J. Electrical Load Data

(1) Not affected.

K. Software Accomplishment Summary

(1) None

L. References

(1) Hamilton Sundstrand Standard Practices Manual 20-00-02

(2) Hamilton Sundstrand Component Maintenance Manual CMM 73-28-01

(3) Hamilton Sundstrand Illustrated Parts Catalog 73-28-01

(4) Pratt & Whitney Reference Number: EA 11VC148

M. Other Publications Affected

(1) Illustrated Parts Catalog 73-28-01

N. Interchangeability or Intermixability of Parts

(1) None

2. Material Information

A. Material - Price and Availability

(1) Not applicable

B. Industry Support Information

(1) You may perform this Service Bulletin locally. This Service Bulletin will be done at charge to the operator for units that are returned to the following addresses.

Hamilton Sundstrand Corporation
A United Technologies Company
One Hamilton Road
Dock W
Windsor Locks, CT 06096-1010
USA

FAA Repair Station License Number SI3R842L

OR

Hamilton Sundstrand
Customer Support Center - Maastricht
Horsterweg 7
6199 AC Maastricht Airport
The Netherlands

FAA Repair Station License Number CW5Y794M

(2) The purchase order to perform this Service Bulletin must refer to Hamilton Sundstrand Service Bulletin number EEC150-20-73-35.

(3) Material to be Purchased

(a) This Service Bulletin change will use parts in the list for each EEC150-20 unit that is changed.

(b) Any parts that usually are discarded when you disassemble the EEC150-20 unit may not be listed.

(c) In the list of parts for this change, the "Key Word" is the name of the part.

(d) In the list of parts for this change, the "instruction codes" tell you what to do with the parts. A short list under the list of parts tells you about the instruction codes that are used in the list.

(e) The prices that are shown are estimates for one part. When you buy the parts, the prices may be different. Send requests for parts to:

Hamilton Sundstrand Corporation
A United Technologies Company
Attention: Manager, Commercial Spares Administration
Mail Stop: 236-6
P.O. Box 7002
4747 Harrison Avenue
Rockford, IL 61125-7002

Facsimile: (815) 226-2624

Table 3. Material to be Purchased

New PN	Qty	Estimated Price	Key Word	PN Before this SB	Instruction Code
5R8077-070-0001	4	$464.00	EEPROM	5R8077-070-0001	A

Instruction Code A: Discard the old part.

3. Accomplishment Instructions

A. The user should obtain the material safety data sheets [Occupational Safety and Health Act (OSHA) Form 20 or equivalent] from the manufacturers or suppliers of materials to be used. The user must become completely familiar with the manufacturer/supplier information and adhere to the procedures, recommendations, warnings, and cautions of the manufacturer/supplier for the safe use, handling, storage, and disposal of these materials. The user should also read the long version of the warnings contained in this Service Bulletin. The long version warnings are contained in Hamilton Sundstrand Warnings Registry 341-006 available free of charge to all organizations that are on distribution for this Service Bulletin. The Warnings Registry 341-006 is also available at www.hsvas.com.

CAUTION: READ REPAIR GENERAL IN CMM 73-28-01 BEFORE YOU TOUCH THE EEC150-20 ELECTRONIC ENGINE CONTROL OR ITS COMPONENTS. OBEY THE INSTRUCTIONS IN THE 20-00-02 STANDARD ELECTRONIC PRACTICES MANUAL WHEN YOU TOUCH THE EEC150-20 ELECTRONIC ENGINE CONTROL OR ITS COMPONENTS. IT IS AN ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICE. IT CAN BE DAMAGED BY ELECTROSTATIC DISCHARGE, WHICH CAN BE TRANSMITTED BY TOUCH.

NOTE: Refer to the 20-00-02 Standard Electronic Practices Manual to do the procedures unless otherwise noted.

NOTE: EEC hours can be estimated by multiplying fleet hours per year by calendar time in service.

B. If the EEC serial number is listed in Table 2 proceed to step 3.G. If the EEC serial number is not listed in Table 2 and the EEC has over 30,000 hours continue to step 3.C.

C. Refer to the DISASSEMBLY section of CMM 73-28-01 to remove the Channel A Processor/ Input circuit card assembly and perform the following rework:

NOTE: The Component Maintenance Manual refers to microcircuit U106 and microcircuit U107. The Illustrated Parts Catalog (IPC) 73-28-01 refers to microcircuit U106 as microcircuit U1106 and refers to microcircuit U107 as microcircuit U1107. The IPC reference is being used to specify the replacement component.

(1) Refer to the Illustrated Parts Catalog (IPC) 73-28-01 to locate and examine U1106 and U1107 for vendor part prefix X2864A or X2864B. If it has prefix X2864A or X2864B, replace both microcircuits in channel with vendor parts prefixed with X28C64 or X28HC64 and continue to step 3.C.(2). If U1106 and U1107 do not have prefix X2864A or X2864B proceed to step 3.C.(6).

(2) Remove microcircuits U1106 and U1107 located on the component side of the circuit card assembly in accordance with section VII, 20-00-02.

(3) Clean the rework area in accordance with section III, 20-00-02. Refer to section X, Task 1 of 20-00-02 to remove any residual conformal coating.

(4) Install microcircuits U1106 and U1107 with two new EEPROMs part number 5R8077-070-0001 in the locations previously removed in accordance with section VII, 20-00-02.

(5) Apply conformal coating in the reworked area on the component side of the Processor/ Input circuit card assembly in accordance with section X, Task 1 of 20-00-02.

(6) Reidentify the Processor/Input circuit card assembly by marking “SB35” on the circuit card assembly in accordance with section X, Task 7 of 20-00-02.

D. Install the Processor/Input circuit card assembly back into the EEC150-20 in accordance with the ASSEMBLY section of CMM 73-28-01.

E. Repeat step 3.C. and 3.D. for the Channel B Processor/Input circuit card assembly.

F. Test the EEC150-20 in accordance with the TESTING and TROUBLESHOOTING section of CMM 73-28-01.

G. To show that this Service Bulletin was done, add “SB35” in the MOD DATA section of the unit identification plate in accordance with section VI, Task 1 of 20-00-02

Hamilton Sundstrand
A United Technologies Company

TO ALL HOLDERS OF HAMILTON SUNDSTRAND
SERVICE BULLETIN EEC150-1-73-38

APPLICABILITY: Airbus A320 aircraft

THIS SHEET TRANSMITS REVISION NO. 1 DATE May 5/09

HIGHLIGHTS

Pages that we revised are shown below with descriptions of the changes. Please replace your Service Bulletin, in its entirety, with this new Service Bulletin.

Page	Description of Change
2	Added the following statement to the end of the solution statement, “once accumulated 30,000 hours of service. See accomplishment instructions to determine EEC hours.”

THIS IS A BLANK PAGE

Hamilton Sundstrand
A United Technologies Company

SERVICE BULLETIN

ENGINE FUEL AND CONTROL - EEC150-1 ELECTRONIC ENGINE CONTROL - E2 WEAR OUT

1. Planning Information

A. Effectivity

Table 1. Effective Parts

All Hamilton Sundstrand EEC150-1 Electronic Controls Incorporating Part Number:
798300-X-YYY

NOTE: The EEC150-1 is used on Airbus A320 aircraft that use the IAE V2500-A1 engine. "X" identifies all available hardware configurations. "YYY" identifies all available software configurations.

(1) Parts shown in Table 2 have been inspected and do not contain the suspect EEPROMs. These parts were processed prior to release of this Service Bulletin and require the identification markings in the Accomplishment Instructions of this Service Bulletin.

(a) Refer to Table 2 for compliant EEC serial numbers.

Table 2. EEC Compliance

Compliant Serial Numbers:					
2500-0004	2500-0006	2500-0008	2500-0009	2500-0026	2500-0034
2500-0036	2500-0038	2500-0040	2500-0042	2500-0049	2500-0053
2500-0057	2500-0061	2500-0069	2500-0072	2500-0081	2500-0083
2500-0094	2500-0100	2500-0101	2500-0102	2500-0106	2500-0108
2500-0115	2500-0118	2500-0131	2500-0138	2500-0150	2500-0153
2500-0159	2500-0164	2500-0166	2500-0169	2500-0184	2500-0193
2500-0203	2500-0206	2500-0209	2500-0211	2500-0215	2500-0220
2500-0223	2500-0227	2500-0238	2500-0240	2500-0251	2500-0263
2500-0268	2500-0274	2500-0275	2500-0277	2500-0286	2500-0287
2500-0294	2500-0295	2500-0299	2500-0300	2500-0302	2500-0303
2500-0305	2500-0319	2500-0320	2500-0324	2500-0325	2500-0328
2500-0335	2500-0340	2500-0344	2500-0347	2500-0352	2500-0386
2500-0392	2500-0393	2500-0396	2500-0397	2500-0406	2500-0425
2500-0430					

B. Concurrent Requirements

(1) None

C. Reason

(1) Problem

(a) Unscheduled EEC removals and flight delays due to EEC false Overheat faults. These faults require EEC replacement since the fault cannot be cleared.

(2) Cause

(a) Unexpected failure of fault EEPROMs U106 and U107 of EECs with more than 30,000 hours since the EEPROM was last replaced.

(3) Solution

(a) Replace the fault EEPROMs U106 and U107 once accumulated 30,000 hours of service. See accomplishment instructions to determine EEC hours.

(4) Substantiation

(a) Substantiated by Hamilton Sundstrand Engineering.

D. Description

(1) EEC150-1 is disassembled, U106 and U107 on both processor modules are examined for EEPROM type. If the EEPROM type are identified as 10,000 write cycle endurance parts, they will be replaced with 100,000 write cycle endurance parts. EECs returned for failure associated with fault EEPROM will have parts replaced regardless of write cycle endurance capability 10,000 or 100,000 writes.

E. Compliance

(1) Code 4 -Do this Service Bulletin the first time the EEC150-1 is at a maintenance base that can do the procedures regardless of other planned maintenance action.

F. Approval

(1) The part number changes and/or 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 EEC150-1 Electronic Engine Controls listed.

G. Manpower

(1) Approximately 2.0 man-hours are necessary to perform the Service Bulletin procedures. This estimate does not include time required to perform functional tests.

H. Material - Cost and Availability

(1) None

I. Weight and Balance

(1) None

J. Electrical Load Data

(1) Not affected

K. Software Accomplishment Summary

(1) None

L. References

(1) 20-00-02 Standard Electronic Practices Manual (SEPM)

(2) Component Maintenance Manual CMM 73-22-34

M. Other Publications Affected

(1) Illustrated Parts Catalog 73-22-34

N. Interchangeability or Intermixability of Parts

(1) None

2. Material Information

A. Material - Price and Availability

(1) Not applicable

B. Industry Support Information

(1) You may perform this Service Bulletin locally. This Service Bulletin will be done at charge to the operator for units that are returned to the following addresses.

Hamilton Sundstrand Corporation
A United Technologies Company
One Hamilton Road
Dock W
Windsor Locks, CT 06096-1010
USA

FAA Repair Station License Number SI3R842L

OR

Hamilton Sundstrand
Customer Support Center - Maastricht
Horsterweg 7
6199 AC Maastricht Airport
The Netherlands

FAA Repair Station License Number CW5Y794M

(2) The purchase order to perform this Service Bulletin must refer to Hamilton Sundstrand Service Bulletin number EEC150-1-73-38.

(3) Material to be Purchased

(a) This Service Bulletin change will use parts in the list for each EEC150-1 unit that is changed.

(b) Any parts that usually are discarded when you disassemble the EEC150-1 unit may not be listed.

(c) In the list of parts for this change, the “Key Word” is the name of the part.

(d) In the list of parts for this change, the “instruction codes” tell you what to do with the parts. A short list under the list of parts tells you about the instruction codes that are used in the list.

(e) The prices that are shown are estimates for one part. When you buy the parts, the prices may be different. Send requests for parts to:

Hamilton Sundstrand Corporation
A United Technologies Company
Attention: Manager, Commercial Spares Administration
Mail Stop: 236-6
P.O. Box 7002
4747 Harrison Avenue
Rockford, IL 61125-7002

Facsimile: (815) 226-2624

Table 3. Material to be Purchased

New PN	Qty	Estimated Price	Key Word	PN Before this SB	Instruction Code
4P8061-237-0001	4	$29.60	EEPROM	5R8077-051-0003	A, B

Instruction Code A: Discard the old part.

Instruction Code B: Replace with 4P8061-237-0001 or part number 5R8077-051-0003 for EEPROM X28C64 only. Part number 5R8077-051-0003 is an alternate part.

3. Accomplishment Instructions

A. The user should obtain the material safety data sheets [Occupational Safety and Health Act (OSHA) Form 20 or equivalent] from the manufacturers or suppliers of materials to be used. The user must become completely familiar with the manufacturer/supplier information and adhere to the procedures, recommendations, warnings, and cautions of the manufacturer/supplier for the safe use, handling, storage, and disposal of these materials. The user should also read the long version of the warnings contained in this Service Bulletin. The long version warnings are contained in Hamilton Sundstrand Warnings Registry 341-006 available free of charge to all organizations that are on distribution for this Service Bulletin. The Warnings Registry 341-006 is also available at www.hsvas.com.

CAUTION: READ REPAIR GENERAL IN CMM 73-22-34 BEFORE YOU TOUCH THE EEC150-1 ELECTRONIC ENGINE CONTROL. OBEY THE INSTRUCTIONS IN THE 20-00-02 STANDARD ELECTRONIC PRACTICES MANUAL WHEN YOU TOUCH THE EEC150-1 ELECTRONIC ENGINE CONTROL OR ITS COMPONENTS. IT IS AN ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICE. IT CAN BE DAMAGED BY ELECTROSTATIC DISCHARGE, WHICH CAN BE TRANSMITTED BY TOUCH.

NOTE: Refer to the 20-00-02 Standard Electronic Practices Manual to do the procedures unless otherwise noted.

NOTE: EEC hours can be estimated by multiplying fleet hours per year by calendar time in service.

B. If the EEC serial number is listed in Table 2 proceed to step 3.G. If the EEC serial number is not listed in Table 2 and the EEC has over 30,000 hours continue to step 3.C.

C. Refer to the DISASSEMBLY section of CMM 73-22-34 to remove the Channel A Processor/Input circuit card assembly and perform the following rework:

(1) Examine U106 and U107 for Xicor part prefix X2864A or X2864B. If it has prefix X2864A or X2864B, replace both microcircuits in channel with parts identified in Table 3 and continue to step 3.C.(2). If U106 and U107 do not have prefix X2864A or X2864B proceed to step 3.C.(6).

(2) Remove microcircuits U106 and U107 located on the component side of the circuit card assembly in accordance with section VII, 20-00-02.

(3) Clean the rework area in accordance with section III, 20-00-02. Refer to section X, Task 1 of 20-00-02 to remove any residual conformal coating.

(4) Install new microcircuits U106 and U107 with two new EEPROMs part number 4P8061-237-0001 in the locations previously removed in accordance with section VII, 20-00-02.

(5) Apply conformal coating in the reworked area on the component side of the Processor/Input circuit card assembly in accordance with section X, Task 1 of 20-00-02.

(6) Reidentify the Processor/Input circuit card assembly by marking “SB38” on the circuit card assembly in accordance with section X, Task 7 of 20-00-02.

D. Install the Processor/Input circuit card assembly back into the EEC150-1 in accordance with the ASSEMBLY section of CMM 73-22-34.

E. Repeat steps 3.C. and 3.D. for the Channel B Processor/Input circuit card assembly.

F. Test the EEC150-1 in accordance with the TESTING and TROUBLESHOOTING section of CMM 73-22-34

G. To show that this Service Bulletin was done, add “SB38” in the MOD DATA section of the unit identification plate in accordance with section VI, Task 1 of 20-00-02.

SERVICE BULLETIN FEEDBACK FORM

Please use this form to give feedback on the quality of this Service Bulletin. The input you provide will be used to analyse areas of improvement and to take action to further improve on the quality of our Service Bulletins.

We thank you for the time you spent in completing this form.

Please rate on a scale of 1 to 5, with 5 being the highest score:

- General quality rating of this Service Bulletin	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- Quality rating of the Accomplishment Instructions	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- Quality rating of the Illustration	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- Is this Service Bulletin easy to understand ?	☐ Yes ☐ No

If you have had difficulties to perform this Service Bulletin please quote below the area(s) and give a short description of the issue:

Planning Information Section:		Material Information Section:	Accomplishment Instruction Section:
☐ 1.A.	☐ 1.I.	☐ 2.A.	☐ General
☐ 1.B.	☐ 1.J.	☐ 2.B.	☐ Get Access
☐ 1.C.	☐ 1.K.	☐ 2.C.	☐ Removal/Installation
☐ 1.D.	☐ 1.L.	☐ 2.D.	☐ Inspection
☐ 1.E.	☐ 1.M.	☐ 2.E.	☐ Test
☐ 1.F.	☐ 1.N.	☐ 2.F.	☐ Close the Access
☐ 1.G.	☐ 1.O.		☐ Log Book Entry
☐ 1.H	☐ 1.P.		

Explanatory notes:

Operator:	Overhaul Site:
Name/Title:	Date:

Please send the completed Service Bulletin Feedback Form to IAE, Customer Support.
Email: GPIAECUSTCOM@IAEV2500.COM