CT7-2E1 SERVICE BULLETIN - 73-0008 R00

Revised: 03 /13/2024

SB 73-0008 R00 ENGINE FUEL AND CONTROL - ELECTRONIC ENGINE CONTROL (73-00-00) - EECU CONNECTOR RTV ADDITION AND COVER INSPECTION

Issued: 03 /13/2024

GE Designated: -CONFIDENTIAL-

1. PLANNING INFORMATION

A. Effectivity

* * * CT7-2E1

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

B. Description

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

C. Compliance

Category 6

Do when the part is routed for repair.

Impact F

Implement as deemed necessary per the Service Bulletin category.

D. Concurrent Requirements

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

E. Reason

(1) Objective:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

(2) Condition:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

(3) Cause:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

(4) Improvement:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

(5) Substantiation:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

F. Approval

This Service Bulletin contains no modification information that revises the approved configuration and therefore does not require FAA or Regulatory approval.

G. Manpower

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

H. Weight and Balance

Weight and balance are not changed.

I. References (Use the latest version of these documents)

GEK 112027, CT7-2E1 Electronic Engine Control Unit (EECU) Component Maintenance Manual (CMM) 73-21-95

GENERAL PRACTICES MANUAL (GPM), FADEC International ACS 12865

J. Publications Affected

None.

K. Interchangeability

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

L. Software Accomplishment Summary

Not applicable.

2. MATERIAL INFORMATION

A. Material - Price and Availability

(1) Parts necessary to do this Service Bulletin:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

(2) Other Spare Parts:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

(3) Consumables:

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

B. Industry Support Information

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

C. Configuration Chart

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

D. Parts Disposition

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

E. Tooling - Price and Availability

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

3. ACCOMPLISHMENT INSTRUCTIONS

A. General

Refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

4. APPENDIX - A

VENDOR SERVICE BULLETIN SUMMARY TABLE

Vendor Service Bulletin Title:	ENGINE FUEL AND CONTROL - ELECTRONIC ENGINE CONTROL (73-00-00) - EECU CONNECTOR RTV ADDITION AND COVER INSPECTION		
GE Service Bulletin Number:	CT7-2E1 S/B 73-0008, Revision 0		
Supplier Service Bulletin Number:	CT7-2E1-73-001	Vendor:	BAE SYSTEMS
Category:	6	Vendor CAGE Code:	89954
Component Maintenance Manual (CMM):	73-21-95	CMM CAGE Code:	89954

PARTS AFFECTED

New GE Part Number	Old GE Part Number	New Vendor Part Number	Old Vendor Part Number	Part Name
--	5158T32P03	--	115E3518G3	Electronic Engine Control (EECU)

NOTE: For interchangeability and/or material support refer to the attached BAE SYSTEMS Service Bulletin CT7-2E1-73-001 (latest revision).

BAE SYSTEMS

TO: Holders of CT7-2E1 FADEC, Engine Control Unit.

FROM: BAE Systems
CAGE: 89954
ILS/Product Support
1098 Clark Street
Endicott, NY 13760 USA
Web: http://www.baesystems-ps.com/customersupport

SUBJECT: ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection CT7-2E1-73-001, Revision 0, dated Mar 04/2024

The subject Service Bulletin is attached to this letter of transmittal.

SUMMARY: This Service Bulletin gives procedures for the application of RTV to Front Panel Assembly (FPA) CCA to protect electrical connector pin fields from Foreign Object Debris and to check the EECU cover for flatness deviation.

Please direct any questions or comments to the address above.

BAE SYSTEMS

SERVICE BULLETIN

ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection

1. PLANNING INFORMATION.

A. Effectivity.

This Service Bulletin applies to the following CT7 - 2E1 Electronic Engine Control Units (EECUs):

BAE SYSTEMS PN	GE PN	SERIAL NUMBER RANGE
115E3518G3	5158T32P03	LMDA5000 to LMDA5364 (Cover Level) LMDA5000 to LMDA5360 (FPA Level)

NOTE: The effectivity listed is based on the best available data.

NOTE: EEC Serial Number Prefix may start with and “E” (EMDA5XXX)

B. Reason.

(1) Objective.

Provide Foreign Object Debris (FOD) protection of the exposed J1, E1, J2 and E3 connector pin fields and check cover flatness.

(2) Condition.

FOD from the EECU Cover was discovered within the pin fields of the J1 connector on a returned unit. Some units have covers with excess deformation.

(3) Cause.

The pin fields of the J1, E1, J2 and E3 connectors of the FPA are inaccessible and shielded from the spray application of conformal coating by the connector flanges and connector mounting plates. Cover manufacture produced covers with excessive deformation.

(4) Improvement.

RTV is used to seal and protect pin field areas where conformal coating cannot be applied. New cover conforms to allowable flatness standard.

(5) Substantiation.

The application of RTV along the entire exterior and interior perimeter of the mounting plates and/or PWB will protect the connector pin fields and provide mechanical isolation improvement against FOD. Conforming covers being utilized.

C. Description.

This Service Bulletin provides procedures to apply a bead of RTV along the entire exterior and interior perimeter of the mounting plates and/or PWB for FPA J1, E1, J2 and E3 connectors, and to check the EECU Front Panel Assembly cover for flatness deviation.

D. Compliance.

(1) Technical Compliance.

Category 6.

Do when the part is routed for repair.

(2) Program Compliance.

There are no labor or material allowances.

E. Approval.

This Service Bulletin with the PNs listed in the Effectivity Paragraph 1.A., is accepted by GE. GE has traceability to FAA Engineering for acceptance of this Service Bulletin.

F. Manpower.

(1) You will need approximately 3.0 man-hours to complete the Service Bulletin.

(2) If you do not have the capability, or you want the Service Bulletin to be done by other authorized personnel, return the affected unit and a Purchase Order with the number of this Service Bulletin to a substantiated repair facility. It can be sent to the following address:

BAE Systems
4250 Airport Expressway
Fort Wayne, IN 46809 USA
Attn: Service Center

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G. Material.

None.

H. Tooling.

Tool Name	Part Number	Suggested Source
Vernier Height Gauge, 0-24 in.	Starrett 755 or equivalent	Commercial
Dial Test Indicator, 0.060 Range, 0.0005 in. Dial Reading	Interapid 312B-1V or equivalent	Commercial
Block, Leveling, (4 ea.) (1 in. X 2 in. X 3 in.)	N/A	N/A

I. Weight and Balance.

Weight and balance are not affected.

J. References.

CT7-2E1 SB 73-0008

EECU Component Maintenance Manual (CMM) 73-21-95

GENERAL PRACTICES MANUAL (GPM), FADEC International ACS 12865

CR 417712

CR 419612

K. Publications Affected.

None.

L. Previous Modifications.

None.

2. ACCOMPLISHMENT INSTRUCTIONS.

A. Equipment Protection.

CAUTION: SUBASSEMBLIES OF THE EQUIPMENT CAN CONTAIN ESDS DEVICES (MICROCIRCUITS, SEMICONDUCTORS, AND FILM RESISTORS) THAT ARE SENSITIVE TO VOLTAGES MADE BY ELECTROSTATIC DISCHARGE. OBEY ESDS PRECAUTIONS WHEN YOU HANDLE SUBASSEMBLIES THAT HAVE THE ESD SYMBOL. THESE PRECAUTIONS ARE APPLICABLE TO THE FULL SUBASSEMBLY WHICH CONTAINS ESDS DEVICES.

WHEN ESDS SUBASSEMBLIES ARE NOT INSTALLED IN THE UNIT, THEY MUST BE KEPT OR MOVED IN MATERIALS THAT ARE ELECTRICALLY CONDUCTIVE, AND MUST NOT BE PUT IN NON-CONDUCTIVE PLASTIC BAGS. STATIC SHIELD BAGS, OR THEIR EQUIVALENT, ARE THE CORRECT PROTECTIVE MATERIALS TO KEEP OR MOVE SUBASSEMBLIES. REFER TO THE GENERAL PRACTICES MANUAL, CHAPTER 73-60-00, FOR SPECIAL PROCEDURES FOR ESDS SUBASSEMBLIES.

B. Incoming Inspections.

(1) Do this Service Bulletin if the PN and SN of the EECU is listed in Effectivity, Paragraph 1.A. and Service Bulletin Number 73-0008 is not identified on the unit cover.

(2) Do not perform this Service Bulletin if the EECU PN and SN is not listed in the effectivity paragraph or 73-0008 is identified on the unit cover.

(3) If accomplishing this Service Bulletin, continue with paragraph 2.C.

C. Disassembly.

Remove cover assembly from the EECU. Refer to the DISASSEMBLY section of CMM 73-21-95.

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D. Modification Instructions.

(1) Front Panel Assembly CCA Connector Bonding.

NOTE: Disassembly of the CCAs from the heatsink chassis assembly is not necessary to perform this procedure.

(a) Inspect for presence of foreign object debris in the area around the exposed J1, E1, J2 and E3 connector pin fields and clean area as necessary. Refer to CLEANING section of CMM 73-21-95.

(b) Inspect for presence of bonding material along the perimeter edge of the four electrical connector mounting plates. Bonding locations prior to this service bulletin are shown in Figure 1.

(c) If bonding material is not present at all locations shown in Figure 2, apply adhesive bonding material as follows:

CAUTION: ONLY APPLY RTV TO THE PERIMETER EDGE OF THE CONNECTOR BRACKETS AND PWB. DO NOT FILL THE ENTIRE CAVITY BENEATH THE CONNECTOR. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO EQUIPMENT.

Using a syringe with a small opening, neatly apply bonding material (TSE-322 and RTV-6424 or an equal mixture of 3140 and 3145 RTV) between the connector mounting plates and the PWB along the exterior and interior perimeter edges of the mounting plates or PWB edge to prevent FOD from entering pin fields as shown in Figure 3. Refer to the GENERAL PRACTICES MANUAL, Section 73-45-18, for RTV bonding application procedures.

(2) EECU Cover Inspection.

(a) Place EECU cover on a level work surface, on its long side with the opening facing away from the height gauge and the ID plate facing upwards. Refer to Figure 4, (Sheet 1 of 3).

NOTE: The mounting flanges on the cover will prevent it from sitting level, so the cover will need to be elevated from the table using four leveling blocks to ensure a parallel plane exists between the cover surface and the height gauge.

(b) Using a height gauge, run across the exterior surface of the cover and measure the flatness deviation within the area shown in Figure 4, (Sheet 2 of 3).

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(c) If the deviation measured at the approximate top center of the cover is over 0.056 in., the cover is defective and must be replaced. Refer to Figure 4, (Sheet 3 of 3).

E. Assembly.

Install cover assembly to the EECU. Refer to the ASSEMBLY section of CMM 73-21-95.

F. EECU Testing.

Do the test procedures that follow on the EECU.

(1) For return to service do a complete ATP at COLD, HOT and ROOM temperatures. Refer to the TESTING AND FAULT ISOLATION section of CMM 73-21-95.

(2) Perform leak test per the ASSEMBLY section of CMM 73-21-95.

G. Service Bulletin Identification Plate Marking.

The CT7 FADEC does not contain a Service Bulletin ID Plate. Please mark with a stamp and epoxy ink per GPM 73-30-16. Refer to Figure 5 for stamp location.

Mark Location with: SB 73-0008

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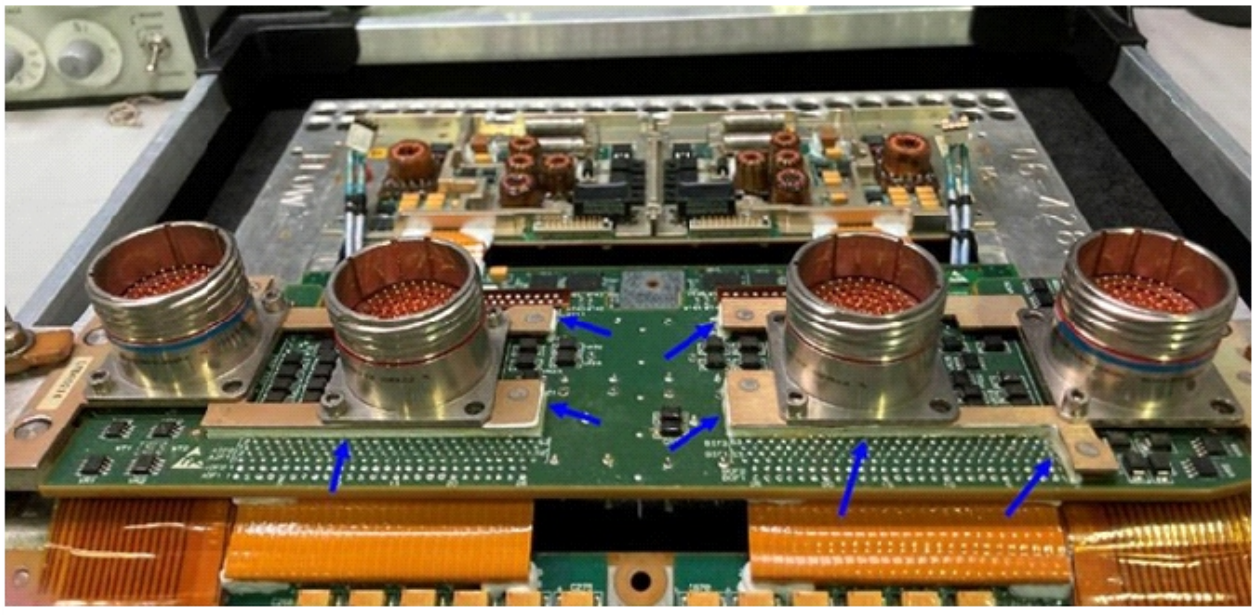

NOTE: Arrows show existing locations of RTV prior to this Service Bulletin.

NOTE: EECU shown disassembled for clarity only.

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Existing PWB RTV Locations
Figure 1

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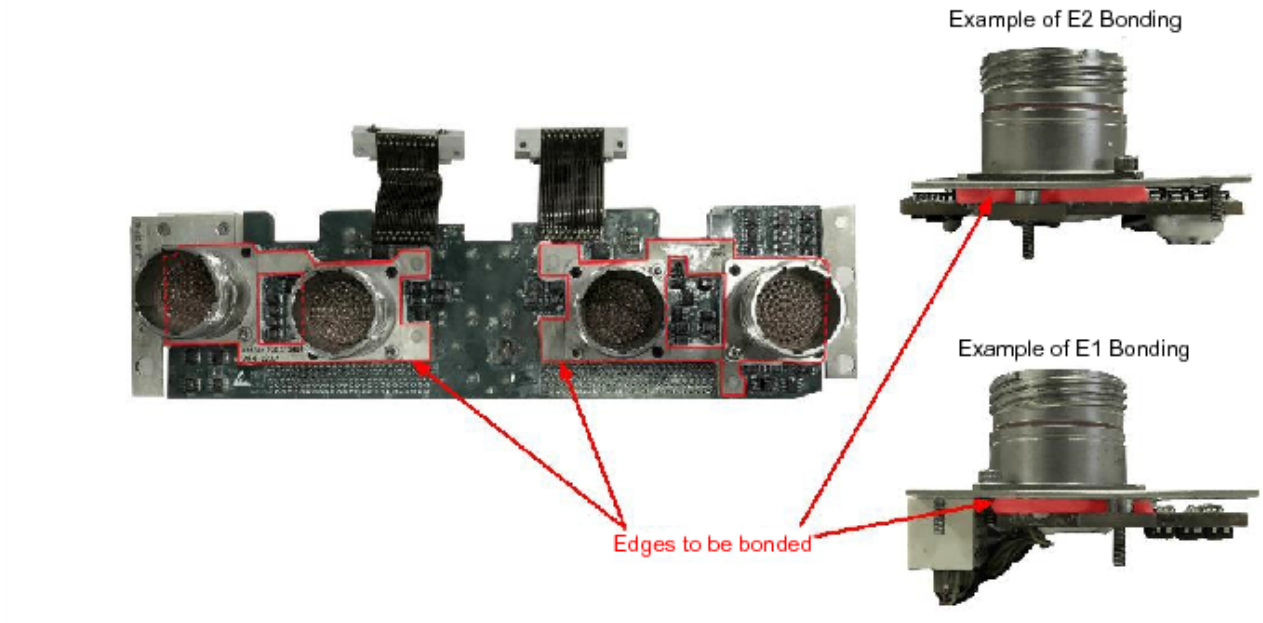
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



NOTE: EECU shown disassembled for clarity only.

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Connector and PWB Edges To Be Bonded
Figure 2

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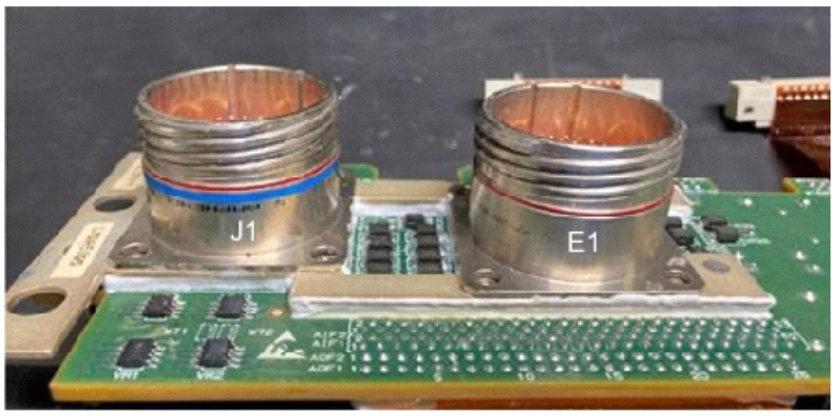
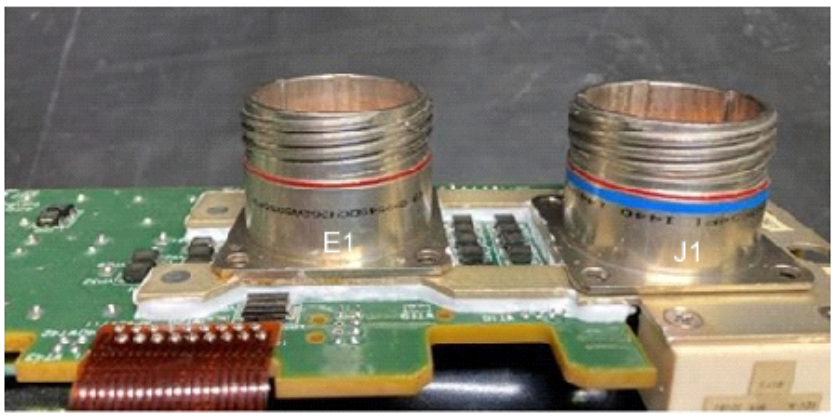
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection





J1 and E1 Connector Side Views

NOTE: EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 1 of 7)

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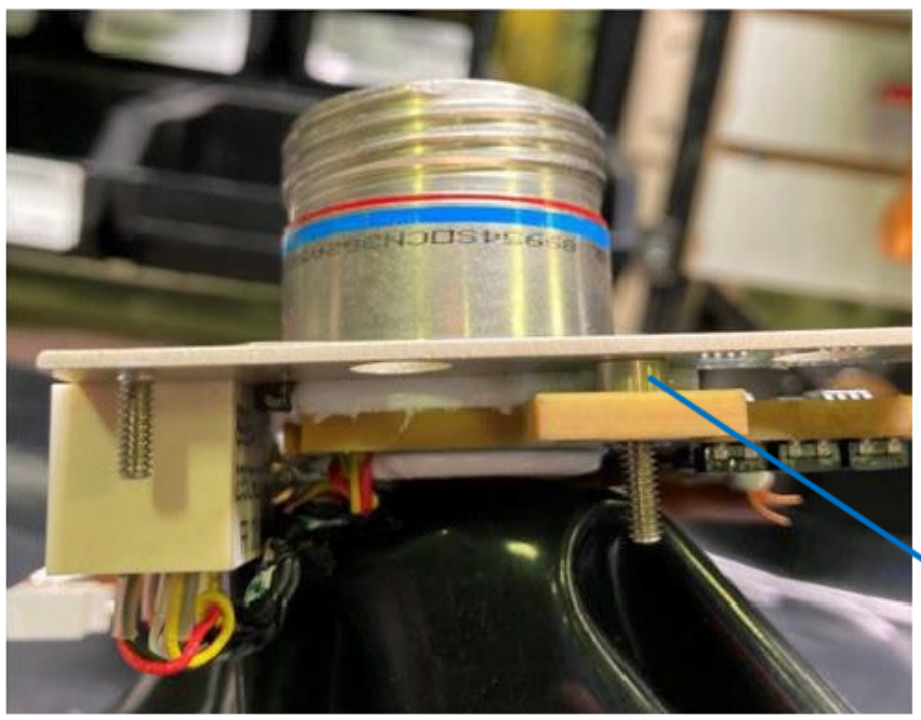
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



J1 Connector End View

CAUTION: MAKE SURE SPACER IS NOT ENCAPSULATED WITH RTV.

NOTE : EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 2 of 7)

BAE SYSTEMS

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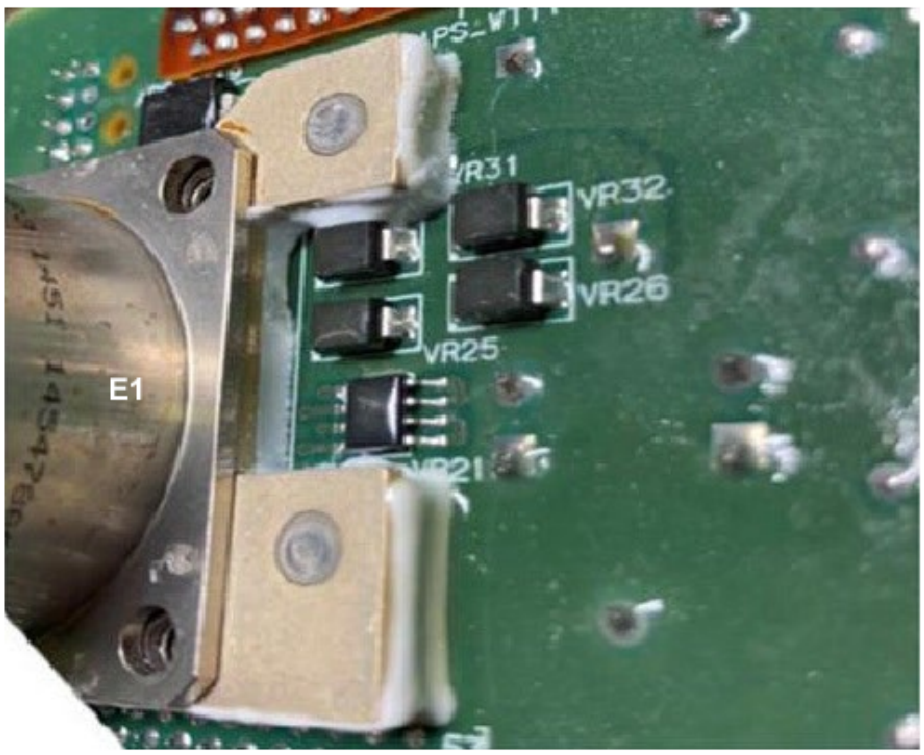
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



E1 Connector End View

NOTE: EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 3 of 7)

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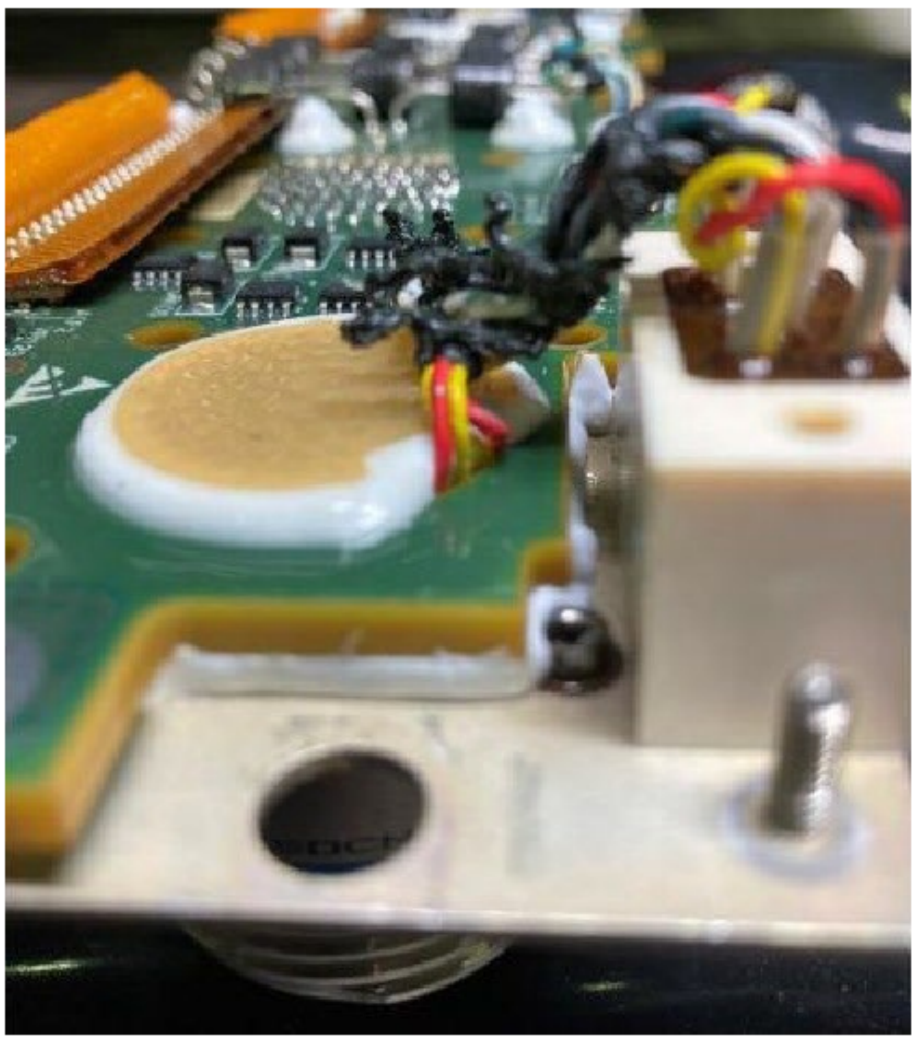
SERVICE BULLETIN

ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



J1 Edge Adjacent to Cold Junction
(Opposite Side of PWB)

NOTE: EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 4 of 7)

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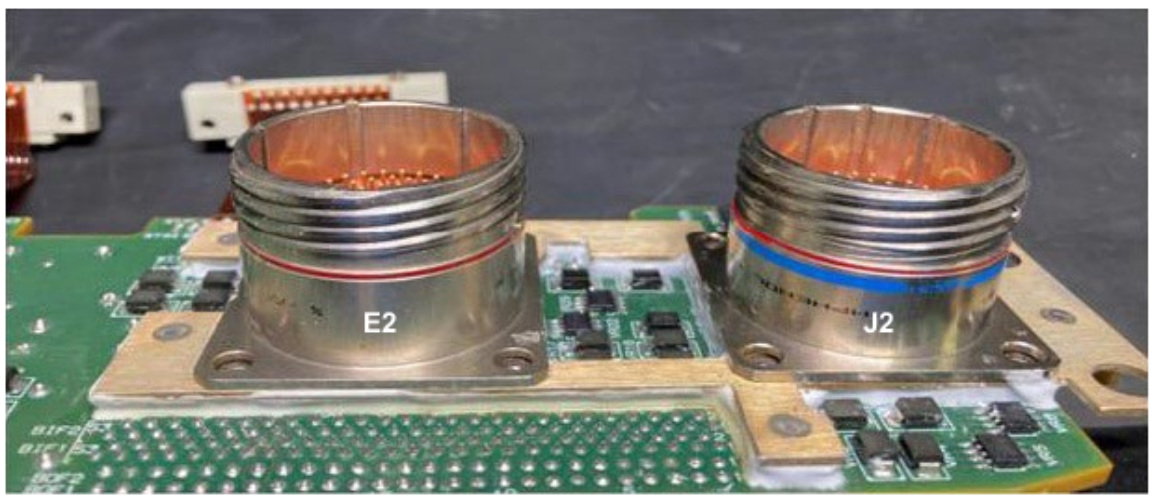
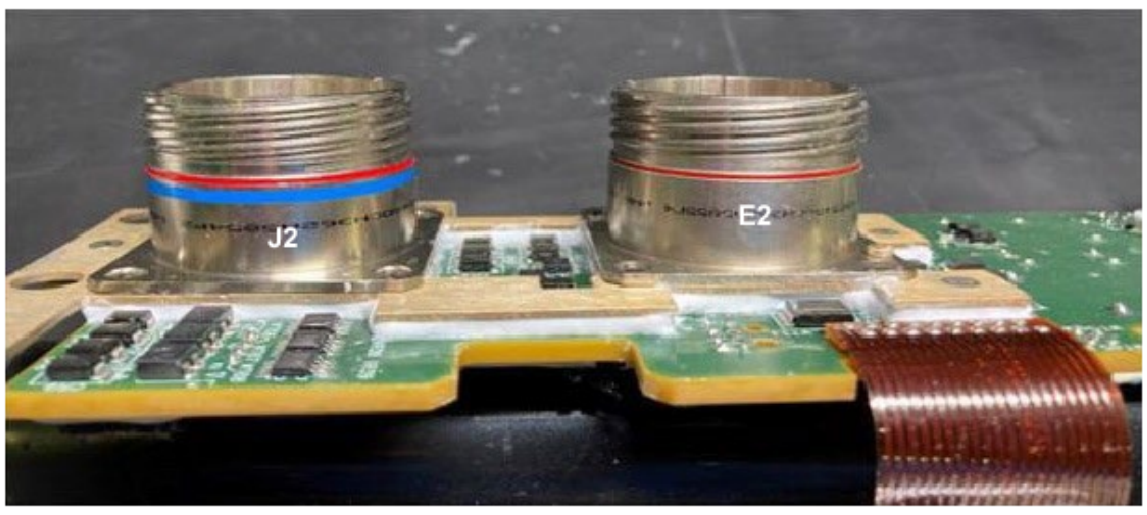
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection





E2 and J2 Connector Side Views

NOTE: EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 5 of 7)

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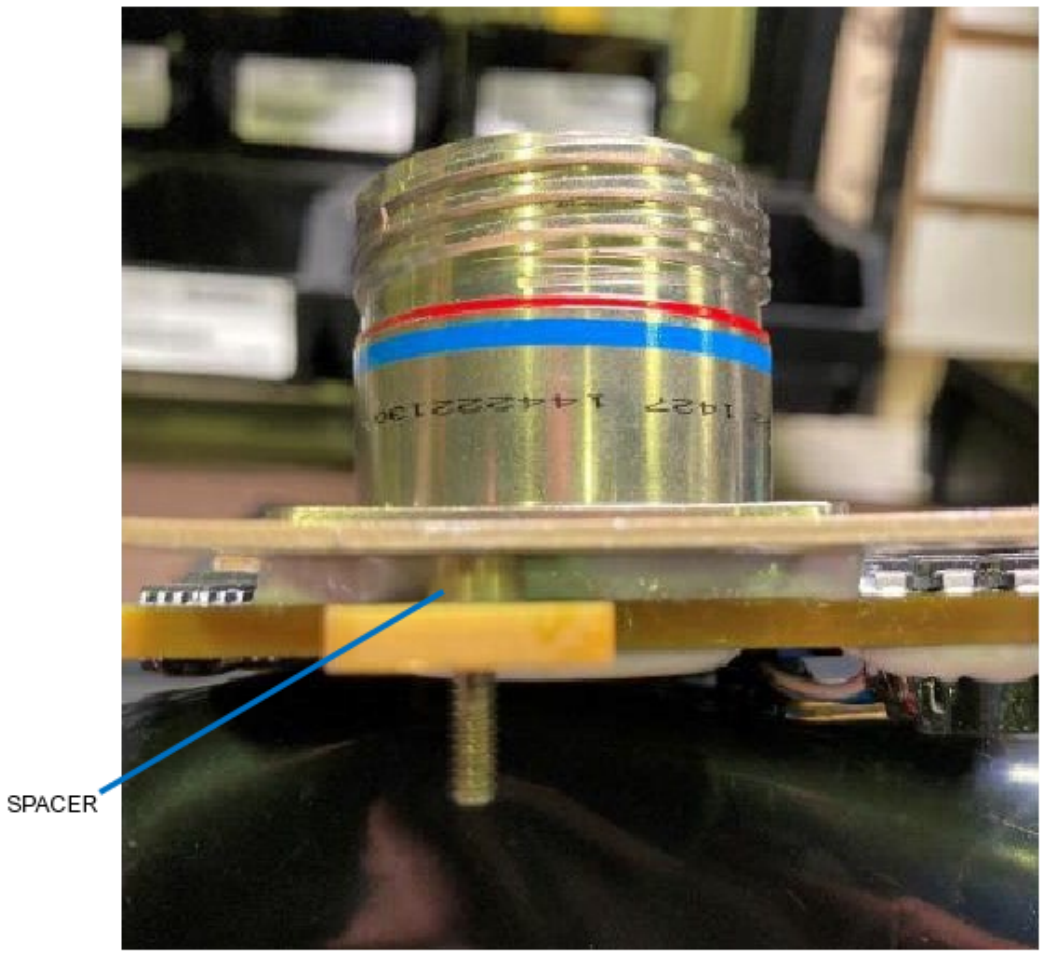
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



J2 Connector End View

CAUTION: MAKE SURE SPACER IS NOT ENCAPSULATED WITH RTV.

NOTE: EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 6 of 7)

BAE SYSTEMS

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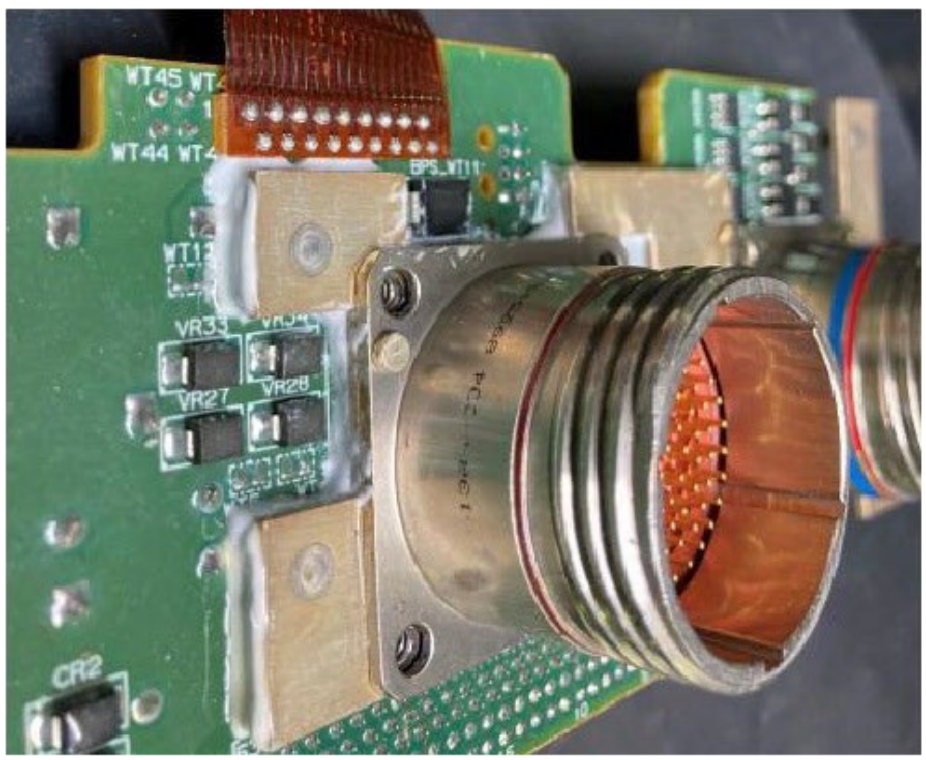
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



E2 Connector End View

NOTE: EECU shown disassembled for clarity only.

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New RTV Application Locations
Figure 3 (Sheet 7 of 7)

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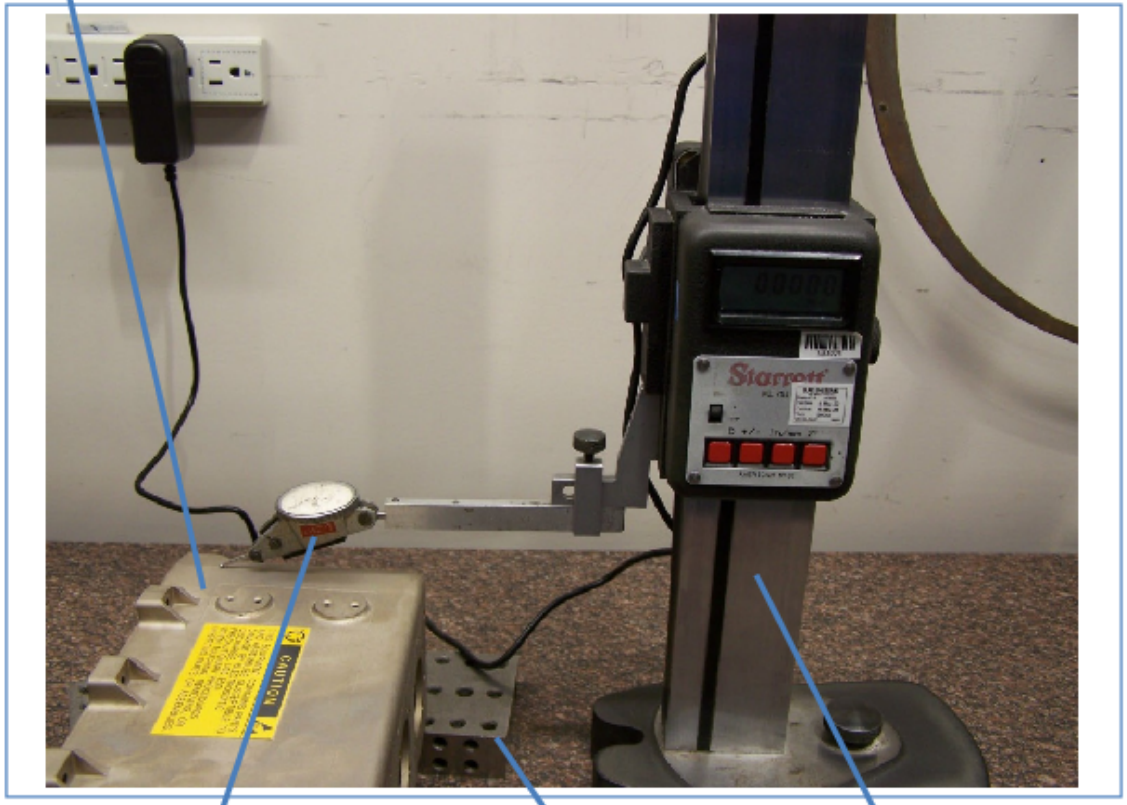
ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



NOTE: Due presence of mounting flange, cover must be raised off of table surface using leveling blocks to create a parallel plane between cover surface and height gauge.

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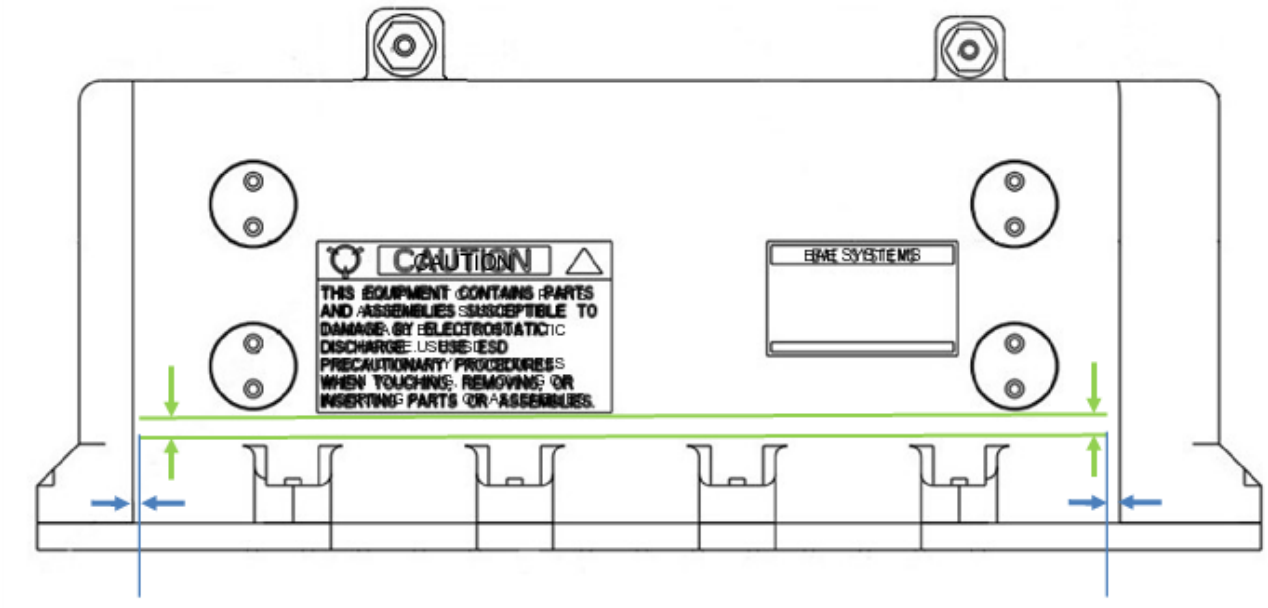
Cover Flatness Deviation Inspection
Figure 4 (Sheet 1 of 3)



NOTE: Measure across the top of the cover within the green outlined area.

NOTE: Starting and ending points of measurement should be approximately 1/8 in. to 1/16 in. from the crease in the cover.

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Cover Flatness Deviation Inspection
Figure 4 (Sheet 2 of 3)

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ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection

NOTE: Maximum flatness deviation measured at the approximate center of the top of the cover is 0.056 in.

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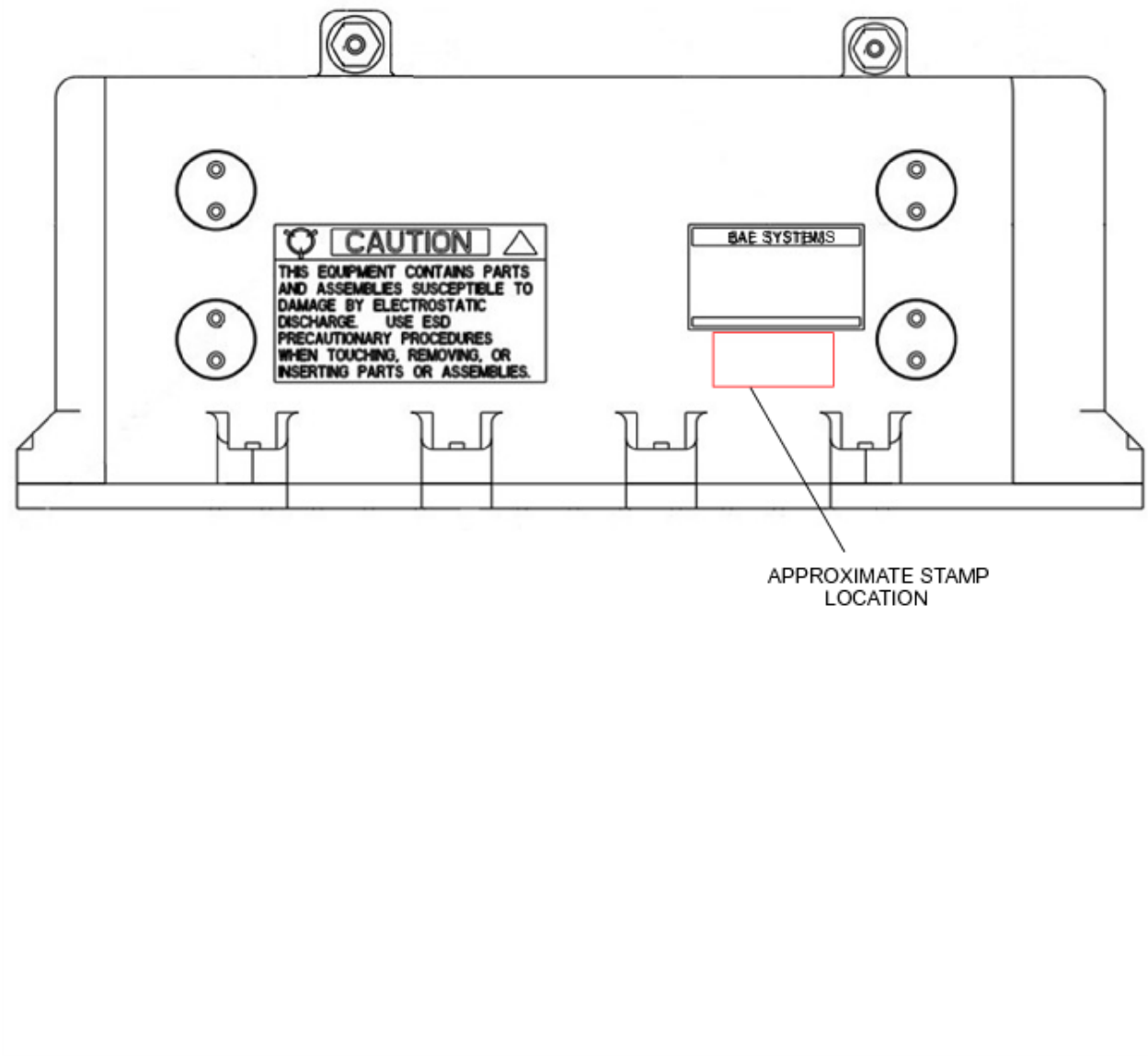
Cover Flatness Deviation Inspection
Figure 4 (Sheet 3 of 3)

BAE SYSTEMS

SERVICE BULLETIN

ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection



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Service Bulletin Stamp Location
Figure 5

BAE SYSTEMS

SERVICE BULLETIN

ENGINE FUEL AND CONTROL - Electronic Engine Control (73-00-00) - EECU Connector RTV Addition and Cover Inspection

3. MATERIAL INFORMATION.

A. Parts and Consumables.

(1) Parts necessary to do this Service Bulletin:

PART NUMBER	QTY/ EECU	PART NAME	UNIT $ PRICE	PKG QTY	LEAD TIME DAYS
115E1071G3	AR	Cover	(*)	(-)	- -

*FADEC International will quote the price of these parts. Pricing information is available.

(2) Future Spare Parts.

None.

(3) Consumables.

Material Name	Suggested Source
RTV (3145/3140) or RTV (TSE 322/RTV6424)	Commercial

B. Configuration Chart.

A configuration chart is not provided because there was no change to a defined EECU configuration.

C. Interchangeability.

None.

D. Parts Disposition.

Unserviceable covers will be scrapped.

GE Designated: - CONFIDENTIAL Subject to the restrictions on the media