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V2500-A5 SERIES PROPULSION SYSTEM SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin V2500-ENG-73-0207.

Service Bulletin Initial Issue

Remove	Incorporate	Reason for change
	Pages 1 to 27 of the Service Bulletin.	Initial Issue.
	Page 1 of the Appendix.	Initial Issue.
	Page 1 of the Supplement.	Initial Issue.

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

ENGINE – FUEL AND CONTROL – PROVIDE A NEW TWO POINT TRIM ENGINE PRESSURE RATIO (EPR)
CLASSIFICATION FOR ELECTRONIC ENGINE CONTROL (EEC) UNITS WITH SCN20A SOFTWARE

1. Planning Information

A. Effectivity

(1) Airbus A319

- (a) V2522-A5, V2524-A5, V2527M-A5 (A5 Standard and A5 SelectOne™ Retrofit Standard).

Engine Serial No. – All engines with SCN20A software or higher installed.

- (b) V2522-A5, V2524-A5, V2527M-A5 (A5 SelectOne™ Production Standard).

Engine Serial No. – All engines with SCN20A software or higher installed.

(2) Airbus A320

- (a) V2527-A5, V2527E-A5 (A5 Standard and A5 SelectOne™ Retrofit Standard).

Engine Serial No. – All engines with SCN20A software or higher installed.

- (b) V2527-A5, V2527E-A5 (A5 SelectOne™ Production Standard).

Engine Serial No. – All engines with SCN20A software or higher installed.

(3) Airbus A321

- (a) V2530-A5, V2533-A5 (A5 Standard and A5 SelectOne™ Retrofit Standard).

Engine Serial No. – All engines with SCN20A software or higher installed.

- (b) V2530-A5, V2533-A5 (A5 SelectOne™ Production Standard).

Engine Serial No. – All engines with SCN20A software or higher installed.

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

- (1) Condition: Certain engines can experience a thrust/N1 overshoot during 33K maximum take-off thrust rating conditions.
- (2) Background: The Engine Pressure Ratio (EPR)-thrust relationship is typically classed at the lower thrust setting. This class is applied to all thrust levels but may not be optimal for some engines at 30/33k thrust levels since they may reach the desired thrust with a lower actual value for EPR. This could result in an N1 speed that is slightly higher at maximum take-off conditions. This could cause some engines N1 speed to slightly exceed 100 % (by up to 0.4 %) during maximum take-off thrust settings.
- (3) Objective: Implement a 2-point EPR trimmer, defined by the data entry plug. The current EPR trimmer is a single value. With the 2-point trimmer, the first point will be fully applied to the Maximum Climb (MCL) and Maximum Continuous (MCT) rating, so there will be no change to the MCL and MCT ratings as compared to the current method. The second point of the trimmer will be applied at take-off only (TLA position). The second point will be applied as a function of EPR to minimize impact during take-off. This change applies to both the Standard A5 and SelectOne™ configurations and is utilized today as required for all engines in production and overhaul. This Service Bulletin applies to all fielded engines.
- (4) Effects of Bulletin on:

Removal/Installation: Not affected.

Disassembly/Assembly: Not affected.

Cleaning: Not affected.

Inspection/Check: Not affected.

Repair: Not affected.

Testing: Not affected.
- (5) Supplemental Information

None.

D. Description

Rewire the data entry plug to introduce the 2-point EPR classification data to the Electronic Engine Control (EEC).

E. Compliance

Category 8

Accomplish based upon experience with the prior configuration.

- NOTE:**
1. Do this Service Bulletin based on your experience with actual engine performance in conjunction with the engine's performance test data.
 2. Service Bulletin incorporation on engines installed on aircraft may be desirable and should be individually evaluated.

F. Approval Data

The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

The technical content of this Service Bulletin has been approved under the authority of the EASA Design Organization Approval N° EASA.21J.031.

G. Manpower

(1) In Service

- (a) Necessary to Open the Fan Cowls: 20 minutes
- (b) Necessary to Remove the Data Entry Plug: 1 minute
- (c) Necessary to Modify the Data Entry Plug: 22 minutes
- (d) Necessary to Install the Data Entry Plug: 2 minutes
- (e) Necessary to Close the Fan Cowls: 20 minutes
- (f) Total Necessary Man-hours: 65 minutes

H. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.

(3) Datum

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

I. Electrical Load Data

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

J. Software Accomplishment Summary

Not applicable.

K. References

- (1) V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, S-V2500-7IB), Chapter/Section 73-22-35.
- (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 and S-V2500-7SB), Chapter/Section 73-22-35.
- (3) V2500 Engine Manual (E-V2500-1IA), Chapter/Section 71-00-00.
- (4) Aircraft Maintenance Manual, Chapter/Section 73-22-35.
- (5) V2500 Standard Practices/Processes Manual (E-V2500-3IA), Chapter/Section 70-09-00 and 70-42-05.
- (6) Internal Reference No. – Internal Engineering Notice 09VC126A and Engineering Change 07VZ009-03.
- (7) This Service Bulletin is subject to Aircraft Modification No. 39483

Under no circumstances shall the modified equipment, resulting from the application of this SB, be installed on the aircraft type unless the corresponding modification, and if applicable, its aircraft SB are approved.

- (8) ATA Locator – 73-22-35.

L. Other Publications Affected

None.

M. Interchangeability of Parts

Old and new parts are directly interchangeable.

NOTE: Data entry plugs must remain with the engine on which they are installed. They can not be moved from engine to engine.

N. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (Yes)

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IAE PROPRIETARY INFORMATION

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Revision to Table of Limits (No)

Inspection Procedures (No)

2. Material Information

A. Material – Price and Availability

Not applicable.

B. Industry Support Program

Not applicable.

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

Not applicable.

D. Instructions/Disposition Code Statements:

Not applicable.

Vendor Special Components/Materials

IAE Designation	Name
CoMat 02-138	Lockwire

NOTE: Except for work or supplies to be performed or furnished by IAE, it is understood that IAE does not endorse the work performed by the company or companies named herein or any other company and does not accept responsibility to any degree for the selection of such company or companies for the performance of any work or procurement of supplies.

E. Tooling – Price and Availability

New Support Equipment that is optional

Tool No.	Name	Manufacturer	Design Availability Date	Aperture Card Delivery Date
IAE2P16552	IAE Software Loader	IAE	04/01/2010	Not applicable

This equipment can be obtained by contacting your Customer Fleet Director.

Support Equipment available before

Tool No.	Name	Manufacturer
IAE1P16271	Holding Fixture	IAE
MS27495A20	Contact Insertion Tool	PEI Genesis (UK) Ltd
MS27495R20	Contact Removal Tool	PEI Genesis (UK) Ltd

F. Reidentified Parts

Not applicable.

G. Other Material Information Data

Not applicable.

3. Accomplishment Instructions

NOTE: Service Bulletin incorporation on engines installed on aircraft may be desirable and should be individually evaluated.

NOTE: This procedure is taken from Reference 3, Engine Manual, Chapter/Section 71-00-00, Test No. 10 - Performance Test and Test No. 11 - Set Jumpers in Data Entry Plug.

(1) Engine Identification

- (a) Record engine serial numbers for engines that are experiencing N1 overshoot events during maximum take-off thrust settings.
- (b) Record the EPR modifier utilized for each engine from the Data Entry Plug (DEP). Verify that "01" or "02" is not already indicated on the DEP for the EPR BIAS.

NOTE: The EPR Modifier and BIAS are shown in the format on the DEP as "XX-YY", where "XX" is the modifier and "YY" is the BIAS.

- (c) Obtain engine Pass-Off Data from Production Test or the last shop visit for the identified engines.
- (d) Perform the calculation that follows to determine if an EPR BIAS 01 or 02 can be applied.
 - (i) Curve fit measured EEC EPR (EPR-0) versus measured correct thrust. Use a second order/degree least square fit (Band A, B, C and D only).
 - (ii) Evaluate the curve fit at the corrected net thrust gates in the table that follows to find EPR.

Description	Gate #	Thrust, lbf (FNTR2)	EPR (Max) 33K Tested Engines	EPR (Max) 30K Tested Engines
33K MTO	1	*30650	1.613	N/A
30K MTO	2	29050	1.562	1.559
30K MCT	3	*26220	1.477	1.477
27K MTO	4	24200	1.422	1.422
24K MTO	5	23930	1.414	1.414
22K MTO	6	22500	1.376	1.376
27K MCT	7	*21750	1.357	1.357
	8	17100	1.251	1.251

NOTE: * Shows the points that are necessary to run to curve fit the data. The other points can be interpolated (Band D is not shown). Use only the points with a max EPR value to find the DEP class.

- (iii) Find the delta EPR at each gate as follow:

Subtract each evaluated EPR, rounded to three decimal places, from the related max EPR in the table above.

$$\text{delta EPR} = \text{max EPR} - \text{evaluated EPR}$$

- (iv) Match the delta EPR to the table below to find the EPR modifier number at each gate. If the delta EPR lies in between classes then select the next highest EPR class.

EPR Class	04	05	06	07	08	09	10	11
Delta EPR mod	+0.012	+0.009	+0.006	+0.003	±0.000	-0.003	-0.006	-0.009

- (v) Subtract the highest EPR modifier number of gates 1 and 2 from the highest EPR modifier number of all gates to find the EPR class bias.

- (vi) Set the EPR class bias equal to zero if less than zero and equal to two if more than two.

- (vii) Find the delta EPR bias. Multiply the EPR class bias by 0.003.

$$\text{EPR class bias} = (\text{highest EPR modifier number of all gates}) - (\text{highest EPR modifier number of gates 1 and 2})$$

$$0 \leq \text{EPR class bias} \leq 2$$

$$\text{delta EPR bias} = (\text{EPR class bias}) \times 0.003$$

NOTE: The EPR class bias is limited to 0 (no adjustment), 1 (one) or 2 (two). The EPR class bias is set to zero when the highest numerical EPR modifier number at gates 1 and 2 is equal to the highest EPR modifier number from all eight gates.

(2) Data Entry Plug Modification

- Remove the Data Entry Plug Assembly, PN 2A3106 by the procedure in Reference 4, Aircraft Maintenance Manual, Chapter/Section 73-22-35, Removal of the Data Entry Plug Assembly. See Figure 1, Sheet 1 for the location of the data entry plug assembly.
- Put a plastic cap on the EEC connector. This gives the EEC protection from unwanted fluids or materials.

(c) Remove the Backshell from the Connector of the DEP

- (i) Remove and discard the lockwire which safeties the nut to the backshell.
- (ii) Install the DEP onto Holding Fixture, PN IAE1P16271 and disassemble it as follows. See Figure 2
 - (1) Align the main key on the connector with the main key-way on the holding fixture.
 - (2) Use light hand pressure to engage the DEP with the holding fixture and tighten it by hand.

CAUTION: MAKE SURE THE BACKSHELL DOES NOT TURN WHEN YOU LOOSEN THE BACKSHELL NUT. IF THE BACKSHELL TURNS, DAMAGE TO THE JUMPER WIRES CAN OCCUR.

- (3) Use a Strap Wrench, TG-70 or equivalent, to loosen the backshell nut. Remove the backshell from the DEP connector. See Figure 1, Sheet 1 for the location of the nut.

NOTE: It is important to make sure the backshell is later installed on the same DEP connector from which it was removed.

- (4) Remove the anti-vibration rubber.

(d) Make a record of the EPR modifier number, variant and engine serial number.

(e) Remove the jumpers, sealing plugs and contact pins from the connector. See Figure 1, Sheet 2.

- (i) Find the necessary jumpering connections for the EPR modifier, variant and engine serial number from Table 1.

NOTE: It is recommended that you make a copy of the diagram of the contact hole locations in Figure 1, Sheet 2 and mark the necessary jumpering connections on the diagram.

Table 1 – EPR Modifier Jumper Connections

EPR Modifier Number	EPR Class Bias	Channel A	Channel B	Jumper	Jumper Quantity	** EEC Software
05	01	Z* to a	g* to r and h to T	2 pin	3	SCN20/Y

06	01	Z* to m	g* to r and h to T	2 pin	3	SCN20/Y
07	01	Z* to m and c* to a	h to T	2 pin	3	SCN20/Y
08	01	No Jumpers	g* to r, h to T and j* to P	2 pin	3	SCN20/Y
09	01	Z* to a	h to T and j* to P	2 pin	3	SCN20/Y
10	01	Z* to m	h to T and j* to P	2 pin	3	SCN20/Y
11	01	Z* to m and c* to a	g* to r, h to T and j* to P	2 pin	5	SCN20/Y
06	02	b to G and Z* to m	g* to r	2 pin	3	SCN20/Y
07	02	b to G* and Z* to m, and c* to a	No Jumpers	2 pin	3	SCN20/Y
08	02	b to G	g* to r and j* to P	2 pin	3	SCN20/Y
09	02	b to G and Z* to a	j* to P	2 pin	3	SCN20/Y
10	02	b to G and Z* to m	j* to P	2 pin	3	SCN20/Y
11	02	b to G, Z* to m and c* to a	g* to r and j* to P	2 pin	5	SCN20/Y

* In some cases, connector holes g and z are used in the variant number wiring and connector holes c and j are used in the engine serial number wiring. Find which holes are to be connected for engine serial number, EPR modifier and variant number wiring before you choose the necessary jumpers.

** Indicated EEC software standard or later must be installed.

- (ii) Remove the jumpers that do not agree with the jumpering combinations that you want from the connector with Contact Removal Tool, PN MS27495R20 or equivalent. Discard the jumpers.

NOTE: If necessary, you can cut the jumper wires so you can easily install the removal tool on the jumper. Cut the wire 0.250 in. (6,35 mm) from the top of the connector rubber seal.

- (iii) Remove the sealing plug with your fingers or soft nose pliers and discard them.
- (iv) Remove the contact pins and discard them. Use the Contact Removal Tool, PN MS27495R20 or equivalent and a small piece of straight wire such as a straightened paper clip.

- (f) Install the jumpers into the connector.

CAUTION: DO NOT USE THE REMOVAL TOOL TO INSTALL THE JUMPERS. THE COLLET CAN NOT RETRACT AND CAN NOT LOCK THE JUMPER.

- (i) Install the jumpers into the connector (2 pin)
 - (1) Put the jumper into Contact Insertion Tool, PN MS27495A20.
 - (2) Hold the connector with your hand.

CAUTION: DO NOT APPLY STRONG FORCE TO THE CONTACT INSERTION TOOL WHEN YOU PUSH THE JUMPER. THIS COULD CAUSE DAMAGE TO THE COLLET.

- (3) Push one end of the jumper into the correct hole in the connector until the shoulder of the contact becomes locked by the collet.

NOTE: When the collet locks the contact, the collet makes a light click sound.

- (4) Remove the insertion tool.
 - (5) Lightly pull back the jumper to make sure that the contact is locked in the collet. The contact is correctly locked if the jumper does not move rearward.
 - (6) Do the applicable previous steps for the other end of the jumper.

- (ii) Install the jumpers into the connector (3, 4, 5 or 6-pin)
 - (1) Hold the connector with your hand.

- (2) Push all of the jumper ends into the correct holes with your hand. Use the contact insertion tool to push the contacts into the connector until the shoulder of the contact is locked by the collet. Push each contact a little at a time.

NOTE: When the collet locks the contact, the collet makes a light click sound.

- (3) Remove the contact insertion tool.
- (4) Lightly pull back the jumper end to make sure that the contact is locked in the collet. The contact is correctly locked if the jumper does not move rearward.
- (5) Do the applicable previous steps for the other ends of the jumper.

- (g) Install the contact pins and sealing plugs in to the remaining open connector holes

- (i) Use the Contact Insertion Tool, PN MS27495A20, or equivalent, to push the contact pin into the unused hole until the shoulder of the contact pin becomes locked by the collet.

NOTE: When the collet locks the contact, the collet makes a light click sound.

- (ii) Remove the contact insertion tool.
- (iii) Make sure the contact pin is locked in the collet.
- (iv) Install the sealing plug into the remaining open holes with your hand or soft nose pliers.

- (h) Make marks on the backshell outer face and on the engine identification plate. See Figures 3, 4 and 5

- (i) Mark the new EPR modifier on the backshell and the engine identification plate using the vibration peen method. See Reference 5, Standard Practices Manual, Chapter/Section 70-09-00, Marking of Parts. The EPR modifier number and EPR class bias must be as follows:

EPR MOD XX – YY

Where: XX = EPR modifier number

YY = EPR class bias

NOTE: If there is no area on the backshell to make marks, replace the backshell with a new one. See Reference 4, Aircraft Maintenance Manual, Task 73-22-35-300-012, VRS3503. Make sure you mark the new backshell with the same date that is given on the old backshell.

If the DEP was reworked to a new configuration, see the applicable Service Bulletin for the applicable engine identification plate instructions.

If you replace the engine identification plate, inform your IAE representative.

(i) Install the backshell to the connector. See Figure 1, Sheet 1 and Figure 2

(i) Install the connector on the Holding Fixture, PN IAE1P16271 as follows:

(1) Align the main key on the DEP connector with the holding fixture main key-way.

(2) Use light hand pressure to engage the connector with the holding fixture and tighten with your fingers.

(ii) Align the back ends of the jumpers with the holes in the anti-vibration rubber and install the backshell onto the connector. Install the anti-vibration rubber even if the jumpers have no back ends.

CAUTION: MAKE SURE THE BACKSHELL DOES NOT TURN WHEN YOU TIGHTEN THE BACKSHELL NUT. IF THE BACKSHELL TURNS, DAMAGE TO THE JUMPER WIRES CAN OCCUR.

(iii) Engage the nut of the backshell with the threads on the connector. Tighten the nut to 53.0 – 58.0 lbfin (5,988 – 6,553 Nm). Use Strap Wrench, TG-70 or equivalent.

(iv) Safety the nut with CoMat 02-138 Lockwire. See Reference 5, Standard Practices Manual, Chapter/Section 70-42-05, Lockwire General Instructions.

- (j) Do an electrical wiring test on Data Entry Plug Assembly, PN 2A3106.
Use IAE Software Loader, PN IAE2P16552 as follows:

NOTE: If IAE Software Loader, PN IAE2P16552 is not available, then a continuity check of the jumper pin connection can be used as an alternative to this check.

- (i) Initial setup of IAE Software Loader, PN IAE2P16552.

NOTE: Do not attach Yellow Y Cable connectors to the TDS Ranger or the IAE Software Loader, PN IAE2P16552 until instructed to do so or DEP test will not be successful.

- (1) Make sure the power switch for IAE Software Loader, PN IAE2P16552 is in the OFF position.
- (2) Connect IAE Software Loader, PN IAE2P16552 to an external power source (110/60Hz or 220V/50Hz).

- (ii) Test data entry plug wiring as specified in Table 2.

NOTE: The center of the "D-Pad" and the "Enter Key" can be used interchangeably throughout the following procedures.

Table 2 – DEP Electrical Wiring Test

Step	Action	Result(s)	Additional Information
1	Move the main power switch, labeled "AC POWER INPUT" on the IAE Software Loader to the ON position.	The orange "AC PWR ON" light will become illuminated.	The orange light means the equipment is powered and ready for use.

Step	Action	Result(s)	Additional Information
2	Depress and hold the green power button on the TDS Ranger until the word "Booting" appears at the bottom of the screen next to an arrow.	The "V2500 Front End Program" screen will be displayed.	If the unit was already on, a count down screen will appear after approximately three seconds. Wait for the countdown to reach zero. Continue to hold green power button until the word "Booting" appears. If the unit was off, the words "Booting" should appear after approximately two seconds.
3	When the "V2500 Front End Program" screen is shown, connect Yellow Y Cable to IAE Software Loader and TDS Ranger as labeled.		System set up is complete. NOTE: If Yellow Y Cable was already connected to TDS Ranger prior to Step 2, DEP test will not be successful. Disconnect Yellow Y Cable from TDS Ranger and return to Step 2.
4	a) Use the "D-Pad" on the TDS Ranger and highlight "Go to Engine Support Program". b) Depress the "Enter Key".	The "V2500 Engine Support Programs" screen will be displayed.	At this screen there will be three options. 1) V2500 Loader 2) DEP Tester 3) Administrative Functions
5	a) Use the "D-Pad" on the TDS Ranger and select "DEP Tester". b) Depress the "Enter Key".	The "Data Entry Plug Tester" screen will be displayed.	At this screen there will be two options. 1) Test Data Entry Plug 2) Data Entry Plug Tester Self Test

Step	Action	Result(s)	Additional Information
6	a) Use the "D-Pad" on the TDS Ranger and select "Test Data Entry Plug". b) Depress the "Enter Key".	The Document Property Rights Notice will be displayed.	NOTE: You must agree to the terms and conditions or it is not permissible to use this device.
7	a) If you agree to the terms and conditions, use the "D-Pad" to highlight the check box and depress the "Enter Key". b) Use the "D-Pad" to highlight "Continue" and depress the "Enter Key".	The "Data Entry Plug Tester" screen will be displayed with instructions to 1) Install Data Entry Plug, and 2) Select Continue.	
8	a) Install Data Entry Plug on panel marked "Data Entry Plug Tester Interface" on IAE software loader. b) Use the "D-Pad" on the TDS Ranger and select "Continue". c) Depress the "Enter Key".	The "Data Entry Plug tester" screen will be displayed with radio buttons to select the applicable engine model.	

Step	Action	Result(s)	Additional Information
9	<p>a) Use the "D-Pad" and "Key Pad" on the TDS Ranger to highlight applicable engine model.</p> <p>b) Depress the "Enter Key" to turn the radio button black next to the appropriate engine model.</p> <p>c) Use the "D-Pad" on the TDS Ranger to select "Continue".</p> <p>d) Depress the "Enter Key".</p>	<p>The detected configuration of the Data Entry Plug will be displayed.</p>	<p>If the DEP wiring configuration is not recognized, "Unknown DEP jumper connection" will be displayed. Use the "D-Pad" to select Continue and depress the "Enter Key". Proceed to Step 12 below. Otherwise go to Step 10.</p>
10	<p>a) If the configuration displayed is the desired setting, use the "D-Pad" on the TDS Ranger to select "Yes".</p> <p>b) If the configuration displayed is not the desired settings, use the "D-Pad" on the TDS Ranger to select "No".</p> <p>c) Depress the "Enter Key"</p>	<p>a) If "Yes" is selected, DEP configuration will be displayed. Proceed to Step 11.</p> <p>b) If "No" is selected, you will be asked to enter the desired DEP setting. Proceed to Step 12.</p>	
11	<p>a) Use the "D-Pad" on the TDS Ranger to select "Finish".</p> <p>b) Depress the "Enter Key".</p>	<p>The "V2500 Engine Support Programs" menu will be displayed.</p>	<p>You should only be at Step 11 if the DEP was wired correctly and you selected "Yes" at Step 10. Otherwise, skip to Step 12.</p>

Step	Action	Result(s)	Additional Information
12	<p>a) If an unknown DEP jumper connection was detected, or if the detected configuration was not the desired configuration, the words "Enter desired" will be displayed, followed by several empty boxes.</p> <p>b) Use the "D-Pad", "Enter Key", "Tab Key" and keypad to enter desired configuration.</p> <p>c) Use the "D-Pad" to select "Continue".</p> <p>d) Depress the "Enter Key".</p>	<p>The expected results will be displayed alongside the detected results.</p>	<p>When entering the Engine Serial Number, enter the serial number without a preceding "V".</p>

Step	Action	Result(s)	Additional Information
13	<p>a) Remove the Data Entry Plug from the panel marked "Data Entry Plug Tester Interface" on IAE Software Loader.</p> <p>b) For each row, on the TDS Ranger, that shows "Fail" in the right column, correct the wiring as necessary.</p> <p>c) Install the Data Entry Plug on the panel marked "Data Entry Plug Tester Interface" on IAE Software Loader.</p> <p>d) Use the "D-Pad" on the TDS Ranger to select the TDS Ranger to select Continue.</p> <p>e) Depress the "Enter Key".</p>	<p>The words "Do you want to retest this plug?" will be displayed.</p>	<p>It is possible to go back to the wiring display screen by using the "D-Pad" on the TDS Ranger to select "Back" and depressing the "Enter Key".</p>
14	<p>a) Use the "D-Pad" on the TDS Ranger to select "Yes".</p> <p>b) Depress the "Enter Key".</p>	<p>A screen will be displayed with instructions to select "DEP P/N to be tested". Go back to Step 9 for instructions to continue with DEP test.</p>	<p>If "No" is selected, the "V2500 Engine Support Programs" menu will be displayed.</p>

(iii) Shut down IAE Software Loader, PN IAE2P16552

- (1) Make sure the power switch for IAE Software Loader, PN IAE2P16552 is in the OFF position and disconnect power cable.

- (2) Shut down the TDS Ranger by doing the following. Depress the green power button on the TDS Ranger and hold it until the countdown begins. Then let it go. It should take approximately three seconds for the countdown to begin. If you hold the power button too long, the TDS Ranger will reset itself.
- (3) Disconnect Yellow Y Cable from IAE Software Loader, PN IAE2P16552 and TDS Ranger.
- (4) Disconnect Data Entry Plug Assembly from panel marked "Data Entry Plug Interface" on IAE Software Loader, PN IAE2P16552.
- (5) At the "Power Menu", use the "D-Pad" on the TDS Ranger to highlight "Shutdown".
- (6) Depress the "Enter Key" to shutdown the TDS Ranger.

(3) Assembly Instructions

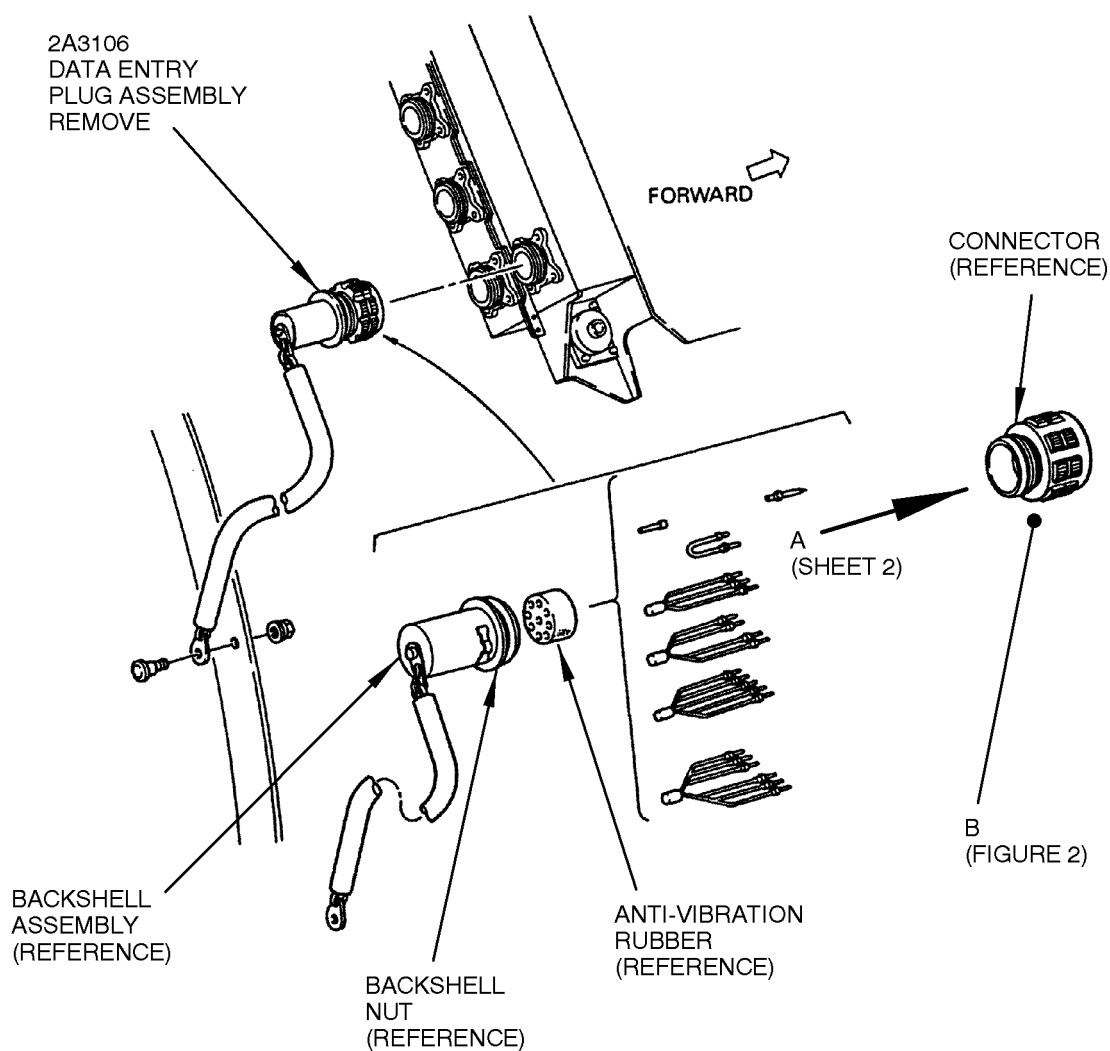
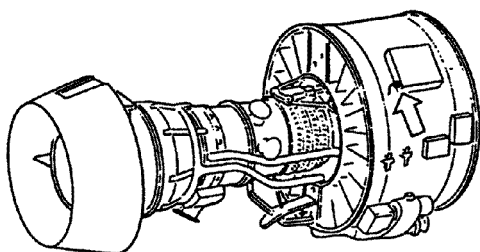
- (a) Connect the data entry plug assembly to the EEC connector

- (i) Remove the plastic protective cap from the EEC connector.
- (ii) Install the Data Entry Plug Assembly, PN 2A3106 by the procedure in Reference 4, Aircraft Maintenance Manual, Chapter/Section 73-22-35, Installation of the Data Entry Plug Assembly.

NOTE: This procedure includes test of the data entry plug assembly wiring by utilizing the EEC CONFIGURATION page as displayed on the MCDU followed by operational tests of the EEC.

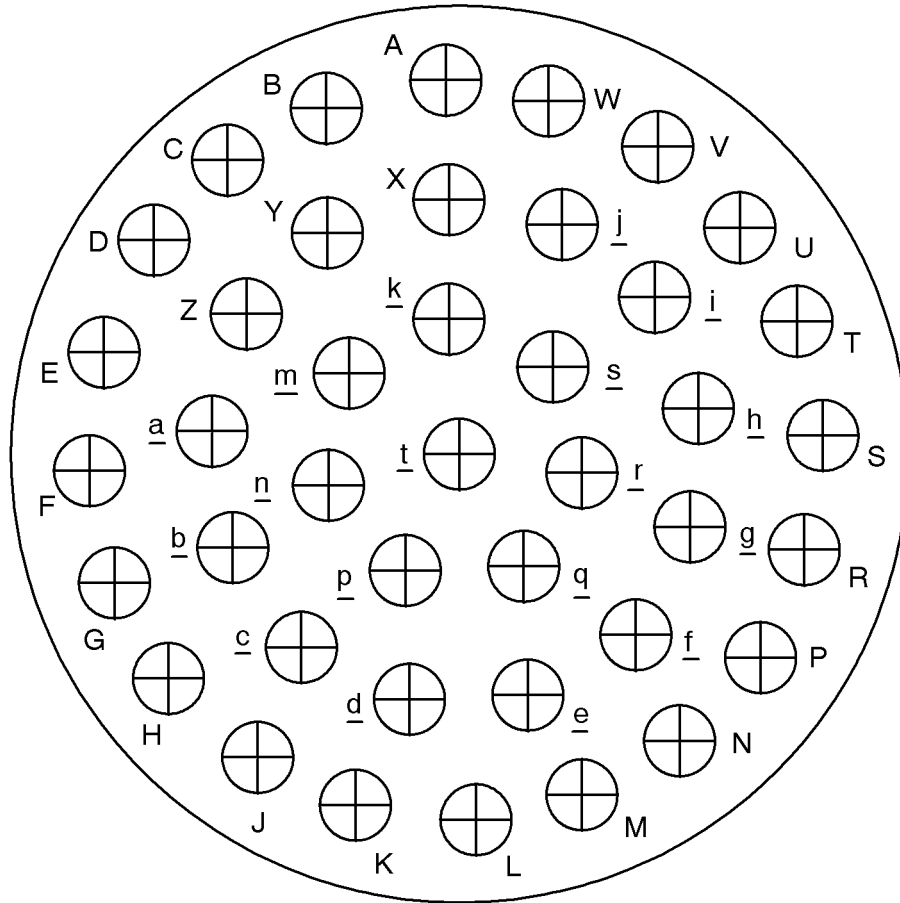
(4) Recording Instructions

- (a) A record of accomplishment is required.



LOCATION OF THE DATA ENTRY PLUG (DEP) ASSEMBLY AND CONTACT HOLE LOCATIONS
73-22-35

FIGURE 1, SHEET 1

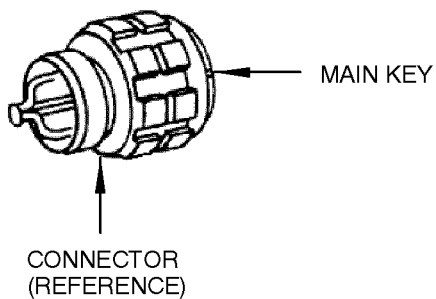


NOTE: Upper case I, O, and Q are not used.
Lower case l and o are not used.

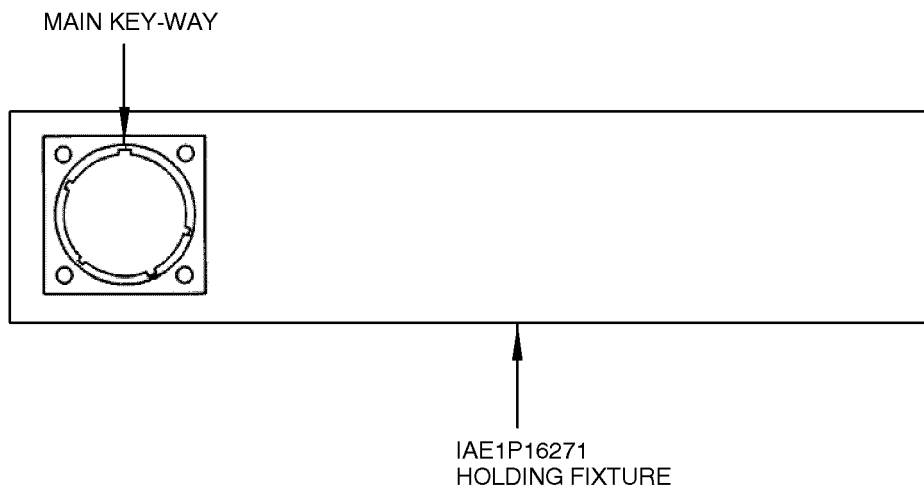
VIEW IN DIRECTION A

pw0b522991

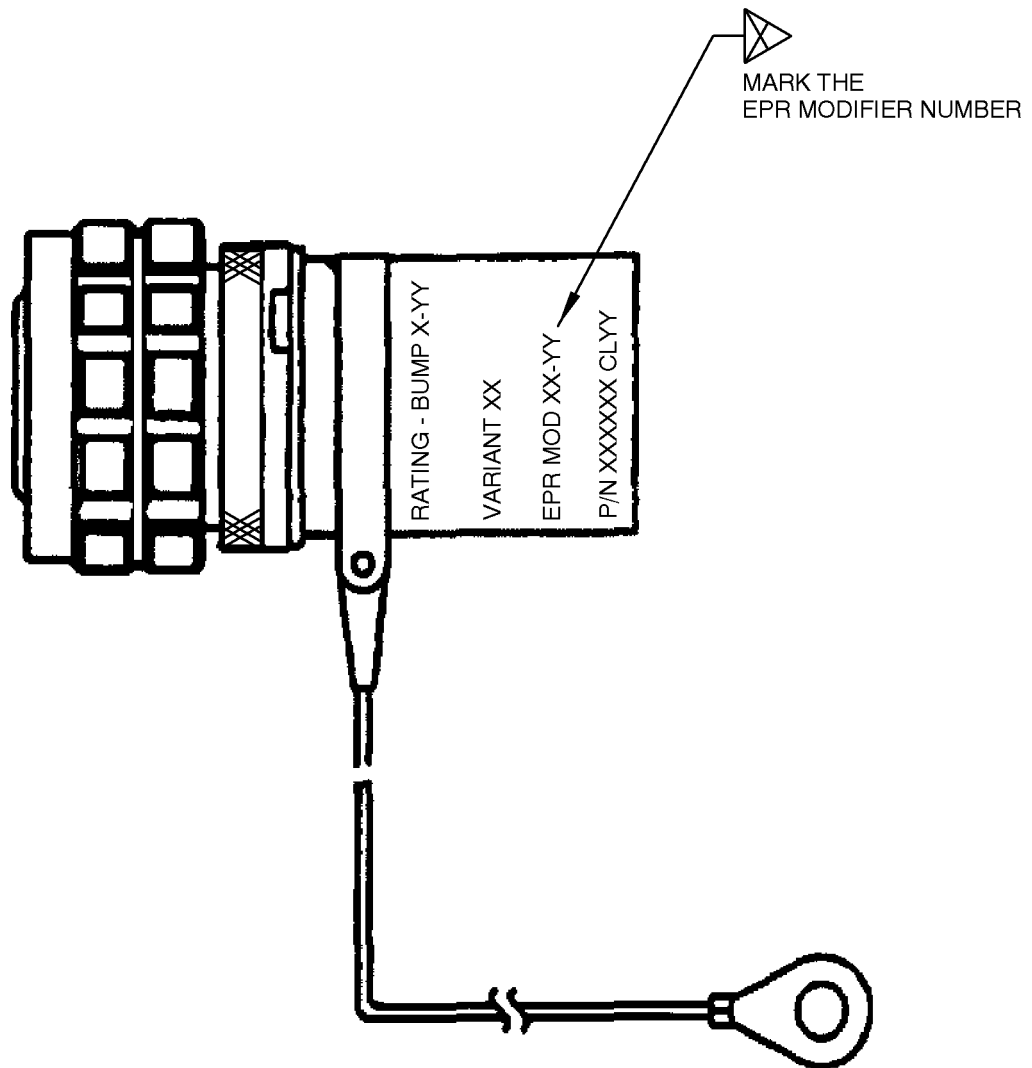
LOCATION OF THE DATA ENTRY PLUG (DEP) ASSEMBLY AND CONTACT HOLE LOCATIONS
FIGURE 1, SHEET 2



VIEW B

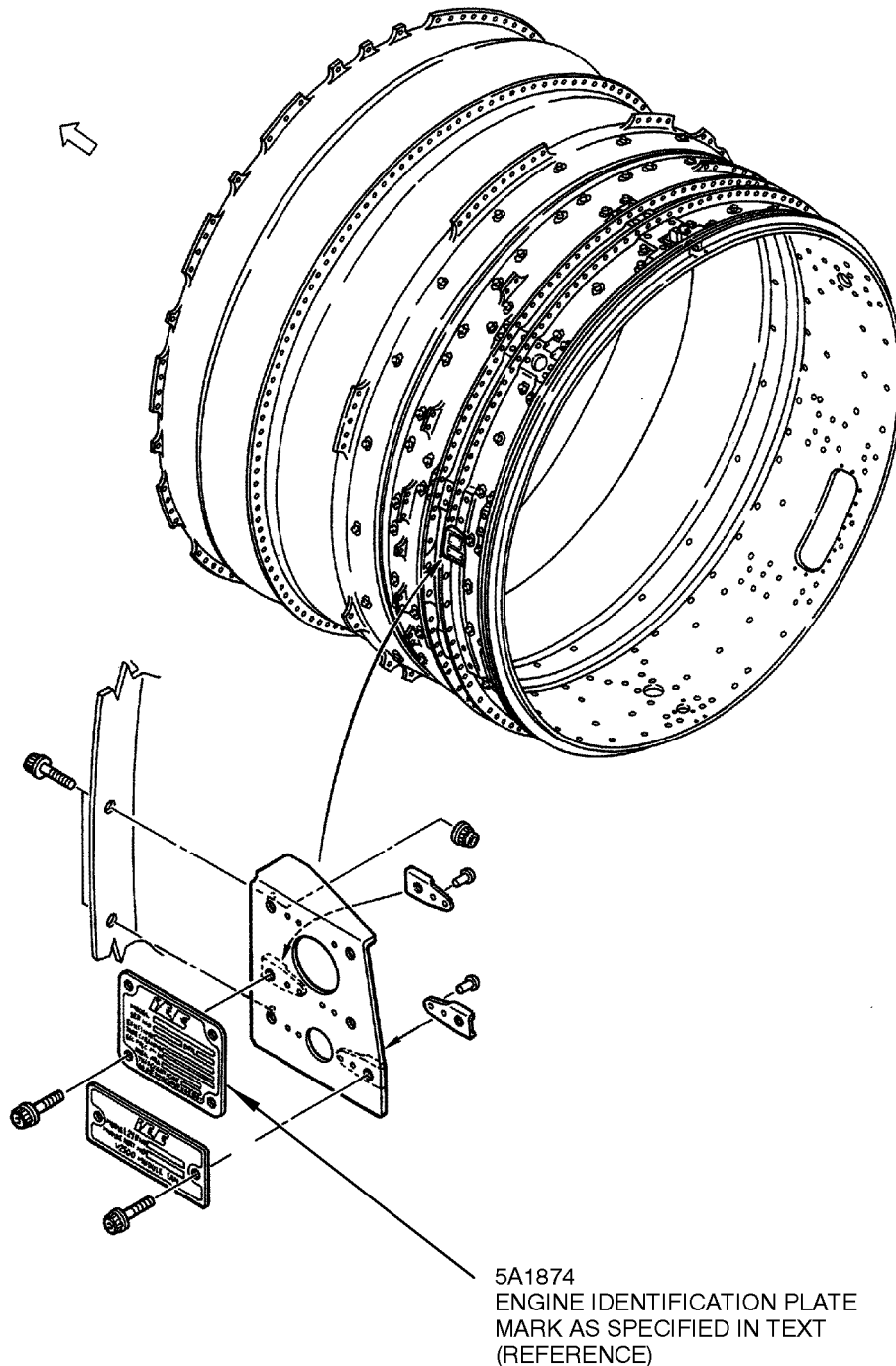


DISASSEMBLY OF THE DATA ENTRY PLUG (DEP) ASSEMBLY
FIGURE 2

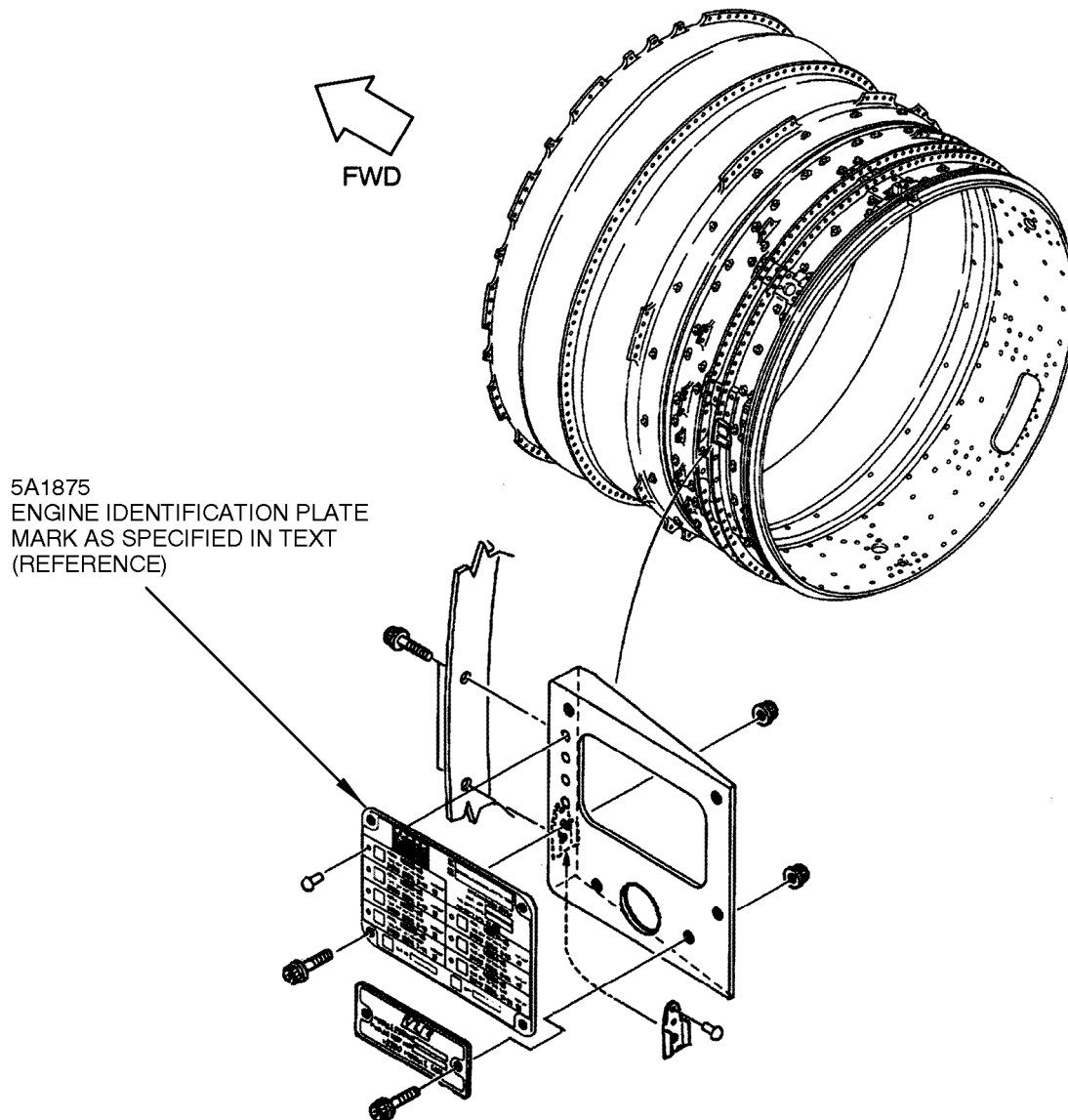


pw0b522994

MARKING OF THE BACKSHELL
FIGURE 3



MARKING OF THE ENGINE IDENTIFICATION PLATE
FIGURE 4



pw0b523002

MARKING OF THE ENGINE IDENTIFICATION PLATE
FIGURE 5

APPENDIXAdded Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	IEN 09VC126A EC 07VZ009-03	DTL/JDH

ENGINE – FUEL AND CONTROL – PROVIDE A NEW TWO POINT TRIM ENGINE PRESSURE RATIO (EPR)
CLASSIFICATION FOR ELECTRONIC ENGINE CONTROL (EEC) UNITS WITH SCN20A SOFTWARE

SUPPLEMENT – PRICES AND AVAILABILITY

V2500 All-A5 and -A5 SelectOne™

1. Modification Kit

A. There is no kit provided to do this Service Bulletin

2. Material Cost

A. There is no new material cost to do this Service Bulletin when the part modification procedure is used.

3. New Production Parts

Not applicable.



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	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Quality rating of the Accomplishment Instructions	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Quality rating of the Illustration	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Is this Service Bulletin easy to understand ?	<input type="checkbox"/> Yes		<input type="checkbox"/> 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:
<input type="checkbox"/> 1.A.	<input type="checkbox"/> 1.I.	<input type="checkbox"/> 2.A.	<input type="checkbox"/> General
<input type="checkbox"/> 1.B.	<input type="checkbox"/> 1.J.	<input type="checkbox"/> 2.B.	<input type="checkbox"/> Get Access
<input type="checkbox"/> 1.C.	<input type="checkbox"/> 1.K.	<input type="checkbox"/> 2.C.	<input type="checkbox"/> Removal/Installation
<input type="checkbox"/> 1.D.	<input type="checkbox"/> 1.L.	<input type="checkbox"/> 2.D.	<input type="checkbox"/> Inspection
<input type="checkbox"/> 1.E.	<input type="checkbox"/> 1.M.	<input type="checkbox"/> 2.E.	<input type="checkbox"/> Test
<input type="checkbox"/> 1.F.	<input type="checkbox"/> 1.N.	<input type="checkbox"/> 2.F.	<input type="checkbox"/> Close the Access
<input type="checkbox"/> 1.G.	<input type="checkbox"/> 1.O.		<input type="checkbox"/> Log Book Entry
<input type="checkbox"/> 1.H.	<input type="checkbox"/> 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**