V2500 International Aero Engines

Date: Apr.24/00

Subject: Transmittal of Revision 1 To Service Bulletin Number V25000-ENG-72-0298.

Service Bulletin Revision History:

Event	Date
Basic Issue	Jan.5/98
Revision 1	Apr.24/00

Reason For Issuance Of Revision:

(1) In paragraph 1.K.(2) change Chapter/Section 71-21-02 to 73-21-02 or 73-21-34.

(2) Editorial correction page 2.

(3) In paragraph 2.F. change Part Number 2P16242 to 2P16369.

(4) In paragraph 2.J. add Chapter/Section 73-21-34.

Effect on Prior Compliance:

None.

List of Effective Pages:

Bulletin Page No.	Rev. No.	Effective Date
1 and 2	1	Apr.24/00
3	Basic	Jan.5/98
4	1	Apr.24/00
5	Basic	Jan.5/98
6 and 7	1	Apr.24/00
8 to 16	Basic	Jan.5/98

International Aero Engines

SERVICE BULLETIN

Printed in Great Britian

ENGINE - CONVERSION - PROVIDE INSTRUCTIONS TO CHANGE THE V2500-D5 ENGINE RATING BY MODIFYING THE DATA ENTRY PLUG

MODEL APPLICATION

V2525-D5
V2528-D5

BULLETIN INDEX LOCATOR

72-00-00

Compliance Category Code

8

Internal Reference No.

97VI001B

Jan.5/98
Revision 1 Apr.24/00

V2500-ENG-72-0298

1. Planning Information

A. Effectivity

(1) Aircraft: MCDONNELL DOUGLAS MD-90

(2) Engine: V2525-D5 and V2528-D5 Engines (Any Engine as Applicable, subject to the restrictions listed in step (3)).

NOTE: Conversion of V2500-D5 engines to a different model rating as described in this Service Bulletin can only be accomplished as per prior contractual agreement with International Aero Engines.

(3) Restrictions: See Table 1 to determine which (if any additional) Service Bulletins must be incorporated into the subject engine before performing an engine model change.

NOTE: Conversion of V2500-D5 engines to a different model rating as described in this Service Bulletin can only be accomplished as per prior contractual agreement with International Aero Engines.

NOTE: Engines that have been operated at a higher Rating must maintain the life limited parts lives currently assigned to that higher Rating even if the engine is downrated to a lower Rating.

B. Reason

(1) Condition:

Operators of multiple V2500-D5 engine models desire more flexibility with engine rating interchangeability.

(2) Background:

Spare engines of a needed engine model may not always be available to operators of multiple V2500-D5 engine models.

(3) Objective:

To provide instructions for converting a V2500-D5 engine to a different engine model rating.

(4) Substantiation

All of the listed V2500-D5 engine model configurations have been previously flight tested and certified.

(5) Effects of Bulletin on Workshop Procedures:

Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected

Testing — Not affected

(6) Supplemental Information

None.

C. Description

(1) Determine if any Service Bulletin engine hardware and/or EEC software modifications are required prior to engine model conversion, from Table 1.

(2) Determine the Data Entry Plug jumper connections for the desired V2500-D5 engine model rating, from Table 2.

(3) Wire the current EEC Data Entry Plug to the appropriate engine model rating.

(4) Mark the Data Entry Plug with the new Variant No.

(5) Install a NEW Engine Identification Plate with the new Variant No. and Engine Rating already marked.

D. Approval

The Part Number Changes and/or part modifications described in Section 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 listed.

The 'compliance' statement and the procedures described in paragraph F of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-Approved for the Engine Model listed.

E. Compliance

Category 8

Accomplish based upon experience with the prior configuration.

NOTE: Conversion of V2500-D5 engines to a different model rating as described in this Service Bulletin can only be accomplished as per prior contractual agreement with International Aero Engines.

NOTE: Conversion is optional and is to be accomplished only if the required engine model is not available.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In service	21 minutes
(2) At overhaul	21 minutes

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

(a) To do a modification of the Data Entry Plug Assembly	13 minutes
(b) To identify Data Entry Plug Assembly	3 minutes
(c) To mark and install the Engine Identification Plate	5 minutes
TOTAL	21 minutes

G. Material - Price and Availability

(1) Modification kit is not required. Parts are supplied as single line items.

(2) See "Material Information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Tool No.	Qty	Description	Function	Avail
IAE2P16242	1	Tester	Electrical test	(1)

(1) Indicates that tool design aperture card is currently available from IAE.

I. Weight and Balance

(1) Weight change	None
(2) Moment arm	No effect
(3) Datum	Engine Front mount Centerline (Power Plant station (PPS) 100)

J. Electrical Load Data

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

K. References

(1) V2500-D5 Engine Illustrated Parts Catalog (S-V2500-3IA, S-V2500-3IB), Chapter/Section 73-22-35, (Figure Item No. 01-100), and Chapter/Section 72-32-85, (Figure Item No. 03-120).

(2) Aircraft Maintenance Manual, Chapter/Section 73-21-35, Approved Repairs, Replace the Jumpers, Contacts or Connector - VRS 3500; and Chapter/Section, 73-21-02 or 73-21-34 Adjustment/Test and Chapter/Section, 73-21-03, EEC Static Test Adjustment/Test.

(3) V2500 Standard Practices/Processes Manual(SSP-V2500-1IA), 70-09-00, Marking of Parts.

(4) IAE Service Bulletin:

None.

L. Other Publications Affected

None.

2. Accomplishment Instructions

NOTE: See Table 1 to determine which (if any) Service Bulletins must be incorporated into the subject engine before performing an engine model rating change.

A. Remove the Data Entry Plug by the procedure given in Reference (2), Chapter/Section 73-21-35, Repairs, VRS3500.

B. Disassemble the Data Entry Plug Assembly, PN 2A3106,Reference (1), Chapter/Section 73-22-35, Figure/Item No. 01-100) by the procedure specified in Reference (2), Chapter/Section 73-21-35, Repairs, VRS3500 and Figure 2.

NOTE: The Data Entry Plug Assembly can be disassembled as necessary to permit the installation of the necessary jumper wires.

C. Make two copies of Figure 5, Contact Hole Locations.

(1) Mark the existing jumper connections from the Data Entry Plug Connector on one copy of the figure.

(2) Find the jumper pin connections, from Table 2, for the current engine model rating, and highlight these on the copy made in C. (1).

(3) Find the jumper pin connections, from Table 2, for the variant for the target engine model rating, and highlight these on the second copy of the figure.

(4) Determine the jumper pin changes required from these two copies, for the target engine model rating, and any new jumpers needed, (Reference (1), Chapter/Section 73-22-35, Figure/Item No. 01-100), and Figure 2.

D. Modify the Data Entry Plug Connector by the procedure specified in Reference (2), Chapter/Section 73-21-35, Repairs, VRS3500.

E. Assemble the Data Entry Plug Assembly by the procedure specified in Reference (2), Chapter/Section 73-21-35, Repairs, VRS3500 and Figure 2.

F. Do a check of the wiring, using electrical tester IAE 2P16369, by the procedure specified in Reference (2), Chapter/Section 73-21-35, Repairs VRS3500.

G. Mark the Data Entry Plug Backshell with the new Variant No. by the procedure given in Reference (3), Chapter/Section 70-09-00, Marking of Parts Parts and Figure 3. Use the vibration peen method.

H. Install the Data Entry Plug by the procedure given in Reference (2), Chapter/Section 73-21-35, Repairs, VRS3500.

I. Install a new Engine Identification Plate, PN 5A9036, Reference (1), Chapter/Section 72-32-85, Figure Item No. 03-120, and Figure 4 as follows:

NOTE: The new Engine Identification Plate MUST be obtained from your International Aero Engines Representative, and the old Engine Identification Plate MUST be returned to this same representative.

(1) Remove the four bolts (4W0102), that hold the Engine Identification Plate to the bracket.

(2) Give the old Engine Identification Plate to your IAE Representative.

(3) Get the new Engine Identification Plate from your IAE Representative.

(4) Install the new Engine Identification Plate with the 4W0102 bolts (4 off).

(5) Torque the bolts between 32 to 36 lbfin (3,61 to 4,07 Nm).

NOTE: If a two-sided (reversible) Engine Identification Plate is installed, that already has the required information and the new variant No. on the back-side of the plate, the plate may simply be removed, flipped over, and installed again. You MUST inform your IAE representative of this action.

J. Check the data entry plug wiring by viewing the Engine Rating indicated on the Engine Display Panel comparing this to the Data Plate information, when the EEC and the DEP are installed on the aircraft. Use the procedure specified in Reference (2), Chapter/Section 73-21-02 or 73-21-34, EEC Adjustment/Test. Aircraft 28V dc Power/Engine Display Panel Adjustment /Test, to view the EDP, and Figure 6.

NOTE: If this does not agree, the Data Entry Plug must be corrected or replaced; until then the aircraft can not be dispatched.

K. Do a Static Test of the EEC by the procedure given in Reference (2), Chapter/Section 73-21-03, Static Test, Adjustment/Test .

NO SERVICE BULLETIN REQUIREMENTS AT THIS TIME

E7871

Service Bulletin Incorporation Requirements for Engine Model Conversion
Table 1

FOR DEP 2A3106 (CL02), 2A2309 (CL04)

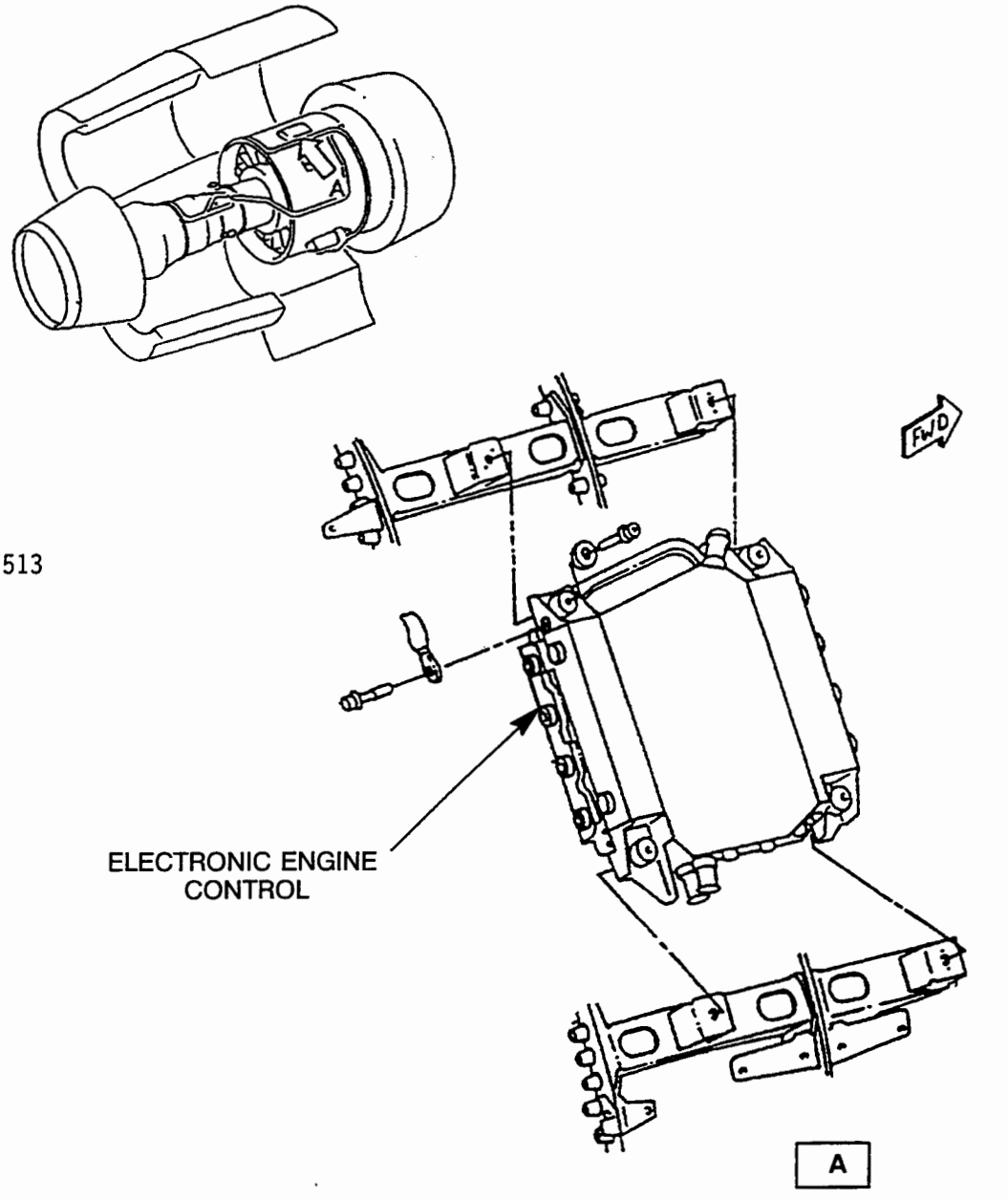
VARIANT No.	ENG. RATING.	THRUST LEVEL	BUMP No.	CHANNEL A	CHANNEL B	JUMPER TYPE	No. REQ.
10	4	28K	00	b* TO F Y TO C Z* TO D	h* TO S N TO q g* TO f	2 PIN 2 PIN 2 PIN	 2 PIN :6
15	5	25K	00	b* TO F Y TO C , X Z* TO D, E	h* TO S, N TO q, M g* TO f , R	2 PIN 3 PIN 3 PIN	2 PIN :2 3 PIN :4
20	6	25K/28K	00	b* TO F Y TO B, X	h* TO S N TO e, M	2 PIN 3 PIN	2 PIN :2 3 PIN :2

NOTE: In some cases, connectors holes b and h are used in the engine serial number wiring and connector holes g and Z are used in the EPR modifier wiring. Determine which holes are to be connected for engine serial number, EPR modifier and variant number wiring before you select the required jumpers.

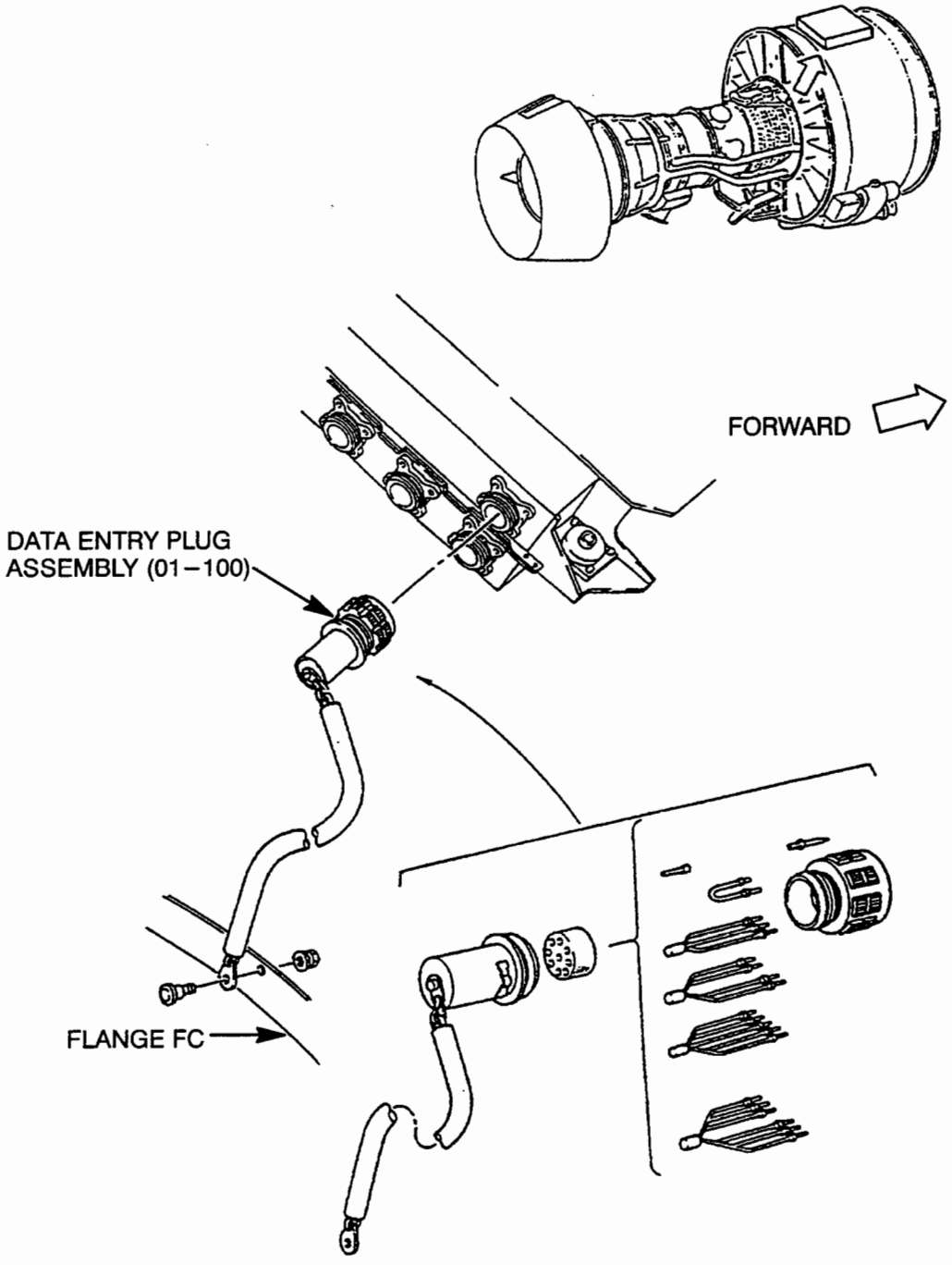
E7872

Data Entry Plug Pin Selection Procedure For Engine Rating - Bump No.
Table 2

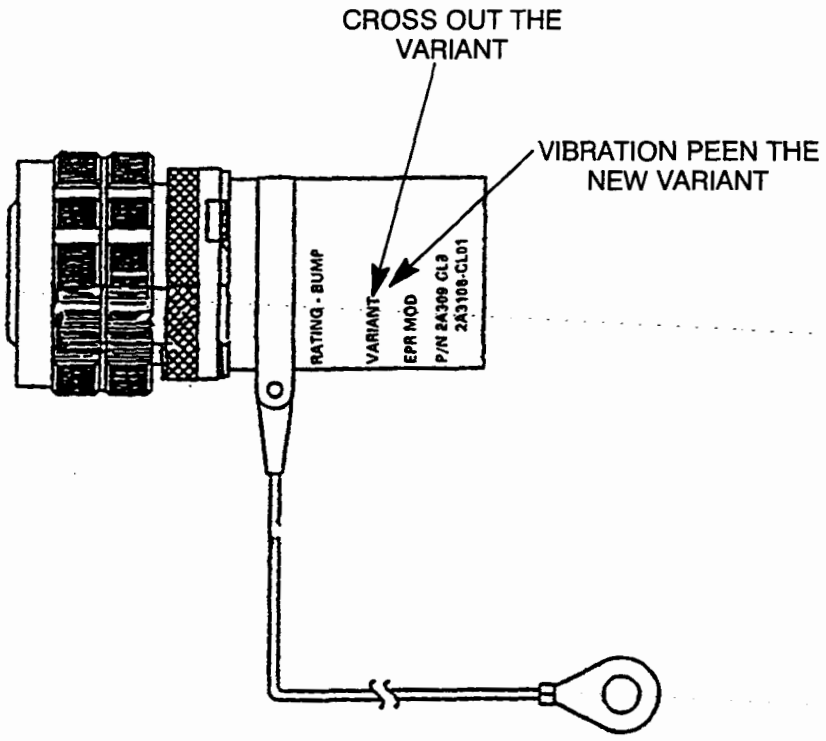
?fi;E7513



Location of the Electronic Engine Control
Figure 1

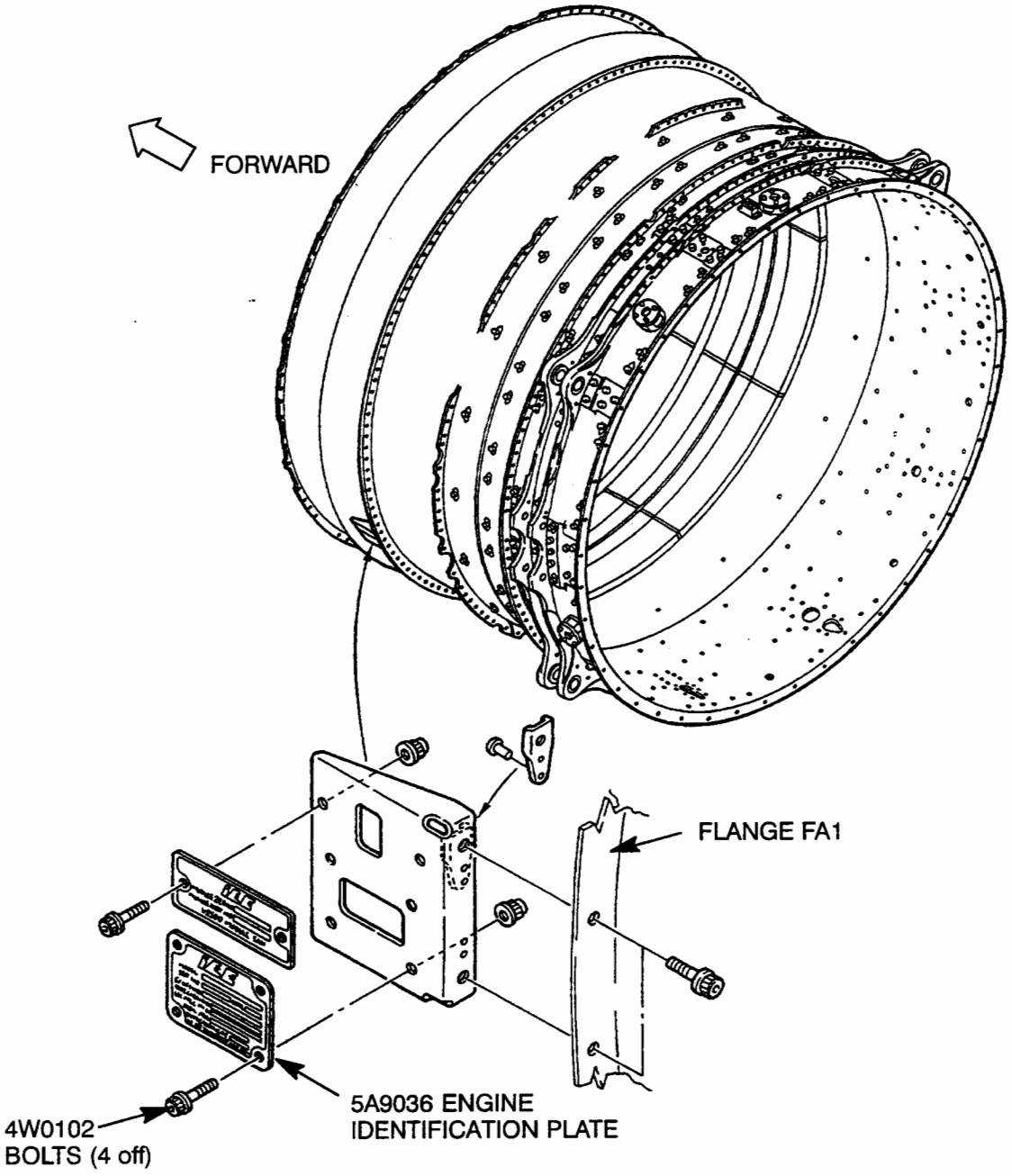


Data Entry Plug Assembly
Figure 2

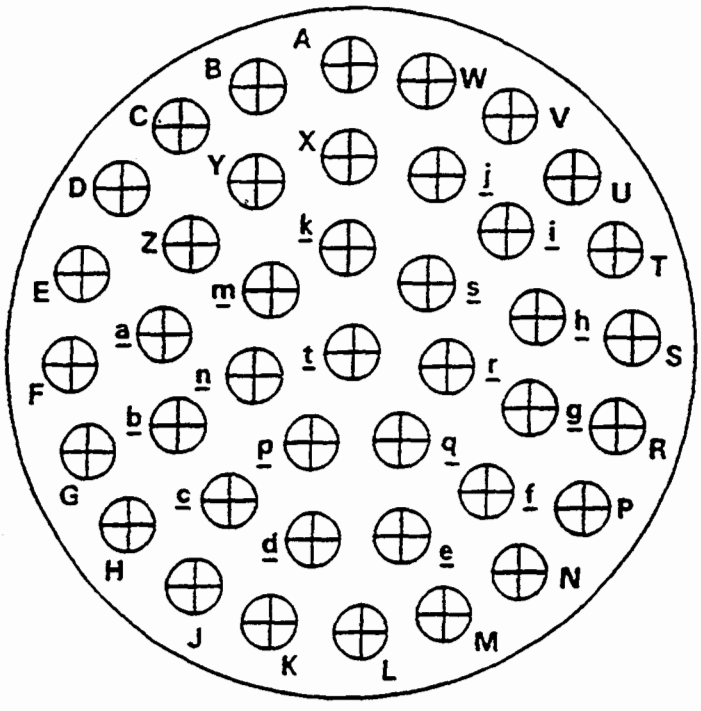


E7875

Identification Of The Data Entry Plug Assembly To the New Part Number
Figure 3



Location of the Engine Identification Plate
Figure 4



?fi;E7564

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

ENGINE NO. _____

RATING – BUMP _____

VARIANT _____

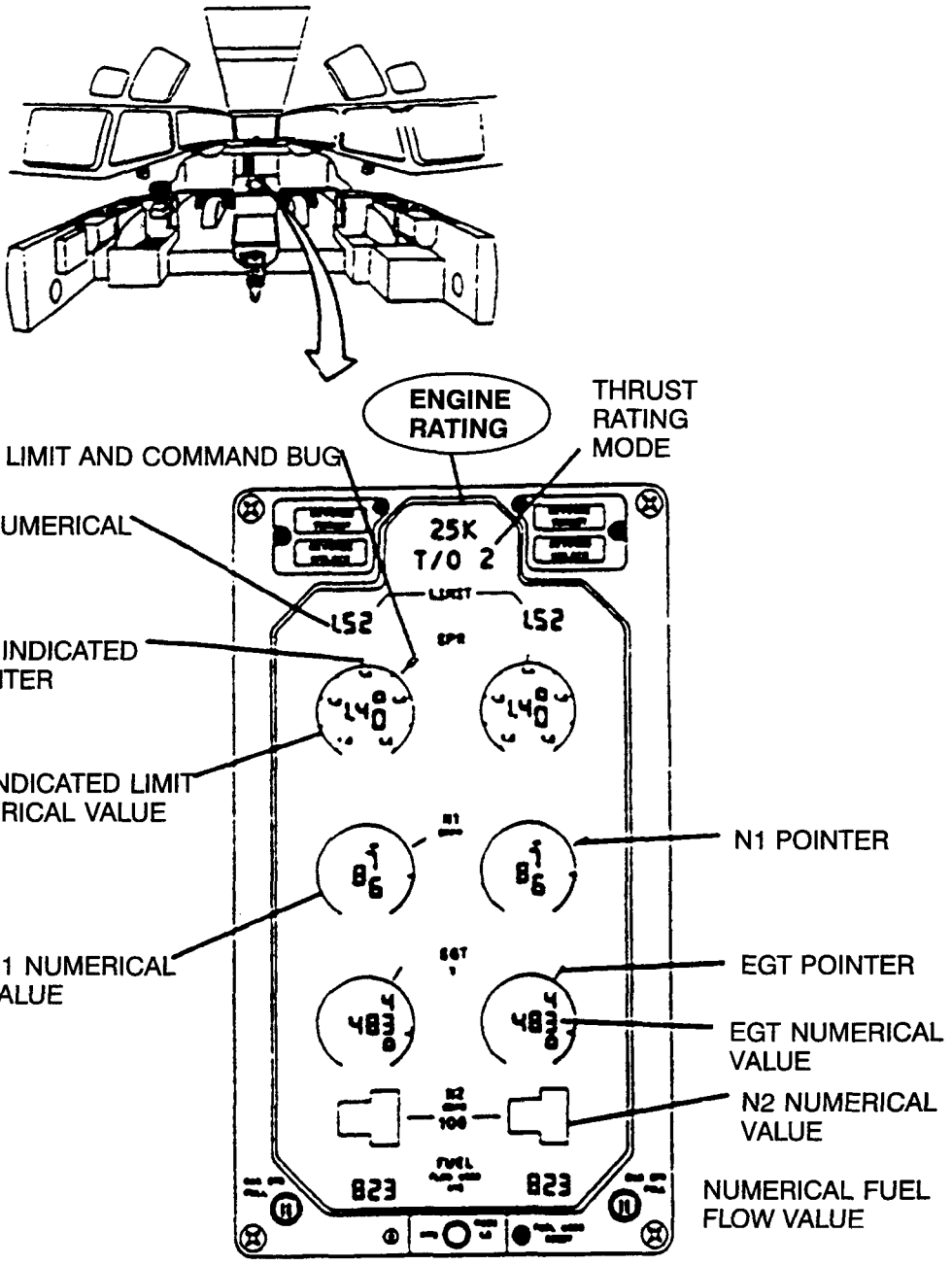
EPR MOD. _____

P/N 2A3106– CL02

E7877

Contact Hole Locations
Figure 5

?fi;E7564



Engine Display Panel Electronic Engine Control Adjustment/Test
Figure 6

3. Material Information

A. Kit associated with this bulletin.

None

B. Parts affected by this bulletin.

New Part No. (ATA No.)	Qty	Est'd Unit Price($)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
5A9036 (72-32-85)	1		Engine Identification Plate	5A9036 (03-120)	(A)

C. Consumable Materials

None.

D. Instructions/Disposition Code Statements:
(A) The new Engine Identification Plate can be obtained through your International Aero Engines Representative.