

International Aero Engines
SERVICE BULLETIN

June 26/98

Subject: Transmittal of Revision 1 to Service Bulletin V2500-ENG-75-0029

Service Bulletin Revision History:

Event	Date
Basic Issue	Apr. 25/92.
Revision 1	June 26/98.

Reason for Revision:

- (1) Change Effectivity at 1. A. (2) (a).
- (2) Editorial changes to bring SB up to latest standards.

Effect on Past Compliance:

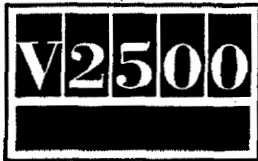
None.

List of Effective Pages:

Page No.	Revision No.	Effective Date
1 to 7	Revision 1	June 26/98.

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Transmittal
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AIR - VARIABLE STATOR VANE ACTUATOR - INTRODUCTION OF A LINEAR VARIABLE
DIFFERENTIAL TRANSFORMER (LVDT) WITH IMPROVED EXTERNAL SEALING

MODEL APPLICATION

V2500-A1

BULLETIN INDEX LOCATOR

75-32-00

Compliance Category Code

R 4

Internal Reference No.

EC91VR017 ECM91VR017-01



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**AIR - VARIABLE STATOR VANE ACTUATOR - INTRODUCTION OF A LINEAR VARIABLE
DIFFERENTIAL TRANSFORMER (LVDT) WITH IMPROVED EXTERNAL SEALING**

1. Planning Information

A. Effectivity

(1) Aircraft:

(a) Airbus A320.

(2) Engines:

R (a) V2500-A1 Engines prior to Serial No. V0261.

R B. Concurrent Requirements

None.

R C. Reason

R (1) Problem

R Fuel leaks into the linear variable differential transformer (LVDT), can cause malfunctions to
R show on the cockpit display system.

R (2) Evidence

The problem was found in service.

R (3) Substantiation

Successful vibration, pressure cycling, fuel immersion and temperature endurance tests have been
done on the changes introduced by this Service Bulletin.

R (4) Objective

The purpose of this Service Bulletin is to improve unit reliability.



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R (5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

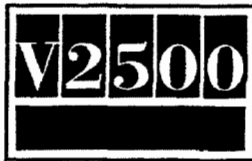
R D. Description

- R (1) This Service Bulletin includes the installation of an actuator for the variable stator vanes, that
R has the Dowty Fuel Systems Service Bulletin 1685-75-003 incorporated.
- (2) This Service Bulletin introduces a revised LVDT which has improved external sealing features.
- (3) Units which have this modification incorporated, will be identified by the serial number 1685 MK 6.

R E. Compliance

Category Code 4.

This Service Bulletin must be accomplished at the first visit of an engine or module to a maintenance base which has the capability to do the accomplishment instructions. It must be accomplished, regardless of the planned maintenance or reason for removal.



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R F. Approval

The part number changes and/or part modification are given in Section 2 and 3 of this Service Bulletin. They comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

R G. Manpower

Estimate of man-hours necessary to embody this Service Bulletin in full:

(1) For the Rework Instructions.

Refer to the Dowty Fuel Systems Service Bulletin 1685-75-003.

(2) For the assembly instructions.

<u>Venue</u>	<u>Estimated Man-hours</u>
(a) In Service	
(i) To gain access	16 Minutes
(ii) To embody	1 Hour 08 Minutes
(iii) To return engine to a serviceable status	20 Minutes
<u>TOTAL</u>	1 Hour 44 Minutes
(b) At Overhaul	Not applicable

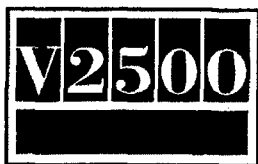
R H. Material - Price and Availability

(1) A modification kit is not necessary.

(2) Refer to 3. Material Information for the prices and availability of future spares.

R I. Tooling - Price and Availability

Special tools are not necessary.



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R J. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

Not affected.

(3) Datum

Engine front mount centreline (Power Plant Station (PPS) - 100)

R K. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

L. References

(1) A320 Aircraft Maintenance Manual (AMM), Chapter/Section 75-42-41, Removal/Installation.

(2) V2500 Component Maintenance Manual (CMM), Chapter/Section 75-42-41.

(3) Dowty Fuel Systems Service Bulletin 1685-75-003.

M. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC), Chapter/Section 75-32-41.



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2. Accomplishment Instructions

R A. Rework Instructions

CAUTION REWORK OF ALL VSVA UNITS TO REPLACE THE LVDT WILL ONLY BE ACTIONED BY A WORKING PARTY CONTRACTED BY DOWTY FUEL SYSTEMS, USING LVDT ELECTRICAL TEST UNIT EL4049.

- R (1) Rework the VSVA Mk 5 to produce a Mk 6. (Refer to the Component Maintenance Manual
R (AMM), Chapter/Section 75-32-41 and the Dowty Fuel Systems Service Bulletin 1685-75-003.

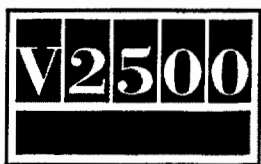
R B. Assembly Instructions

- R (1) Remove the 1685 Mk 5 VSVA and install the 1685 Mk 6 VSVA.

- R (a) For the correct removal/installation procedures refer to the Aircraft Maintenance Manual
R (AMM), Chapter/Section 75-42-41, Removal/Installation.

C. Recording Instructions

A record of accomplishment is necessary.



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3. Material Information

R Applicability: For each V2500 engine for which this Service Bulletin is applicable.

R A. Kits associated with this Service Bulletin:

None.

R B. Parts affected by this Service Bulletin:

NEW PART NUMBER	QTY	EST'D UNIT PRICE (\$)	PART TITLE	OLD PART No. (IPC No.)	INSTR DISP
1685 Mk 6 (75-32-41)	1		Actuator, stator vane	1685 Mk 5 (01-100)	(1D) (S1)

NOTE: The units prices, if shown, are an estimate and they are given for the purpose of planning only. For information about actual prices, refer to the IAE price catalogue or contact IAE's spare part Sales Department.

C. Instruction Disposition Codes

(1D) Old part can be reworked and re-identified as the new part.

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

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1685-75-003

ENGINE COMPRESSOR CONTROL - VARIABLE
STATOR VANE ACTUATOR. INTRODUCTION OF
LINEAR VARIABLE DIFFERENTIAL TRANSFORMER
(LVDT), WITH IMPROVED EXTERNAL SEALING.

(IAE SB V2500-ENG-75-0029)
(DFS MOD. D.TV.036)

1. Planning Information

A. Effectivity

(1) Airbus - A320

V2500-A1100000. All 1685 Mk5 Units.

(2) Variable Stator Vane Actuator Units

This bulletin applies to new manufacture; the point of embodiment is unit serial number 1685500.

B. Reason

(1) Condition

The current standard of Linear Variable Differential Transformer (LVDT), (in the Variable Stator Vane Actuator Unit), is not proof against the entrance of fuel. Entrance of fuel can cause the Eccosil potting compound to swell which can move the termination wires and the magnetic shield. This condition can result in short circuit(s) and a double lane electrical failure.

(2) Background

The condition was identified during the investigation of a unit which malfunctioned in service.

(3) Objective

Incorporation of the changes introduced by this Service Bulletin (Modification), are designed to make the LVDT proof against the entrance of fuel. This will prevent swelling of the Eccosil potting compound and resultant short circuit of the termination wires.

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(4) Substantiation

The changes introduced by this Service Bulletin Modification), have been shown by testing, to alleviate the condition.

C. Description

- (1) This Service Bulletin (Modification) introduces an LVDT with improved external sealing and which is proof against the entrance of fuel.
- (2) This Service Bulletin is in two parts. Part 1 is to accomplish this Service Bulletin at the Operator's facility (Contractor Working Party). Part 2 is to accomplish this Service Bulletin by unit replacement.

D. Compliance

Category Code 4.

Accomplish at the first visit of an engine or module to a maintenance base, capable of compliance with the accomplishment instructions, regardless of the planned maintenance action or the reason for engine removal.

E. Approval

Service Bulletin No. 1685-75-003 (Mod. D.TV.036), (IAE SB V2500-ENG-75-0029), was technically approved by IAE on Apr.9/92. The part number changes and/or part modifications described in this Service Bulletin have been shown to comply with the appropriate Federal Aviation Regulations and are FAA approved for those units listed in this Bulletin.

F. Manpower

2.25 man hours are necessary to accomplish this Service Bulletin (Modification), at Engine Maintenance Level (Part 1). 1.73 man hours are necessary to accomplish this Service Bulletin (Modification), by unit replacement (Part 2).

G. Material - Price and Availability

- (1) See the supplement to this Bulletin.

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H. Tooling - Price and Availability

(1) Additional tools

None (Equipment required for Part 1 accomplishment will be available to Contractor's Working Party).

(2) Tools made redundant

None.

I. Weight and Balance

(1) Weight change 4 g (0.142 oz.)
increase

(2) Moment arm No effect

(3) Datum Engine front mount
centerline (Power
Plant Station
(PPS)100).

J. References

(1) Dowty & Smiths Industries Controls Limited, component maintenance manual 75-32-41.

(2) IAE Service Bulletin V2500-ENG-75-0029.

(3) Dowty/Smiths Mod. D.TV.036.

K. Other Publications Affected

Nil.

2. Accomplishment Instructions

This Service Bulletin can be accomplished by change of parts at engine maintenance level or by unit replacement. 2.A are the engine maintenance accomplishment instructions. 2.B are the unit replacement instructions.

A. The engine maintenance level accomplishment instructions (Part 1), of this Service Bulletin are as follows:

- (1) Remove the Variable Stator Vane Actuator Unit (VSVA), as instructed by IAE Service Bulletin V2500-ENG-75-0029.
- (2) Allow the fuel to drain from the actuator and, where possible, install the transport blanks called up in 75-32-41.

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- (3) Refer to 75-32-41 and Figure 1 of this Service Bulletin and release the label retaining strap (1-20); remove the label retaining strap (1-20) and the data plate (1-30) from the VSVA.
- (4) Discard the label retaining strap (1-20) but keep the data plate (1-30) until the Service Bulletin accomplishment (Part 1), is complete.

CAUTION: KEEP THE UNIT AND COMPONENTS CLEAN. COMPLETE THE WORK IN AN AREA WHICH IS CLEAR OF DIRT AND OTHER UNWANTED MATERIAL/CONTAMINATION.

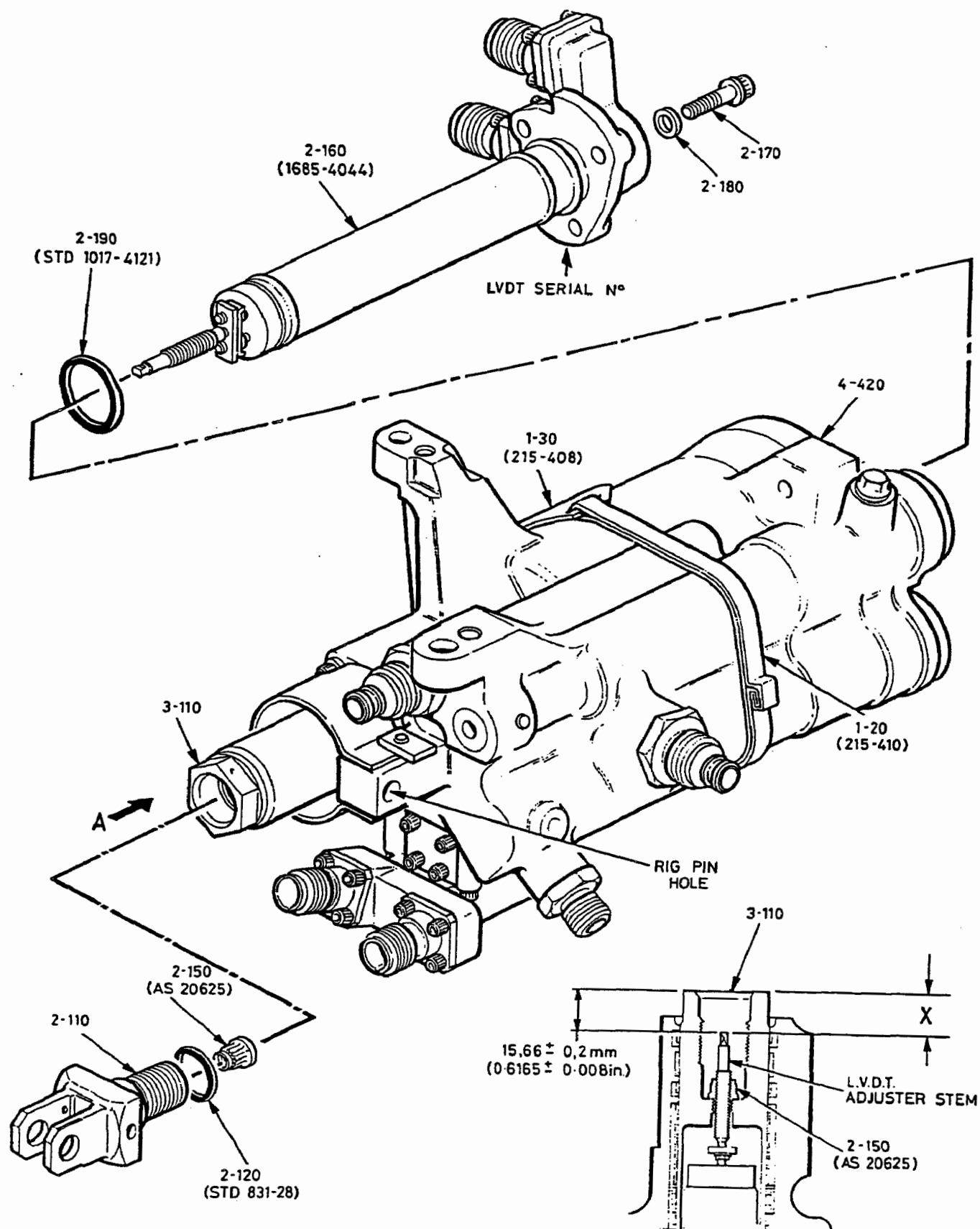
- (5) Check the local electrical supply voltage (120v or 240v). Refer to Figure 2 and set the voltage selector switch on the LVDT indicator unit EL4049, to equal the supply voltage. Connect the indicator unit to the mains supply and switch the on/off switch to the ON (down) position.
- (6) Set the winding selector switch to the PRIMARY position and adjust the energising voltage to $6.000 \pm 0.005v$ by means of the 6v adjustment pot. on the front panel of the indicator unit.

Note: Keep the indicator unit switched on while the change of LVDT is completed; this will permit the energising voltage to become stable.

- (7) Remove the LVDT, Figure 1
 - (a) Extend the ram piston (piston assembly) (3-110) by hand to the fully extended position. Remove the locking wire securing the fork end (2-110) to the ram piston (3-110). Use the reaction tool (of tool A43221), to hold the ram piston and unscrew the fork end with the torque adapter.
 - (b) Remove the fork end (2-110) together with the toroidal sealing ring (2-120) from the ram piston (3-110). Remove the toroidal sealing ring (2-120) from the fork end (2-110); discard the toroidal sealing ring.
 - (c) Unscrew and remove the self-locking nut (2-150) from the adjuster stem of the LVDT (2-160). Use the adjusting tool A43222 to hold the LVDT adjuster stem while the self-locking nut (2-150) is unscrewed at the same time. Discard the self-locking nut (2-150).

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Removal and Installation of the LVDT
Figure 1

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Note: Use the adjuster part of the tool to hold the LVDT adjuster stem; use the sleeve socket to turn the nut.

- (d) Unscrew the LVDT adjuster stem from the ram piston (3-110) (clockwise when viewed from arrow A); use the adjuster part of the tool A43222.
- (e) Unscrew and remove the three machine bolts (2-170) and the countersunk washers (2-180); these components secure the LVDT (2-160) to the body assembly (4-420).
- (f) Remove the LVDT (2-160) from the body assembly (4-420). Remove the toroidal sealing ring (2-190/2-190A) from the LVDT; discard the toroidal sealing ring.
- (g) Attach a label to the removed LVDT; the label must contain this data:

REMOVED FROM UNIT SERIAL No. 1685***

UNIT HOURS RUN:

Note: 1685*** as shown on the data plate (1-30), which was removed at the start of these instructions. The unit hours run should be added if this is known or can be got from the operator.

(8) Install the Replacement LVDT, Figure 1

- (a) Carefully remove the replacement LVDT (Refer to Para. 3.C) from the protective package. Make sure that the Supplier's Certificate is with the LVDT; make sure also that the Serial Number on the Certificate is the same as that on the flange of the LVDT.

CAUTION: KEEP THE SUPPLIER'S CERTIFICATE AVAILABLE THROUGHOUT THE REMAINDER OF THESE INSTRUCTIONS.

- (b) Write on the Supplier's Certificate, the serial number of the VSVA unit into which the LVDT is to be installed (1685*** - see the Note at sub. para. (7),(g)).
- (c) Remove the LVDT from the polythene bag and clean all the surfaces with a dry, lint-free cloth.

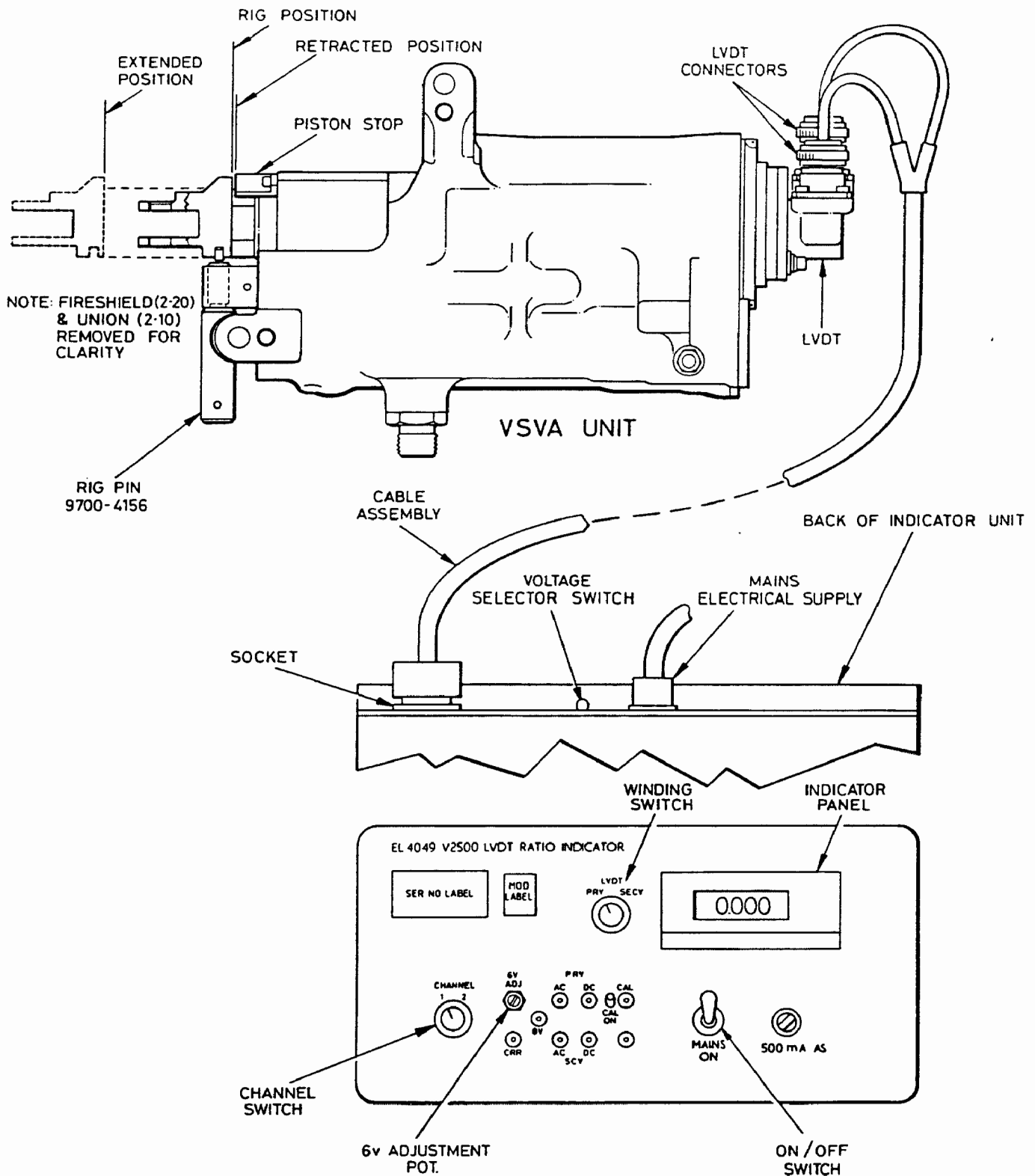
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**LVDT Output Voltage Checks
Figure 2**

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- (d) Get the replacement toroidal sealing ring (STD1017-4121); remove the sealing ring from the protective package and assemble it to the LVDT. Make sure the seal is not twisted in the groove.
- (e) Position the ram piston (3-110) to the mid stroke position. Extend the stem of the LVDT and install the LVDT to the body assembly (4-420), through the ram piston (piston assembly) (3-110); make sure that the LVDT adjuster stem engages the hole in the shoulder of the ram piston (3-110).
- (f) Use the adjuster part of the tool A43222 to screw the adjuster stem of the LVDT into the shoulder of the ram piston (3-110) (counterclockwise when viewed from arrow A). Make sure that the thread of the adjuster stem is fully engaged.
- (g) Align the three holes in the flange of the LVDT with the three holes in the LVDT housing (body assembly (4-420)). Install the three flat, countersunk washers (2-180) and the three machine bolts (2-170) to secure the LVDT.
- (h) Check, when the bolts are tightened, that there is a minimum of 0,23 Nm (2 lbf.in.) inbuilt torque in each of the inserts. If the inbuilt torque is less than this figure, reject the unit for Repair. Torque tighten the machine bolts to 4,5 Nm (40 lbf.in.).
- (i) Use the adjuster part of the tool A43222 to set the LVDT adjuster stem to a dimension of $15,66 \pm 0,2$ mm (0.6165 ± 0.008 in.) from the end of the piston as shown. Check with a vernier depth gauge.
- (j) Get the replacement self-locking nut (AS20625) and assemble the nut to the adjuster stem of the LVDT. Use the adjuster part of the tool A43222 to hold the adjuster stem in the set position. At the same time, use the sleeve socket to tighten the nut but do not torque tighten at this stage. Remove the tool A43222.
- (k) Make sure that the fork end (2-110) is clean; if necessary, clean it with a dry, lint-free cloth.
- (l) Get the replacement toroidal sealing ring (STD831-28); remove the sealing ring from the protective package and assemble it to the fork end (2-110).

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- (m) Install the fork end (2-110) into the end of the ram piston (3-110). Hold the ram piston with the reaction tool (of tool A43222) and torque tighten the fork end to 50 Nm (440 lbf.in.); use the torque adapter.

(9) Check the LVDT adjustment, Figure 2.

- (a) Connect the cable assembly to the socket on the LVDT indicator unit (EL4049), and the Channel 1 and Channel 2 connectors on the VSVA unit.

Note: Channel 1 and Channel 2 are marked on both the connectors and the cable assembly.

CAUTION: THROUGHOUT THE PROCEDURE, MAKE SURE THAT THE ENERGISING VOLTAGE REMAINS WITHIN THE LIMIT OF $6.000 \pm 0.005\text{v}$; RE-ADJUST THE VOLTAGE AS NECESSARY.

- (b) If necessary, adjust the energising voltage to $6.000 \pm 0.005\text{v}$ by means of the 6v adjustment pot. on the indicator unit; check that the winding switch is in the PRIMARY position and the channel switch is in the CHANNEL 1 position.
- (c) Move the ram piston (3-110) to the 'rig' position and put the rig pin 9700-4156 through the fireshield mounting block to engage the hole in the fork end (2-110).
- (d) Turn the winding switch to the SECONDARY position and read the LVDT output voltage on the indicator panel. Write the indicated voltage down under the heading 'Channel 1 - Rig Position'.
- (e) Turn the channel switch to the CHANNEL 2 position and repeat sub. para. (d). Write the indicated voltage down under the heading 'Channel 2 - Rig Position'.
- (f) Get the LVDT Supplier's Certificate and compare the Channel 1 and Channel 2 Rig Position, output voltages (as recorded), with those on the Certificate. For the LVDT to be accepted at the current setting, the voltages must be as follows:

Channel 1 output voltage must equal that stated on the Supplier's Certificate $\pm 0.002\text{v}$.

Channel 2 output voltage must equal that stated on the Supplier's Certificate $\pm 0.003\text{v}$.

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- (g) If the output voltages are within the limits given in sub. para. (f), check the output voltages at the retracted and extended positions (sub. paras. (10) (i) and (1)).
- (h) If the output voltages are outside the limits given in sub. para. (f), calculate the difference between the voltages as follows (use the Channel 1 voltages only):

e.g. Channel 1 voltage as recorded: 2.681v
Channel 1 voltage stated on
Supplier's Certificate: 2.667v
Difference: +0.014v

This shows that the LVDT output voltage must be reduced by 0.014v at the rig position.

- (10) Adjust the LVDT output voltage, Figures 1 and 2.

- (a) Remove the rig pin 9700-4156. Move the ram piston (3-110) to approximately the mid stroke position and remove the fork end (2-110) as described in sub. para. (7), (a). Turn the channel switch to the CHANNEL 1 position and read the new indicated Channel 1 output voltage.

CAUTION: DO NOT MOVE THE RAM PISTON, IN THE STROKE MODE, DURING THE ADJUSTMENT PROCEDURE.

- (b) Slacken the self-locking nut (2-150) and turn the stem of the LVDT to adjust the output voltage; use the tool A43222. Use the reaction tool of tool A43221 to prevent rotation of the ram piston.

Note: Counterclockwise rotation of the LVDT adjuster stem (when viewed from arrow A), REDUCES the LVDT, indicated output voltage. Clockwise rotation INCREASES the indicated voltage.

- (c) Adjust the stem of the LVDT to increase or reduce the indicated voltage by the value calculated at sub. para. (9), (h). Monitor the output voltage as the adjuster stem is turned. When the required voltage is indicated, torque tighten the self-locking nut (2-150) to 11,5 Nm (102 lbf. in.).
- (d) Measure the depth of the adjuster stem from the end face of the ram piston (3-110) (dimension X, Figure 1). Write this dimension down in case no further adjustment is required.

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- (e) Re-assemble and torque tighten the fork end (2-110), as described in sub. para. (8),(m). Return the ram piston (3-110) to the 'rig' position and re-insert the rig pin 9700-4156.
- (f) Turn the winding switch to the PRIMARY position and the channel switch to the CHANNEL 1 position; check the energising voltage as given in sub. para. (9),(b). Return the winding switch to the SECONDARY position.
- (g) Re-check the Channel 1 and Channel 2 Rig Position, output voltages which must be within the limits given in sub. para. (9),(f). If the voltages are still outside of the limits stated, re-adjust the LVDT adjuster stem as given in sub. paras. (a) through (e).
- (h) Repeat sub. para. (f).
- (i) Remove the rig pin 9700-4156 and move the ram piston to the fully retracted position (with the fork end against the piston stop). Check the indicated output voltage for both Channel 1 and Channel 2 at this position. The indicated output voltage is to be within the limit of 2.689v minimum and 2.736v maximum.
- (j) If the indicated output voltage (for either Channel), is outside of the limit given in sub. para. (i), it is possible to adjust the voltage only within the tolerance available at the 'rig' position. If necessary, repeat the adjustment procedure given in sub. paras. (a) through (g) and write down the indicated voltages for the 'rig' position.
- (k) Repeat sub. para. (f).
- (l) Move the ram piston (3-110) to the fully extended position. Check the indicated output voltage for both Channel 1 and Channel 2 at this position. The indicated output voltage for each Channel is to be within the limit of 0.385v minimum and 0.417v maximum. If the output voltage (for either Channel), is outside of the limit, the same adjustment conditions as for sub. para. (j) apply.

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- (m) Repeat the checks at the retracted and extended positions after any adjustment. Make sure that the self-locking nut (2-150) and the fork end (2-110) are correctly torque tightened, once adjustment is complete. Before the fork end is installed, re-measure dimension X if any adjustment has been made since sub. para. (d).
- (n) Write on the Supplier's Certificate the final values of indicated voltage and adjuster stem depth as follows:

Channel 1	Channel 2
Rig:	Rig:
Retracted:	Retracted:
Extended:	Extended:
Adjuster stem depth:	

- (o) Disconnect the cable assembly from the Channel 1 and Channel 2 connectors of the VSVA unit.

Note: If it is possible that the LVDT indicator unit EL4049 is to be used in the accomplishment of this Service Bulletin (on another VSVA unit), within the next two hours it is advisable to keep it switched ON.

- (11) Complete the Assembly of the Unit, Figure 1.

- (a) Wirelock the fork end (2-110) to the ram piston (3-110) as given in 75-32-41, Assembly.
- (b) Apply Ardrox 3302 to the areas of the joint faces of the LVDT and the unit body, as given in 75-32-41, Assembly.

- (12) Re-identify the VSVA unit, Figure 1.

- (a) Get the new data plate (1-30) (215-408) (supplied with the Mod. kit).
- (b) Refer to the information marked on the first data plate (1-30) and mark the new data plate as follows (use 1/16in. (1,6mm), letter/number stamps), with the data plate held on a flat surface:

TYPE No.	-	Mark: 1685 Mk6
SERIAL No.	-	Mark as on the original plate.
MOD No.	-	Mark as on the original plate.

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(continued)..

TEST - Keep blank.

INSP. - Keep blank.

- (c) Where possible, fill in the stamped letters and numbers with black paint and wipe away the surplus.
- (d) Destroy the first data plate.
- (e) Install the data plate on the VSVA unit as given in 75-32-41, Assembly; use the new label retaining strap (1-20) (215-410) (supplied with the Mod. kit).

(13) Install the VSVA and do the necessary leakage tests as instructed by IAE Service Bulletin V2500-ENG-75-0029.

(14) A record of accomplishment is required.

(15) Place the removed LVDT (labelled as in sub. para (7), (g), in a clean polythene bag and, if possible, heat seal the bag. Pack the LVDT, together with the Supplier's Certificate (for the replacement LVDT), in the package material from which the replacement LVDT was removed.

(16) Return the LVDT package to:

Dowty Fuel Systems
Arle Court
Cheltenham
Glos GL51 OTP
England.

(For the attention of the Customer Support Engineer, V2500).

B. Part 2 of this Service Bulletin is by unit replacement only:

- (1) Remove the Variable Stator Vane Actuator (VSVA), Unit as instructed by IAE Service Bulletin V2500-ENG-75-0029.

Note: Removed VSVA units should be returned to:

Dowty Fuel Systems
Arle Court
Cheltenham
Glos GL51 OTP
England.

For the attention of the Customer Support Engineer, V2500).

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(2) Install the replacement VSVA unit as instructed by IAE Service Bulletin V2500-ENG-75-0029. The part number identification, 1685 Mk6, will show that this Service Bulletin has been incorporated.

(3) A record of accomplishment is required.

3. Material Information.

A. Modification Kit.

Modification kit D.TV.036 (comprises the parts given in Para. C.).

B. Parts to be Re-worked.

None.

C. New Production Parts.

The following new parts will be available as spares:

<u>New Part No.</u>	<u>Qty.</u>	<u>Keyword</u>	<u>Old Part No.</u>
1685-4044	1	LVDT*	1685-4017
1685-4050	1	LVDT*	
STD1017-4121	1	Ring, sealing	STD831-7
STD831-28	1	Ring, sealing	STD831-28
AS20625	1	Nut, self-locking	AS20625
215-410	1	Strap, label	215-410
		retaining	
215-408	1	Plate, data	215-408

* alternative by availability.

Note: If these standards of LVDT are not available, install the LVDT introduced by Service Bulletin (Modification) 1685-75-004.

D. Redundant Parts.

<u>IPL</u>	<u>Fig./Item</u>	<u>New Part No.</u>	<u>Qty</u>	<u>Keyword</u>	<u>Old Part No.</u>
	2-160	1685-4044	1	LVDT*	1685-4017
		1685-4050	1	LVDT*	
	2-190	STD1017-4121	1	Ring, sealing	STD831-7

* alternative by availability, but see the Note at Para. C.

1685-75-003

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

Dowty Fuel Systems

SERVICE BULLETIN

E. Identification of Units.

The type of equipment affected by this Service Bulletin
(Modification), is:

Unit

Type No.

Variable Stator Vane Actuator	1685 Mk5 (Becomes 1685 Mk6).
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Dowty Fuel Systems

SERVICE BULLETIN

1685-75-003 (SUPPLEMENT)

ENGINE COMPRESSOR CONTROL - VARIABLE
STATOR VANE ACTUATOR. INTRODUCTION OF
LINEAR VARIABLE DIFFERENTIAL TRANSFORMER
(LVDT), WITH IMPROVED INTERNAL SEALING.

(IAE SB V2500-ENG-75-0029)
(DFS MOD. D.TV.036)

1. Modification Kit.

Modification kit D.TV.036 comprises the parts given in Para. 2.

2. New Production Parts.

<u>Part No.</u>	<u>Qty per</u> <u>unit</u>	<u>Keyword</u>	<u>Gross World</u> <u>List Price</u> <u>(Dollars)</u>	<u>Availability c</u> <u>Receipt of Ord</u>
1685-4044	1	LVDT*	\$5253.37	90 days
1685-4050	1	LVDT*	\$5253.37	90 days
STD1017-4121	1	Ring, sealing	\$11.70	90 days
STD831-28	1	Ring, sealing	\$22.13	90 days
AS20625	1	Nut, self- locking	\$6.24	90 days
215-410	1	Strap, label retaining	\$3.08	90 days
215-408	1	Plate, data	\$37.34	90 days

* alternative by availability.

Note: If these standards of LVDT are not available, install the LVDT introduced by Service Bulletin (Modification 1685-75-004.

3. New Tooling.

None.

SUPPLEMENT
1685-75-003

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