STANDARD PRACTICES – ENGINE – INFORMATION – ENGINE – OIL – TO ANNOUNCE THE AVAILABILITY OF A NEW NL.4 SCAVENGE VALVE – CATEGORY CODE 7 – MOD.ENG-70-0380



1. Planning Information

A. Effectivity

(1) Aircraft: (a) Airbus A321
(b) McDonnell Douglas MD-90

(2) Engine: (a) V2527-A5
(b) V2530-A5
(c) V2525-D5
(d) V2528-D5

B. Reason

To provide a common valve for all V2500 engine models.

C. Compliance

Category Code 7

Accomplish when supply of superseded parts has been depleted.

D. Approval

The part number transaction shown under the Material Information portion of this Bulletin has been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model listed.

E. References

(1) Internal Reference No.

EC93VJ153

(2) Other references

Lucas Aerospace Service Bulletin No.1779-79-001.

F. General Information

(1) The Material Information section of this bulletin provides the latest information concerning the availability of a new No.4 scavenge valve.

(2) The 5L0037, N.4 scavenge valve can be reworked and reidentified to a new configuration with accomplishment instructions given in the Lucas Aerospace Service Bulletin No.1779-79-001.

(3) The valve schedule is revised to provide commonality for all V2500 models.

G. Material Information

| New Part No. (ATA No.) | Qty | Est'd Unit Price ($) | Keyword | Old Part No. (IPC No.) | Supply Status |
|---|---|---|---|---|---|
| 1779MK2 (5L0062) (79-23-51) | 1 | | .Valve, Scavenge No.4 Brg | 1779MK1 (5L0037) (01-100) | (A)(B) (S1)(1D) |

H. Supply Status Code Statement;

(A) New part is currently available.
(B) Old part is no longer available.
(S1) Old and new parts are freely and fully interchangeable, both physically and functionally.
(1D) Old part can be reqorked and reidentified to the new configuration.

NOTE: The estimated 1995 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Contact the IAE's Spare Parts Sales Department or consult the vendor for information concerning firm prices.

Lucas Aerospace

# SERVICE BULLETIN

**1779-79-001**

**ENGINE OIL DISTRIBUTION - No.4 BEARING COMPARTMENT SCAVENGE VALVE UNIT - INTRODUCTION OF NEW HELICAL COMPRESSION SPRING.**

**(IAE SB V2500-ENG-70-0380 and V2500-ENG-79-0044)**
**(LUCAS ENGINE CONTROL SYSTEMS MOD. D.TV.054)**

1. Planning Information.

A. Effectivity.

(1) Airbus - A320.

V2500-A1. All 1648 Units (superseded by 1779 Mk 2 units).

(2) Airbus - A320/A321.

V2527-A5. All 1779 Mk.1 units.
V2530-A5. All 1779 Mk.1 units.

(3) McDonnell Douglas MD90.

V2525-D5. All 1779 Mk.1 units.
V2528-D5. All 1779 Mk.1 units.

(4) No.4 Bearing Compartment Scavenge Valve Units.

This bulletin applies to new manufacture; the point of embodiment is unit serial number 1779157.

B. Reason.

(1) Condition.

The current standard of No.4 Bearing Compartment Scavenge Valve is only suitable for use on the V2500, A5 and D5 engines.

(2) Background.

A change has been made to the Specification IAES 252 issue 3, to enable the unit to operate on A1 engines in addition to the A5 and D5 variants.

(3) Objective.

Incorporation of the change introduced by this Service Bulletin (Modification), is designed to lower the pressure limit at which the valve must be on/off the high pressure stop.

(4) Substantiation.

The change introduced by this Service Bulletin will enable standardisation of the No.4 Bearing Compartment Scavenge Valve Unit across the range of V2500 engines.

C. Description.

This Service Bulletin (Modification) introduces a new spring which has a lower working rate, achieved by increasing the number of working coils.

D. Compliance.

Category Code 7.

Accomplish when the supply of superseded parts has been depleted.

E. Approval.

Service Bulletin No. 1779-79-001 (Mod. D.TV.054), was technically approved by IAE on 15 Mar 1995. The part number changes and/or part modifications described in this Service Bulletin have been shown to comply with the appropriate Federal Aviation Administration (FAA), Regulations and are FAA approved for those units listed in this Bulletin.

F. Manpower.

5.0 man hours are necessary to accomplish this Service Bulletin (Modification), including full re-test.

G. Material - Price and Availability.

See the supplement to this Bulletin.

H. Tooling - Price and Availability.

(1) Additional tools:

None.

(2) Tools made redundant:

None.

I. Weight and Balance.

(1) Weight change ..... Nil

(2) Moment arm ..... No effect

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

J. References.

(1) Lucas Aerospace Limited, Component Maintenance Manual (CMM) 79-25-41.

(2) IAE Service Bulletins V2500-ENG-70-0380 and V2500-ENG-79-0044.

(3) Lucas Engine Control Systems Mod. D.TV.054.

K. Other Publications Affected.

Nil.

2. Accomplishment Instructions.

A. Remove the No.4 Bearing Compartment Scavenge Valve Unit (Unit), as instructed by IAE Service Bulletin V2500-ENG-70-0380.

B. Allow the oil to drain from the unit and install the transport blanks called up in CMM 79-25-41.

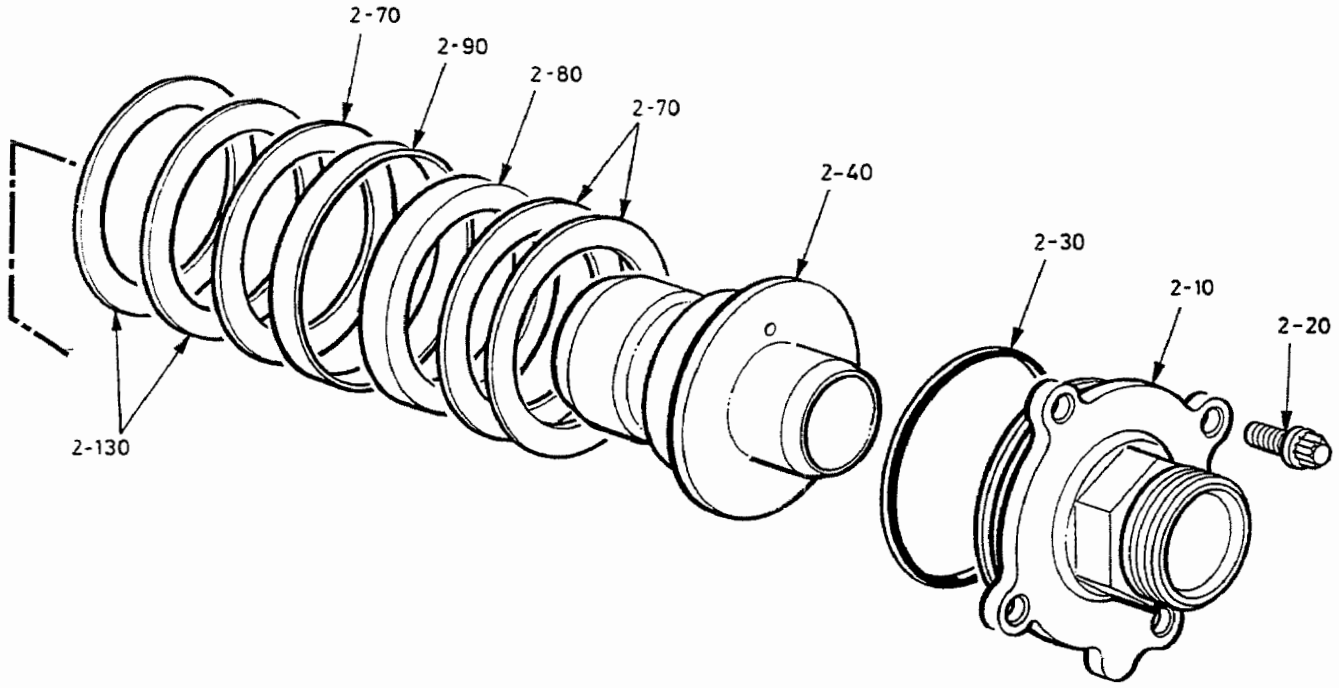
C. Refer to CMM 79-25-41 and Figure 1 of this Service Bulletin and release the label retaining strap (1-60); remove the label retaining strap (1-60) and the identification plate (1-70) from the unit.

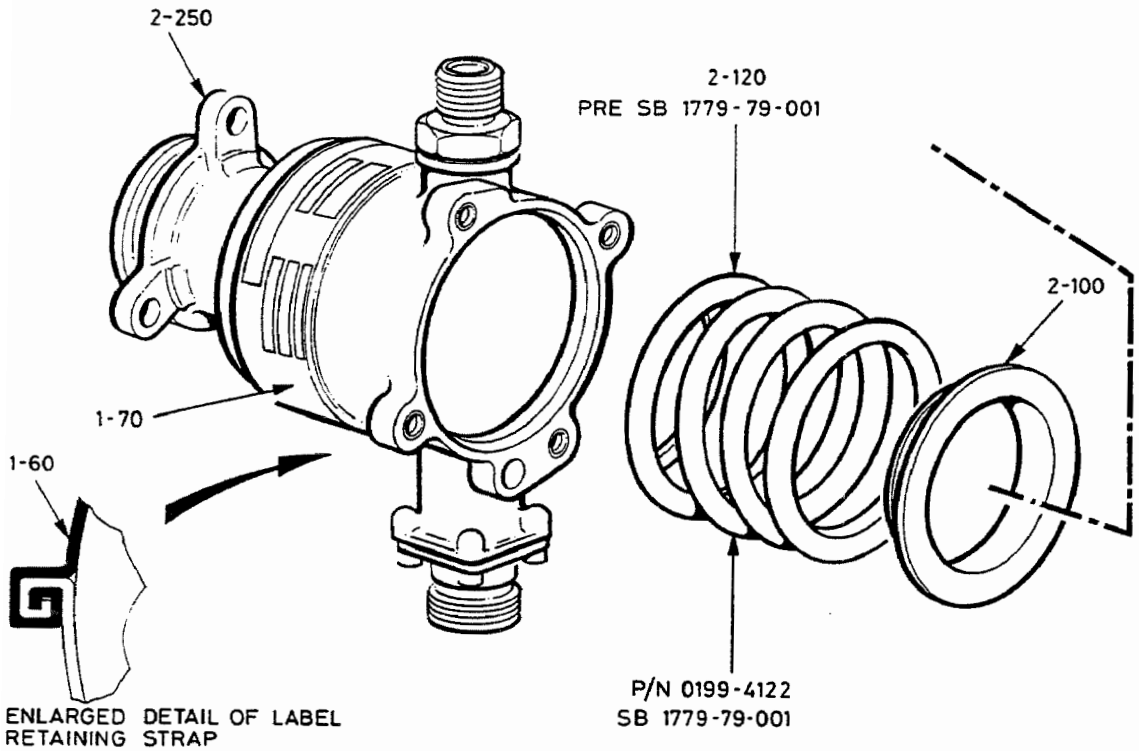
D. Discard the label retaining strap (1-60) but keep the identification plate (1-70) until the Service Bulletin accomplishment is complete.

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

E. Refer to CMM 79-25-41 and Figure 1 of this Service Bulletin, and remove the four machine bolts (2-20) which attach the valve cover (2-10); use the compression tool specified.

F. Remove the toroidal sealing ring (2-30) from the valve cover (2-20).




Removal and Installation of the Spring
Figure 1

G. Remove the following components from the valve housing assembly (2-250):

(1) Valve piston (2-40)

(2) Spacer(s) (2-70)

(3) Magnet (2-80)

(4) Magnet sleeve (2-90)

(5) Spacer (2-70) (if fitted)

(6) Spacer(s) (2-130)

(7) Spring seat (2-100)

H. Remove the helical compression spring (2-120) and put aside; do not remove any other components from the valve housing assembly (2-250).

Note: If the valve seat (2-140) (refer to CMM 79-25-41), is moved during this procedure, a new toroidal sealing ring (part no. AS43013-139) must be fitted before the valve seat is re-assembled. The sealing ring is provided in the modification kit.

I. Get the new helical compression spring (part no. 0199-4122) from the modification kit; assemble the spring, spring seat spacer and valve piston components as given in CMM 79-25-41. Use the original number of spacers at each location.

Note: The quantity/thickness of the spacers may require to be adjusted on test. Additional spacers (2-70) (part no. 1729-4004) and (2-130) (part no. 1729-4002) are supplied in the modification kit.

J. Assemble the new toroidal sealing ring (part no. AS43013-141) to the valve cover (2-10). Assemble the valve cover (2-10) to the valve housing assembly (2-250) as given in CMM 79-25-41.

K. Test the unit as given in CMM 79-25-41.

L. Re-identify the unit :

(1) Get the new identification plate (1-70) (215-4010) (supplied with the modification kit).

(2) Refer to the information marked on the first identification plate (1-70) and mark the new identification plate as follows (use 1,6mm (1/16in.), letter/ number stamps), with the identification plate held on a flat surface:

IAE No. - Mark: **5L0062**

TYPE No. - Mark: **1779 Mk2**

SERIAL No. - Mark as on the original plate.

INSP/TEST - Keep blank.

MOD No. - Mark as on the original plate.

(3) Where possible, fill in the stamped letters and numbers with black paint and wipe away the surplus.

(4) Destroy the first identification plate.

(5) Install the identification plate on the actuator unit as given in CMM 79-25-41, Assembly; use the new label retaining strap (1-60) (215-410) (supplied with the Mod. kit).

M. Install the Actuator and do the necessary leakage tests as instructed by IAE Service Bulletin V2500-ENG-70-0380.

N. A record of accomplishment is required.

3. Material Information.

A. Modification Kit.

Modification kit D.TV.054 (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:

| New Part No. | Qty. | Keyword | Old Part No. |
|---|---|---|---|
| 0199-4122 | 1 | Spring | 0199-4110 |
| AS43013-139 | 1 | Ring, sealing | AS43013-139 |
| AS43013-141 | 1 | Ring, sealing | AS43013-141 |
| 1729-4002 | 2 | Spacer | 1729-4002 |
| 1729-4004 | 3 | Spacer | 1729-4004 |
| 215-410 | 1 | Strap, label retaining | 215-410 |
| 215-4010 | 1 | Plate, identification | 215-4010 |

D. Redundant Parts.

| IPL Fig./Item | New Part No. | Qty | Keyword | Old Part No. |
|---|---|---|---|---|
| 2-120 | 0199-4122 | 1 | Spring | 0199-4110 |

E. Identification of Units.

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

| Unit | Type No. |
|---|---|
| No.4 Bearing Compartment Scavenge Valve Unit | 1779 Mk1 (Becomes 1779 Mk2). |

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# SERVICE BULLETIN

**1779-79-001 (SUPPLEMENT)**

**ENGINE OIL DISTRIBUTION - No.4 BEARING COMPARTMENT SCAVENGE VALVE UNIT - INTRODUCTION OF NEW HELICAL COMPRESSION SPRING.**

**(IAE SB V2500-ENG-70-0380 and V2500-ENG-79-0044)**
**(LUCAS ENGINE CONTROL SYSTEMS MOD. D.TV.054)**

1. Modification Kit.

Modification kit D.TV.054 comprises the parts given in Para. 2.

2. New Production Parts.

| Part No. | Qty per unit | Keyword | Gross World List Price (Dollars) | Availability on Receipt of Order |
|---|---|---|---|---|
| 0199-4122 | 1 | Spring | $ 293.25 | 90 days |
| AS43013-139 | 1 | Ring, sealing | $ 6.73 | 90 days |
| AS43013-141 | 1 | Ring, sealing | $ 8.87 | 90 days |
| 1729-4002 | 2 | Spacer | $ 9.32 | 90 days |
| 1729-4004 | 3 | Spacer | $ 6.90 | 90 days |
| 215-410 | 1 | Strap, label retaining | $ 4.42 | 90 days |
| 215-4010 | 1 | Plate, identification | $ 14.77 | 90 days |

3. New Tooling.

None.

4. Spare Parts Supply.

Spares distribution and Customer Service is available from the following Lucas Aerospace Customer Support Centres:

| REGION | ADDRESS | COMMUNICATION | |
|---|---|---|---|
| AMERICAS | LUCAS AEROSPACE CUSTOMER SUPPORT, AMERICAS<br>ONE CIRCLE WEST<br>STAMFORD<br>CONNECTICUT 06902<br>USA | PHONE/AOG<br>TELEX<br>FAX<br>SITA/ARINC | (1) 203 351 8400<br>4750339<br>(1) 203 351 8444<br>BDRLU7X |

Continued...

| REGION | ADDRESS | COMMUNICATION | |
|---|---|---|---|
| EUROPE/MIDDLE-EAST/AFRICA | LUCAS AEROSPACE CUSTOMER SUPPORT, EUROPE<br>BIRMINGHAM ROAD<br>WEST BROMWICH<br>WEST MIDLANDS B71 4JR<br>ENGLAND | PHONE/AOG<br>TELEX<br>FAX<br>SITA/ARINC | (44) 121 627 6767<br>334174<br>(44) 21 500 6405<br>BHXLW7X |
| ASIA/PACIFIC | LUCAS AEROSPACE CUSTOMER SUPPORT, ASIA/PACIFIC<br>35 - 37 LOYANG WAY<br>SINGAPORE 1750 | PHONE<br>FAX<br>SITA/ARINC<br>AOG | (65) 545 9975<br>(65) 545 9965<br>SINLU7X<br>(65) 545 6253 |