STARTING - PNEUMATIC STARTER VALVE - INTRODUCTION OF STARTER CONTROL VALVE WITH REVISED MATERIAL FOR ACTUATOR LINK PIN - CATEGORY CODE 7 - MOD.ENG-80-0012

1. Planning Information

A. Effectivity

(1) Aircraft:
(a) Airbus A319
(b) Airbus A320
(c) Airbus A321
(d) McDonnell Douglas MD-90

(2) Engines:
(a) V2500-A1 Engines prior to Serial No.V0362
(b) V2522-A5 Engines prior to Serial No.V10124
(c) V2524-A5 Engines prior to Serial No.V10124
(d) V2527-A5 Engines prior to Serial No.V10124
(e) V2530-A5 Engines prior to Serial No.V10124
(f) V2525-D5 Engines prior to Serial No.V20027
(g) V2528-D5 Engines prior to Serial No.V20027

B. Concurrent Requirements

None.

C. Reason

(1) Condition

The butterfly valve of the starter control valve can lock in the open position.

The problem is caused by corrosion of the headless pin that attaches the actuating arm to the pneumatic valve piston. The corrosion of the pin is caused by the condition of operation.

(2) Background

The problem has been found on several units in service.

(3) Objective

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

(4) Substantiation

The changes contained in this Service Bulletin have been the subject of satisfactory engineering analysis.

(5) Effect of Bulletin on Workshop Procedures

Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Inspection/Check	Affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

None

D. Description

(1) This Service Bulletin contains the installation of a starter control valve to engines that have Sumitomo Modification L9.

(2) The changes are as follows:

The starter control valve has been changed. The material of the headless pin has been changed from AMS5630 (440C) to AMS5616 (HS2776). The new material has greater resistance to corrosion at high temperatures.

(3) Units which have this Modification will have L9 put on the modification plate.

E. Approval

The part number changes and/or part modification are given in Section 2 and 3 of this Service Bulletin. They obey the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model Listed.

F. Compliance

CATEGORY CODE 7

This Service Bulletin can be done when there are no initial parts remaining.

G. Manpower

Estimate of manhours necessary to do this Service Bulletin in full:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At overhaul	No additional time is necessary to do this Service Bulletin.

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

H. Material - Price and Availability

(1) A modification kit is not necessary.

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

I. Tooling - Price and Availability

Special tools are not necessary.

J. Weight and Balance

(1)	Weight change	None
(2)	Moment arm	No effect
(3)	Datum	Engine front mount centreline (Power Plant Station - PPS 100)

K. Electrical Load Data

This Modification has no effect on the aircraft electrical load.

L. References

(1) Internal Reference No.

EC94VR040

(2) Other References

Refer to vendor service bulletin.

M. Other Publications Affected

(1) Illustrated parts catalog (IPC), Chapter/Section 80-13-51.

2. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

Remove the starter control valve and replace it with a new unit. For the correct removal/installation procedures, refer to applicable Aircraft Maintenance Manual (AMM), Chapter/Section 80-13-51 or the applicable Engine Manual (EM), Chapter/Section 72-00-32.

C. Recording Instructions

(1) A record of accomplishment is necessary. Refer to vendor service bulletin.

3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits 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
790424-4 (80-13-51)	1		Valve - starter, pneumatic	790424-4 (01-200)	(A)(B)(S1)

NOTE: The 1997 unit prices shown are an estimate and they are given for the purpose of planning only. For information about actual prices, refer to the IAE Price Catalog or contact IAE's Spare Parts Sales Department.

C. Instruction Disposition Codes:

(A) New part is currently available.
(B) Old part will be discontinued.
(S1) Old and new part are freely and fully interchangeable.

SUMITOMO PRECISION PRODUCTS CO., LTD.

SERVICE BULLETIN

STARTING – STARTER CONTROL VALVE –
INTRODUCTION OF AN IMPROVED PIN MATERIAL

1. Planning Information

   A. Effectivity

      (1) Aircraft:

         (a) Airbus A320

         (b) Airbus A321

         (c) McDonnell Douglas MD–90

      (2) Engine:

         (a) V2500 – A1 Engines

         (b) V2527 – A5 Engines

         (c) V2530 – A5 Engines

         (d) V2525 – D5 Engines

         (e) V2528 – D5 Engines

      (3) Units:

Starter Control Valves Not Incorporating SPP Modification Number	Serial Number of First Production Incorporation
790424–4 L9	A0644

   B. Reason

      (1) Condition

      The headless straight pin that attaches the rod end clevis to the push rod may become corroded. When corrosion occurs, freedom of movement of the rod end clevis and the push rod may be affected.

(2) Background

The existing headless straight pin is not sufficiently resistant to corrosion.

(3) Objective

The new headless straight pin is made of a material that is more resistant to corrosion.

(4) Substantiation

The material of the new headless straight pin was used on other parts of the Starter Control Valve. Corrosion did not occur on these parts.

C. Description

This Service Bulletin is raised to introduce a new headless straight pin made with a material of improved corrosion resistance.

D. Approval

Service Bulletin No. 80–2512 (Mod. EC225414 and EC225414–2) was technically agreed by Rolls–Royce plc on Feb 12/96.

E. Compliance

Category Code 7

It is recommended that this Service Bulletin be accomplished when the Starter Control Valve is disassembled for other causes.

F. Manpower

Estimated man–hours:

(1) In service – not applicable

(2) At Overhaul – not affected

G. Material – Cost and Availability

Refer to Section 3 of this Service Bulletin for details.

H. Tooling

None

I. Weight and Balance

None

J. Electrical Load Data

Not affected

K. References

Component Maintenance Manual (CMM) 80–13–51
IAE EC94VR040

L. Other Publications Affected

CMM 80–13–51

M. Family Tree Charts of Modification Relationships

Not applicable

2. Accomplishment Instructions

A. To replace headless straight pin part number (PN) 732154–6, do these steps:

(1) Use the instructions in DISASSEMBLY of the CMM to remove headless straight pin PN 732154–6. Discard the headless straight pin.

(2) Use the instructions in ASSEMBLY of the CMM to install replacement headless straight pin PN 732154–7.

(3) Use the instructions in TESTING AND TROUBLESHOOTING of the CMM to test the Starter Control Valve.

B. To show that this Service Bulletin was done, add Sumitomo Precision Products Co., LTD. (SPP) modification number "L9" to the Starter Control Valve identification plate. The Sumitomo Precision Products Co., LTD. (SPP) part number is not changed by this Service Bulletin.

3. Material Information

A. This Service Bulletin change will use the parts in the list for each Starter Control Valve that is changed.

B. Any parts that usually are discarded when you disassemble the Starter Control Valve are not in the list.

C. In the list of parts for this change, MSQ is the "Minimum Sales Quantity". The parts that have an entry in this area of the list are supplied only in this quantity, or a multiplication of this quantity.

D. In the list of parts for this change, the "key word" is the name of the part.

E. In the list of parts for this change, the "instruction codes" tell you what to do with the parts. A short list under the list of parts tells you about the instruction codes that are used in the list.

F. The prices that are shown are estimates for one part. When you buy the parts, the prices may be different. Send requests for parts to:

Mail: Hamilton Standard Customer Support Service Center
Attention: Spare Parts Sales
471 Lakeshore Parkway
Rock Hill, SC 29730

Facsimile: (803)–325–2849

G. If more data is necessary, ask your Hamilton Standard account representative.

New PN	Qty	MSQ	Estimated Price	Key Word	PN Before the SB	Instruc–tion Code
732154–7	1	001	6.50	Headless Straight Pin	732154–6	A, B, C, D

Instruction Code A. The Service Bulletin change adds the "New PN" to the Starter Control Valve.

Instruction Code B. The Service Bulletin change removes the "PN before the SB" from the Starter Control Valve. Discard the part.

Instruction Code C. The "PN before the SB" has the same fit and function as the "New PN".

Instruction Code D. You can not continue to buy the "PN before the SB".

Hamilton Standard Internal Reference Number 225414, 225414–2
Hamilton Standard Internal Identification Number 80–2512