STARTING - PNEUMATIC STARTER VALVE - INTRODUCTION OF STARTER CONTROL VALVE WITH REVISED SOLENOID AND PLUNGER SPOOL COATING - SUMITOMO SB 80-2513 - CATEGORY CODE 7 - MOD.ENG-80-0010

See Vendor Bulletin 80-2513

1. Planning Information

A. Effectivity

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

(2) Engines:
(a) V2500-A1 Engines prior to Serial No.V0362
(b) V2522-A5 Engines prior to Serial No.V10196
(c) V2524-A5 Engines prior to Serial No.V10196
(d) V2527-A5 Engines prior to Serial No.V10196
(e) V2530-A5 Engines prior to Serial No.V10196
(f) V2525-D5 Engines prior to Serial No.V20088
(g) V2528-D5 Engines prior to Serial No.V20088

B. Concurrent Requirements

None.

C. Effectivity

(1) Condition

At the lower end of its specified voltage range, the Starter Control Valve (SCV) solenoid, can be prevented from operating.

The problem is attributed to the erosion of the Nickel plating on the solenoid spool and plunger.

(2) Background

The problem has been reported in service.

(3) Objective

Incorporation of this Service Bulletin is designed to maintain reliability.

(4) Substantiation

The changes introduced by this Service Bulletin have been the subject of satisfactory engineering analysis and supportive rig testing.

(5) Effect 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.

D. Description

(1) This Service Bulletin covers the fitment to engines of a Starter Control Valve (SCV) incorporating Sumitomo Mod L10 (Refer to 1.L.).

(2) The changes introduced by this Service Bulletin are as follows:

(a) A revised SCV is introduced similar to the existing item except the surface treatment of the plunger within the solenoid is changed from Nickel to Chrome plate.

(3) Units incorporating this Service Bulletin will be identified by endorsement of the modification plate with L10.

E. Approval

The part number changes and/or part modification described on 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.

F. Compliance

Category Code 7.

Accomplish when supply of superseded parts have been depleted.

G. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At Overhaul	Not affected

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

H. Material - Price and Availability

(1) Modificiation kit is not required.

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

I. Tooling - Price and Availability

Special tools are not required.

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 Service Bulletin has no effect on the aircraft electrical load.

L. References

(1) Internal Reference No.

96VR023

(2) Other References

Refer to Sumitomo Service Bulletin 80-2513.

Airbus Modification No.27948 and 24259.

M. Other Publications Affected

None.

2. Accomplishment Instructions

A. Rework Instructions

Refer to Sumitomo Service Bulletin 80-2513

B. Assembly Instructions

Refer to Sumitomo Service Bulletin 80-2513

C. Recording Instructions

(1) A record of accomplishment is necessary. Refer to Sumitomo Service Bulletin 80-2513.

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	Vendor	Valve-starter, pneumatic	790424-4 (01-200)	(A)(B)(S1)

C. Instructions/Disposition Code Statement:

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

SUMITOMO PRECISION PRODUCTS CO., LTD.

SERVICE BULLETIN

STARTING - STARTER CONTROL VALVE - REPLACEMENT OF THE PULL SOLENOID

1. Planning Information

A. Effectivity

Starter Control Valves Not Incorporating SPP Modification Number	Serial Number of First Production Incorporation
790424-4 L10	A0813

NOTE: The Starter Control Valves are installed in Airbus A320 and A321 aircraft that use IAE/V2500 engines and McDonnell Douglas MD-90 aircraft that use IAE/V2500 engines.

B. Reason

(1) Problem

The plunger of the pull solenoid sometimes sticks depending on surface finish roughness of the pull solenoid plunger and the bore.

(2) Cause

The pull solenoid is sensitive to the surface finish roughness of the plunger and the bore.

(3) Solution

The pull solenoid is replaced. The new pull solenoid plunger has a layer of chrome plate and dry film lubricant on its surface instead of nickel. The chrome plate is less sensitive to surface finish roughness. This allows the plunger to move more freely.

(4) Substantiation

The new pull solenoid configuration was vibration tested. It was compared to a current pull solenoid. The new pull solenoid showed very little wear. It operated well within the pull solenoid design limits.

C. Description

The pull solenoid is replaced.

D. Compliance

This Service Bulletin is recommended. Do the procedures in this Service Bulletin when the Starter Control Valve is disassembled for other causes.

E. Approval

This Service Bulletin 80-2513 (IAE SB V2500-ENG-80-0010) was technically approved by IAE on Jun 18/97. The part number changes shown in paragraph 3 of this Service Bulletin have been sanctioned under a product development/control system that has been approved by the D.G.A.C. (Direction Generale de L'Aviation Civile – Paris).

F. Manpower

No additional man-hours are necessary when you do these Service Bulletin procedures during component maintenance (or overhaul).

G. Material – Cost and Availability

The parts that are necessary to do these Service Bulletin procedures are in Section 3, Material Information. Section 3 tells you all you must know to buy these parts.

H. Tooling

None

I. Weight and Balance

None

J. Electrical Load Data

Not affected

K. References

Component Maintenance Manual (CMM) 80-13-51

L. Other Publications Affected

CMM 80-13-51

M. Family Tree Charts of Modification Relationships

Not applicable

2. Accomplishment Instructions

A. To replace pull solenoid part number (PN) 792931-2, do these steps:

(1) Use the instructions in DISASSEMBLY of the CMM to remove pull solenoid PN 792931-2. Discard the pull solenoid.

(2) Use the instructions in ASSEMBLY of the CMM to assemble the Starter Control Valve with this change:

(a) Install new pull solenoid PN 792931-3 as the replacement for pull solenoid PN 792931-2.

(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 "/L10" 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: United Technologies Corporation
Hamilton Standard Division
Attention: Account Representative
One Hamilton Road
Windsor Locks, CT 06096-1010

Facsimile: (860) 654-6905

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
792931-3	1	001	1,924.17	Pull Solenoid	792931-2	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 250627
Hamilton Standard Internal Identification Number 80-2513