

STARTING - PNEUMATIC STARTER VALVE - INTRODUCTION OF REVISED EXTERNAL WIRING -  
CATEGORY CODE 7 - MOD.ENG-80-0011

1. Planning Information

A. Effectivity

- (1) Aircraft (a) Airbus A320
- (2) Engines (b) V3500-A1 Engines prior to Serial No.V0241

B. Concurrent Requirements

None

C. Reason

(1) Condition

The clearance between the external wiring and the body of the pneumatic starter valve may not be sufficient.

(2) Background

The airframe manufacturer reported the problem after an engineering review.

(3) Objective

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

(4) Substantiation

A satisfactory engineers analysis has been done on the changes in this Service Bulletin. A satisfactory mock-up has been done by the vendor.

(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.

**SERVICE BULLETIN****D. Description**

- (1) This Service Bulletin includes the installation of a pneumatic starter valve which has the Sumitomo modification L8.
- (2) The changes introduced are:
  - (a) The pneumatic starter valve has been changed. It is almost the same as the unit in service except for the changes which follow:
    - (i) The mounting flange of the pull solenoid has been turned by 90 degrees.
    - (ii) As a result of (i) the wiring from the solenoid has decreased in length to give improved routing to the connector.
    - (iii) As a result of (ii), two clips, screws and two threaded holes in the actuator housing, have been deleted.
    - (iv) An earth tab has been deleted.
- (3) Units which have this modification will have L8 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

Do this Service Bulletin when there are no initial parts remaining.

**G. Manpower**

Estimate of man-hours to do this Service Bulletin:

Venue	Estimated Man-hours
(1) In service .. ..	Not applicable
(2) At overhaul .. ..	No more time is necessary to do this Service Bulletin

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

**V2500-ENG-80-0011**



# SERVICE BULLETIN

## H. Material - Price and Availability

- (1) A modification kit is not necessary.
- (2) See "Material Information" section for prices and availability of new 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<br>(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.

EC91VR003

- (2) Other References

Refer to vendor Service Bulletin: Sumitomo 80-2507.

## M. Other Publications Affected

- (1) Component Maintenance Manual (CMM), Chapter/Section, 80-13-51.
- (2) Illustrated Parts Catalog (IPC), Chapter/Section 80-13-51.



2. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

For the correct removal/installation procedure, refer to the V2500-A1 Engine Manual (EM), Chapter/Section, 72-00-32 or the Airbus A320 Aircraft Maintenance Manual (AMM), Chapter/Section, 80-13-51.

C. Recording Instructions

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

**V2500-ENG-80-0011**



## 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	Quote	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. Instructions Disposition Code Statements:

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

V2500-ENG-80-0011





**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

# **SERVICE BULLETIN**

CIRCULATE PROMPTLY

## STARTING - STARTER CONTROL VALVE - INCORPORATION OF A NEW SOLENOID

### 1. Planning Information

#### A. Effectivity

Starter Control Valves  
PN 790424-4 Not Incorporating  
SPP Stock List Number

L8

Serial Number of First  
Production Incorporation

None at this time. No production unit incorporating this modification has been shipped at time of publication.

#### B. Reason

This product improvement is for ease of assembly and maintainability.

#### C. Description

The pull solenoid and actuator housing are replaced and two clamps, two screws and one ground strap are discarded.

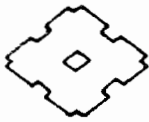
#### D. Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

#### E. Approval

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 - France.)



**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

# **SERVICE BULLETIN**

**F. Manpower**

No additional man-hours are required to perform this bulletin during component maintenance.

**G. Material - Cost and Availability**

The new parts required to accomplish this modification are listed in Section 3, Material Information, and are available at the price and lead times indicated. Orders for new or spare parts should be addressed to:

Hamilton Standard Product Services Incorporated  
United Technologies Corporation  
Attention: Supervisor, Spare Services  
V2500 Distribution Products  
Mail Stop: 1-2-B13  
P.O. Box 2403  
Windsor Locks, CT 06096-2403

**H. Tooling**

None

**I. Weight and Balance**

None

**J. Electrical Load Data**

None

**K. Reference**

Component Maintenance Manual, 80-13-51

**L. Other Publications Affected**

Component Maintenance Manual, 80-13-51

**2. Accomplishment Instructions**

**A. Modify starter control valve, Figure 1, as follows:**

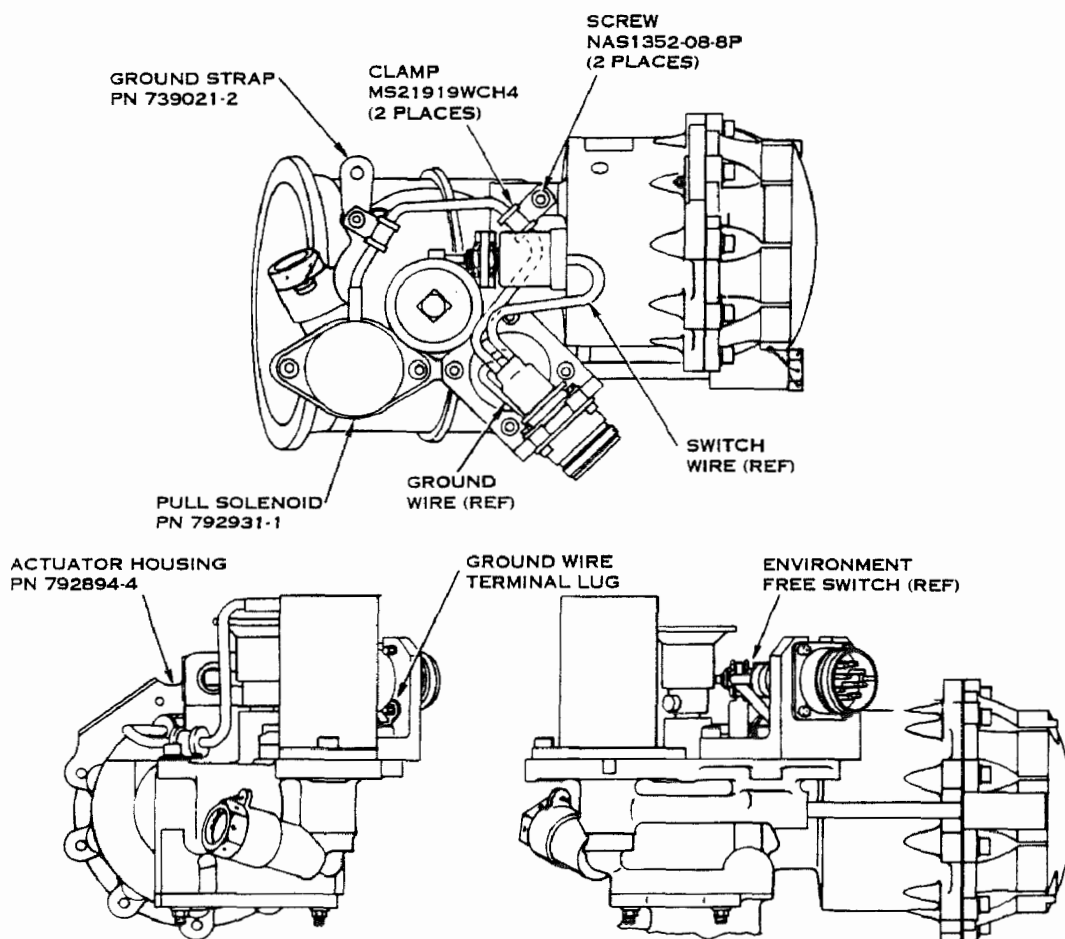
- (1) Replace pull solenoid PN 792931-1 with pull solenoid PN 792931-2.





**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

# SERVICE BULLETIN



11-27555

**Starter Control Valve - External View - Before Modification  
Figure 1**



**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

# **SERVICE BULLETIN**

- (2) Replace actuator housing PN 792894-4 with actuator housing PN 792894-5.

NOTE: Actuator housing PN 792894-4 does not have to be replaced for this modification, however actuator housing PN 792894-5 cannot be used on earlier configurations.

- (3) Remove and discard two clamps PN MS21919WCH4, two screws PN NAS1352-08-8P and ground strap PN 739021-2.
- (4) Assemble starter control valve in accordance with existing component maintenance manual instructions except as follows:
- (a) Install new pull solenoid PN 792931-2 on existing actuator housing PN 792894-4 or new housing PN 792894-5 and route solenoid wire to electrical connector as shown in Figure 2.
  - (b) Install ground wire and splice to new pull solenoid PN 792931-2 in accordance with REPAIR 5-1 of component maintenance manual.
  - (c) Secure ground wire of pull solenoid and environment free switch to electrical connector with lacing tape PN 748929-1. Wrap lacing tape around ground wires and connector two times and tie a square knot as shown in Figure 2.
  - (d) Trim lacing tape from knot approximately 0.500 inch. Fraying at ends permissible.

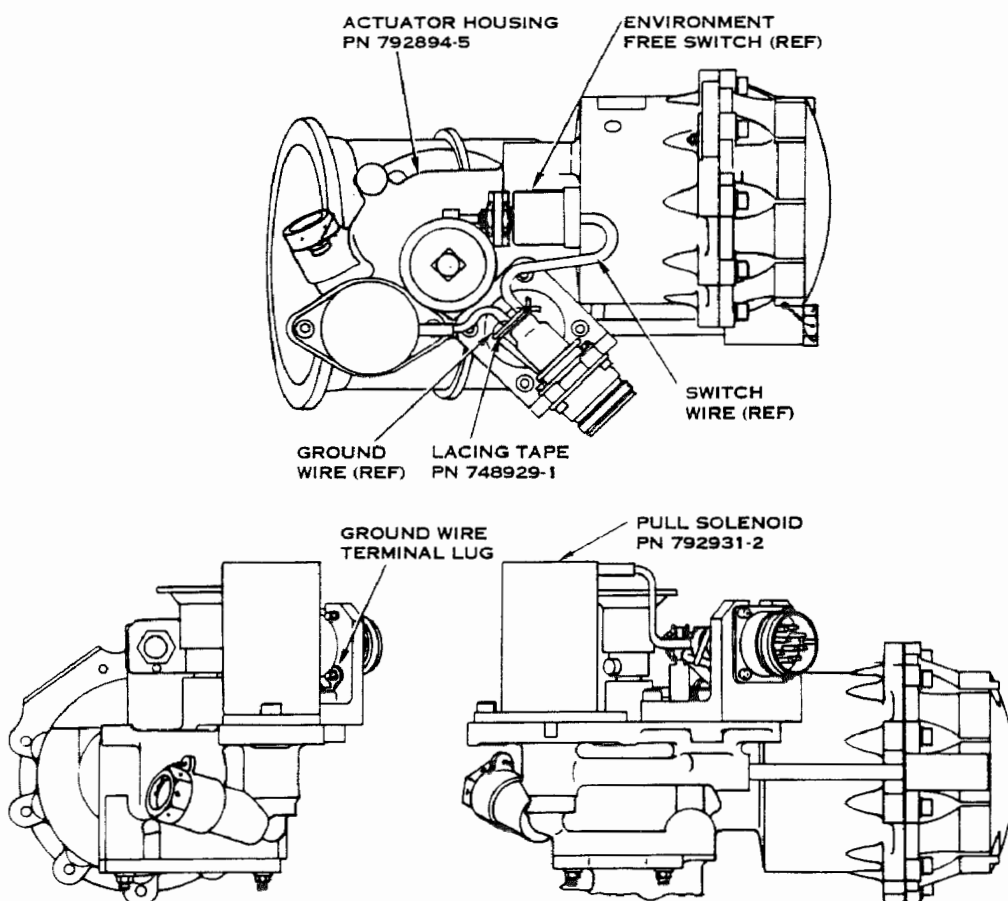
## **B. Reidentification**

Incorporation of this bulletin is identified by Sumitomo Precision Products Co., LTD. (SPP) stock list number. Reidentify modified units by including "L8" on the units identification plate. The Sumitomo Precision Products Co., LTD. (SPP) part number is not affected by this bulletin.



**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

# SERVICE BULLETIN



11-27556

**Starter Control Valve - External View - After Modification  
Figure 2**

Mar 6/92

80-2507  
Page 5



**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

## **SERVICE BULLETIN**

### **3. Material Information**

The basis for the following data is per starter control valve. Any prices shown herein are the net prices F.O.B. Hamilton Standard Product Services Incorporated, United Technologies Corporation, P.O. Box 2403, Windsor Locks, CT 06096-2403 in effect as of date of bulletin and are based on the condition that Hamilton Standard Products Services Incorporated's Standard Terms and Conditions of Sale pertaining to commercial contracts in effect when the order is accepted will apply. These prices are firm subject to ninety days notice of change, except that corrections, additions, or deletions shall be effective immediately and in the event prices for these parts are included in a related general parts price list, prices shown in such parts price list shall be deemed to have superseded the prices shown herein on the effective date of such price list. Quantities ordered must be in accordance with the specified Minimum Sales Quantity (MSQ) or multiples thereof. Lead times listed herein apply to all orders placed for modification parts, are based on the number of days from acceptance of order, and are subject to change without notice. Lead times for parts ordered as replenishment for inventory will be established in accordance with Hamilton Standard Product Services current product support policy. The maintenance/overhaul factors (M/OH) shown are estimated replacement percentages for the individual parts based on 100 maintenance actions (usage between overhauls) and 100 overhauls, respectively. These estimated factors are furnished for your convenience and they shall not constitute either representations or guarantees.

**NOTE:** The tabulation below includes code numbers in the "Instructions/Disposition" column identified as "I/D Code". These code numbers designate the following dispositions.

1. Added Part
2. Scrap Part
3. Rework and Reidentify Part
4. Use for Other Applications



**SUMITOMO PRECISION  
PRODUCTS CO., LTD.**

# SERVICE BULLETIN

## A. New Parts Required

New PN	Qty	Unit Price	Lead Time	M/OH	MSQ	Nomenclature	Old PN	I/D Code
792931-2	1	680.00	30	-/-	1	Pull Solenoid	792931-1 *	1
792894-5	1	3,290.00	30	-/-	1	Actuator Housing	792894-4 * †	1

\* Spares of superseded parts will not be maintained by Hamilton Standard Product Services.

† Bulletin can be accomplished without replacing actuator housing.

## B. Parts to be Discarded (No equivalent new parts)

New PN	Qty	Unit Price	Lead Time	M/OH	MSQ	Nomenclature	Old PN	I/D Code
	2	-	-	-/-	-	Clamp	MS21919WCH4	2
	2	-	-	-/-	-	Screw	NAS1352-08-8P	2
	1	-	-	-/-	-	Ground Strap	739021-2	2

## C. Consumable Materials Required

### Nomenclature

### Manufacturer or Specification

Lacing Tape  
PN 748929-1

Bently-Harris Mfg. Co.,  
241 Welsh Pool Rd.  
Lionville, PA 19353

Vendor Code 81851

Hamilton Standard Product Services Internal Reference Number 212761  
Hamilton Standard Product Services Internal Identification Number 80-2507  
Hamilton Standard Product Services Reference A320/V2500

Mar 6/92

80-2507  
Page 7

