



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

S.B. V2500-NAC-29-0001
Revision No 1

Subject: Nacelle Service Bulletin No. V2500-NAC-29-0001
Revision No 1 dated

THIS IS A COMPLETE REVISION The subject attached Bulletin No. V2500-NAC-29-0001, Revision 1, constitutes the complete instruction. The contents are in accordance with the following list of effective pages.

<u>PAGE No.</u>	<u>REVISION No.</u>	<u>DATE</u>
1 and 2	1	
3	Original	May 31/90
4	1	
5	Original	May 31/90
6	1	
7	Original	May 31/90
8 thru 14	1	
15	Original	May 31/90
16 thru 22	1	

NOTE: A copy of this notice should be filed as a permanent record with each copy of Service Bulletin revision and with any future revisions.

Reason for Revision

- (1) To delete references to I.D.G. cooling pipe in Section 2, Accomplishment Instructions (including figures) and also to amend clipping configuration.
- (2) To add additional Accomplishment Instructions and figure for spares replacement.
- (3) To amend information given in Planning Information.

Effect of Revision on Prior Compliance:

None.



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

NACELLE - HYDRAULIC POWER - HYDRAULIC HOSE
TO LOW PRESSURE SWITCH - REPLACEMENT OF.

MODEL APPLICATION

V2500-A1

BULLETIN INDEX LOCATOR

29-11-49

COMPLIANCE CATEGORY CODE

3

INTERNAL REFERENCE No

SR/SM 90VN023/023B

R

May 31, 1990
Rev 1, Draft 1

V2500-NAC-29-0001
Page 1 of 22



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

1. Planning Information

A. Effectivity

- (1) Airplane: Airbus A320
- (2) Engine: V2500-A1 Engines Serial Number V0123 and on.
- (3) Nacelle: V2500-A1 Nacelles
 - (a) Engine Buildup Units.

The intent of this Service Bulletin was incorporated at the manufacturer on Engine Buildup Units Serial No. 123 and on.

The following EBU Serial Numbers were not changed at the manufacturer. They can be modified by incorporating this Service Bulletin using Kit V2529001-551.

EBU Serial <u>Unit No.</u>	Qty of Kits <u>V2529001-551</u>
1 thru 122	122

May 31, 1990

V2500-NAC-29-0001
Page 2



SERVICE BULLETIN

B. REASON

(1) Condition

The hydraulic hose connecting the pressure tube to the low pressure (LP) warning switch is subject to failure.

(2) Background

Several operators have reported failures of the hose.

(3) Objectives

To install a hydraulic hose that has been upgraded to withstand higher working pressures, and provide new routing orientation.

(4) Substantiation

Flight tests indicate that the new part will perform as expected.

(5) Impact of Bulletin On:

(a) Removal/Installation	Not Affected
(b) Disassembly/Assembly	Not Affected
(c) Cleaning	Not Affected
(d) Inspection/Check	Not Affected
(e) Repair	Not Affected
(f) Testing	Not Affected

(6) Supplemental Information

None.



SERVICE BULLETIN

C. Description

(1) The change introduced by this Bulletin is as follows:-

(a) Existing clipping point (CP0852) support bracket is removed; the LP warning switch is disconnected, and an extension raft is installed. The LP warning switch is mounted in a new position on the extension raft. Clipping point (CP0852) is also mounted in a new configuration on the extension raft with an engine clip being separated from CP0852 and clipped to the extension raft. The harness assy for the LP warning switch is re-routed; this deletes clipping point CP0850. Existing low pressure hydraulic hose is replaced. Paragraph 2.D.(1) gives instructions for a post-modification inspection.

(b) For spares purposes only.

Instructions are provided (ref paragraph 2 Part E), for installing 740-55235-501 raft assembly in place of 740-5234-501 raft extension and 740-5603-501 raft assembly.

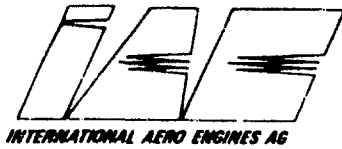
D. Approval

The technical content of this Service Bulletin is covered by an Airbus Industrie Modicication No. TBD which is under DGAC (Direction Generale de L'Aviation Civile - France) approval.

E. Compliance

Category 3.

Accomplish within 150 hours from receipt of Service Bulletin.



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

<u>VENUE</u>	<u>ESTIMATED MANHOURS</u>
(1) In Service	
(a) To gain access	0.2 M/Hrs.
(b) To embody	1.2 M/Hrs.
(c) To return nacelle to service	0.2 M/Hrs.
	Total..... 1.6 M/Hrs.

G. Material - Cost and Availability

The parts to accomplish this Service Bulletin are available from the supplier as Kit No V2529001-551 at no cost to the operator.

Operators with units listed in Paragraph 1A should submit a no charge purchase order for the applicable quantity of kits. The purchase order must specify this Service Bulletin number and only the parts listed herein. Delivery schedules will be furnished to operators upon receipt of their written request.

Direct purchase order to:

Rohr International Sales Corporation
P.O. Box 878
Chula Vista, CA 92012-0878 USA

Attn: Manager, Spares Operations -
Warranty
(Service Bulletin No
V2500-NAC-29-0001)

H. Tooling Cost and Availability

None required.

May 31, 1990

V2500-NAC-29-0001
Page 5



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

I. Weight and Balance

- (1) Weight change None
- (2) Moment arm No effect
- (3) Datum Engine Front Mount
..... Centerline
..... (Powerplant Station
..... PPS 100.00)

J. Electrical Load Data

Not affected.

K. References

R	A320 Aircraft Maintenance Manual	29-00-00
		29-11-00
		29-13-51
		71-13-00

L. Other Publications Affected

	V2500 Powerplant Illustrated Parts Catalog	29-11-49
R	A320 Aircraft Maintenance Manual	71-51-43



SERVICE BULLETIN

2. Accomplishment Instructions

A. Pre-requisite Instructions

- (1) Put a warning notice to tell persons not to start the engine.
- (2) Put a warning notice to tell persons not to start the hydraulic system.

WARNING: DO NOT TOUCH THE ENGINE COMPONENTS FOR A SHORT TIME AFTER THE ENGINE IS SHUT DOWN. THE COMPONENTS STAY HOT AND CAN CAUSE INJURY.

WARNING DO NOT GET HYDRAULIC FLUID ON YOUR SKIN OR IN YOUR EYES. PUT ON PROTECTIVE CLOTHING AND GOGGLES. THE FLUID IS POISONOUS AND CAN GO THROUGH YOUR SKIN INTO YOUR BODY. IF YOU GET HYDRAULIC FLUID ON YOUR SKIN OR IN YOUR EYES, FLUSH AWAY WITH WATER. GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

CAUTION: DO NOT LET HYDRAULIC FLUID FALL ON THE ENGINE. REMOVE UNWANTED HYDRAULIC FLUID IMMEDIATELY. FLUID CAN CAUSE DAMAGE TO THE SURFACE PROTECTION AND SOME PARTS.

R NOTE : Obey the safety precautions detailed in the A320 Aircraft Maintenance Manual Task 29-00-00-910-002.

R (3) Release the pressure in the green or yellow hydraulic system as applicable, with instructions in the A320 Aircraft Maintenance Manual, Task 29-10-00-864-001 or -002.

R (4) Open the left and right fan cowl doors with instructions in the A320 Aircraft Maintenance Manual, Task 71-13-00-010-010.



SERVICE BULLETIN

B. Rework or Modification Instructions

- (1) Drain the hydraulic fluid from the pressure tubes as follows:
 - (a) Put a clean container (minimum capacity of 2 US gallons) in position below the hydraulic pump.
 - (b) Disconnect the AE707875-1 pressure hose from the hydraulic pump.
 - (c) Let the hydraulic fluid drain into the container.
 - (d) Connect the AE707875-1 pressure hose back to the hydraulic pump and torque to 855-945 lb-in (96.6-106.8 N.m.)

- (2) Remove and discard the AE707877-1 hose. Install blanks in the open couplings (Refer to Figure 1).

NOTE: Use a container to catch any remaining hydraulic fluid and discard all the hydraulic fluid.

- (3) Remove two AS21409 bolts to release the LP warning switch. Put the switch in a safe position temporarily. Keep the bolts.
- (4) Remove two AS21508 bolts to release the 740-5603-501 raft assembly from the 740-5612-501 angle at flange FA1. Discard the bolts.
- (5) Remove the AS21408 bolt, AS41104 clip nut, SP154-D washer and JM44LC39H105RG 'P' clip from the 740-5425 bracket. Discard the bolt and clip nut.
- (6) Remove two AS21510 bolts and two NAS1291C4M nuts to release the 740-5425 bracket from the flange FA1. Discard the bracket and install the bolts and nuts back to the flange FA1 (make sure that you install the 740-5612-501 angle back to the flange also). Torque the nuts to 50-70 lb-in (5.6-7.9 N.m.).

R
R
R

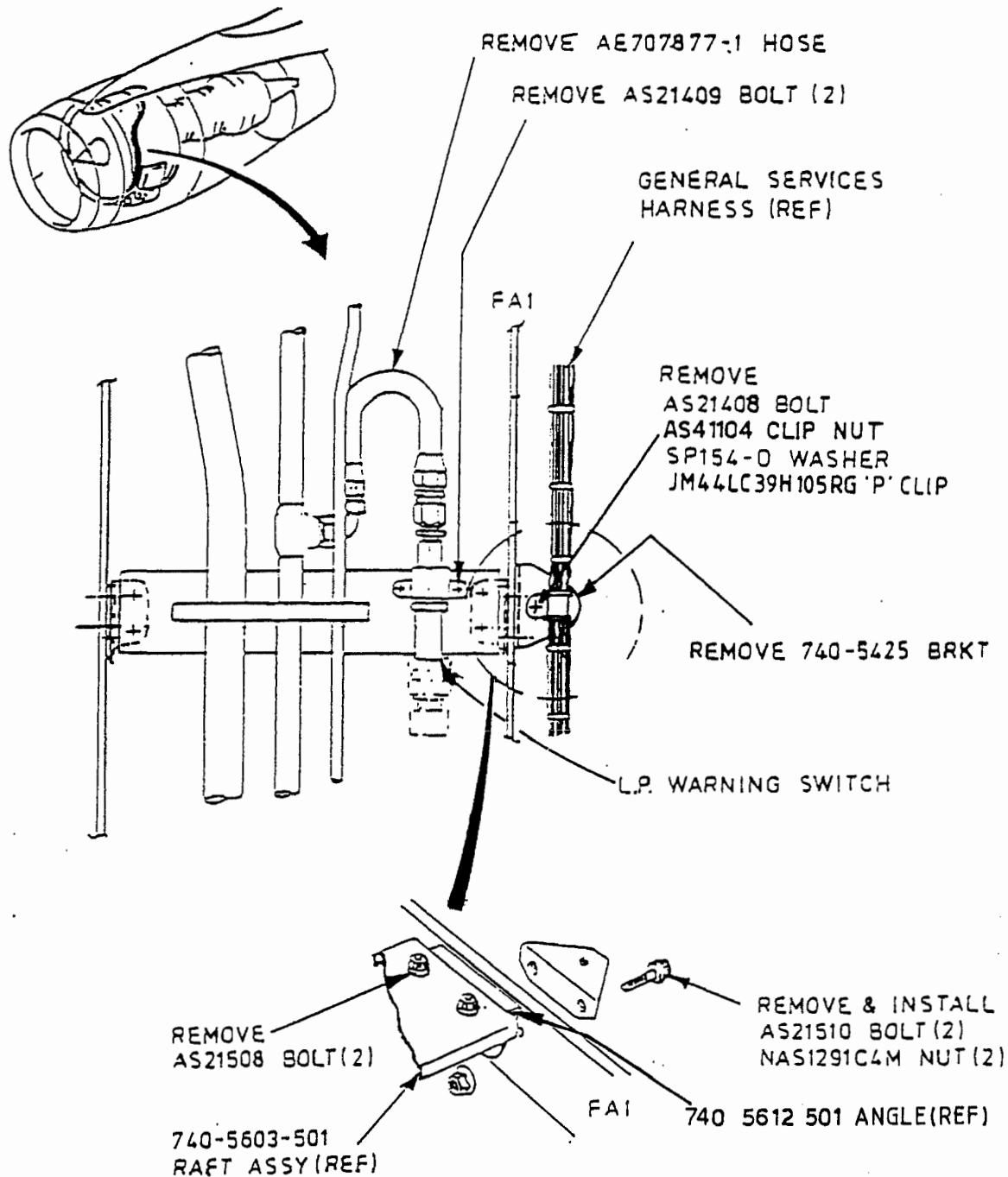


SERVICE BULLETIN

NOTE: SOME ADJUSTMENT OF INTERFACING HARDWARE MAY BE NECESSARY TO PROVIDE SUITABLE CLEARANCE BETWEEN THE HYDRAULIC HOSE AND THE ENGINE FAN CASE.

- (7) Install the 740-5234-501 extension raft to the 740-5603-501 raft assembly with two AS21509 bolts and one AS21409 bolt. (Refer to figure 2). Torque the AS21509 bolts to 100 lb-in. (11.3 N.m.) and the AS21409 bolt to 40 lb-in. (4.52 N.m.).
- (8) Disconnect the harness assembly for the LP warning switch from clipping point CP0850. (Refer to figure 3). Discard the AS21408 bolt, SP154-D washer, and JM44LC39H101RG 'P' clip from that position.
- (9) Attach the general services harness to the 740-5234-501 extension raft (clipping point CP0852) with an AS20624 nut, ST1698-D48 spacer, JM44LC39H105RG 'P' clip, and an AS21414 bolt as shown. Torque the nut to 40 lb-in. (4.52 N.m.)
- (10) Disassemble clipping point CP0903 (Refer to figures 3 and 4). Remove the harness assembly for the LP warning switch from the JM44LC39H102RG 'P' clip and assemble the clipping point back to the pipe assemblies as shown. Torque the nut to 40 lb-in. (4.52 N.m.).
- (11) Install the LP warning switch and 740-5285-501 spacer to the 740-5234-501 extension raft with two AS21411 bolts. Torque the bolts to 40 lb-in. (4.52 N.m.) Refer to figure 2>
- (12) Disassemble clipping point CP0851 from the 740-5425-501 bracket (Refer to Figures 3 and 4).
- (13) Install the harness assembly for the LP warning switch along the general services harness. (Make a loop in the harness when routing). Attach the harness at clipping point CP0851 with the JM44LC39H105RG 'P' clip, AS20624 nut, SP154-D washer, AS21408 bolt; (removed in paragraph 2 B (12)). Torque the nut to 40 lb-in (4.52 N.m.).

SERVICE BULLETIN

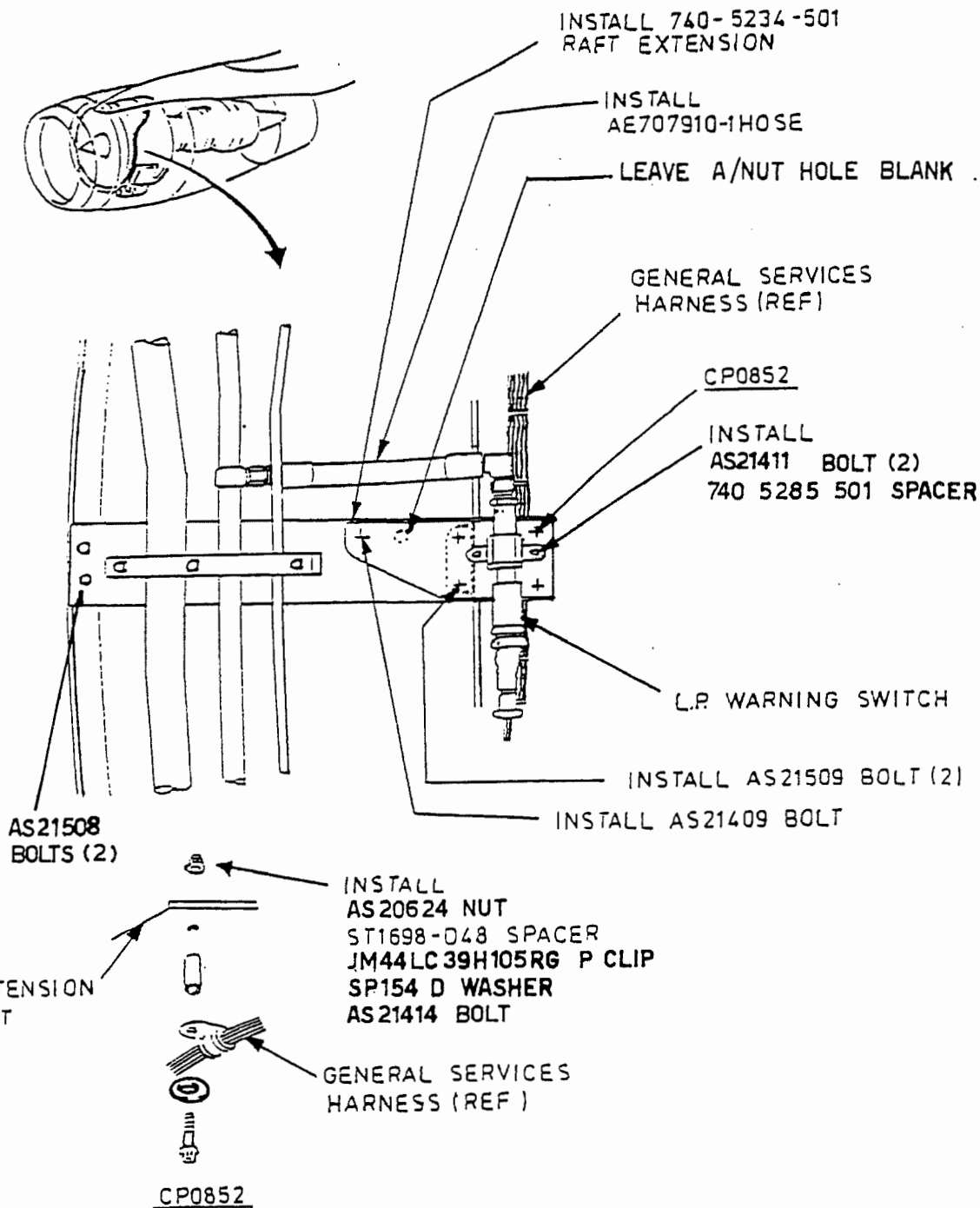


REMOVAL OF DEFECTIVE HYDRAULIC HOSE
FIGURE 1

SERVICE BULLETIN

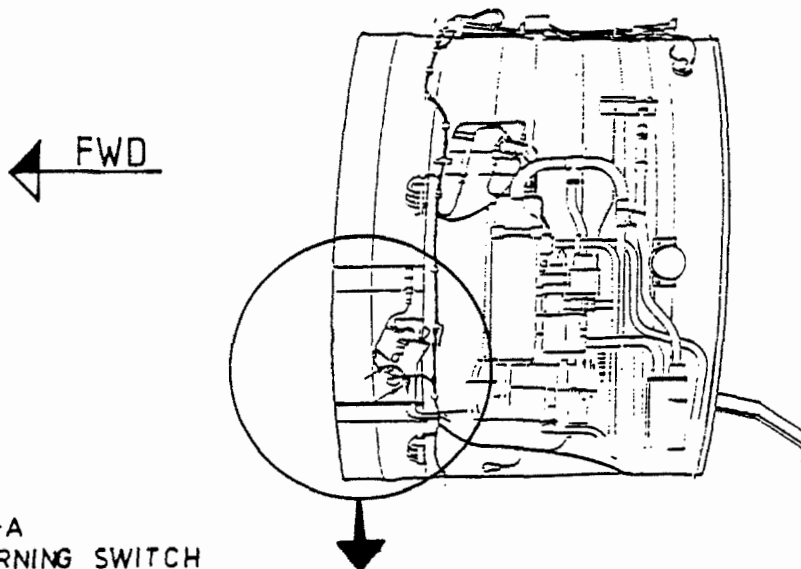
R
R
R
R
R
R
R
R
R
R

R
R



INSTALLATION OF REPLACEMENT HYDRAULIC HOSE
FIGURE 2

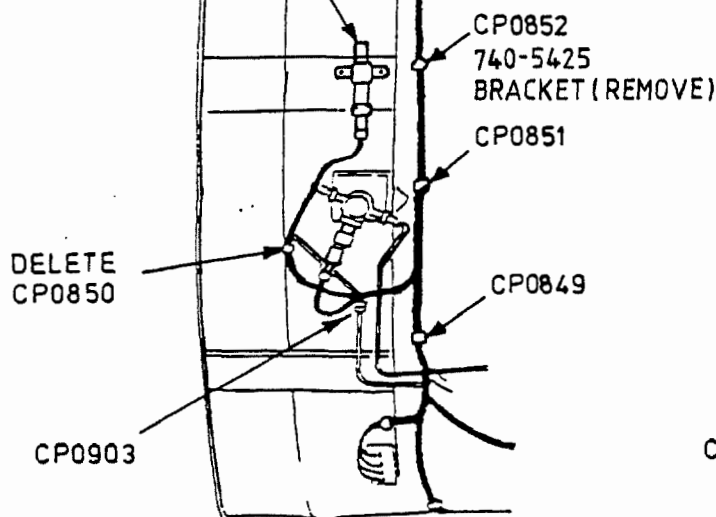
SERVICE BULLETIN



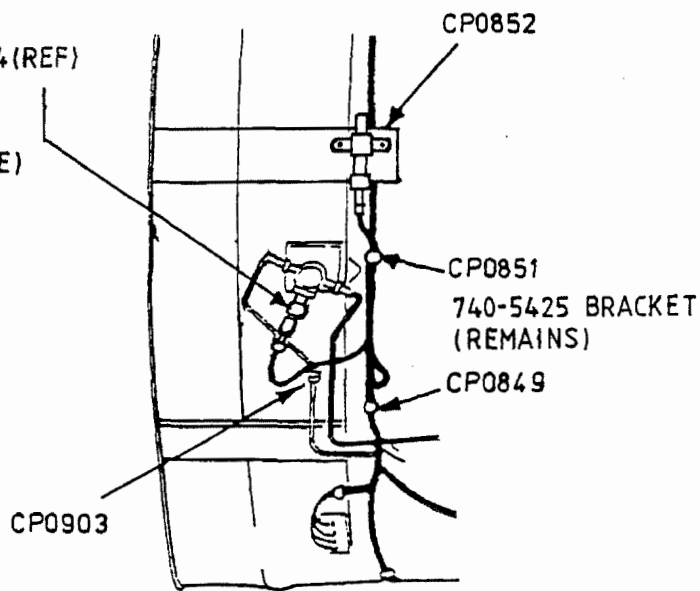
REFER TO ILLUSTRATION 4 FOR
CP0903 AND CP0851

REFER TO ILLUSTRATION 2 FOR
CP0852

R
R
R
R
R
R
R
R
R
R
R
R



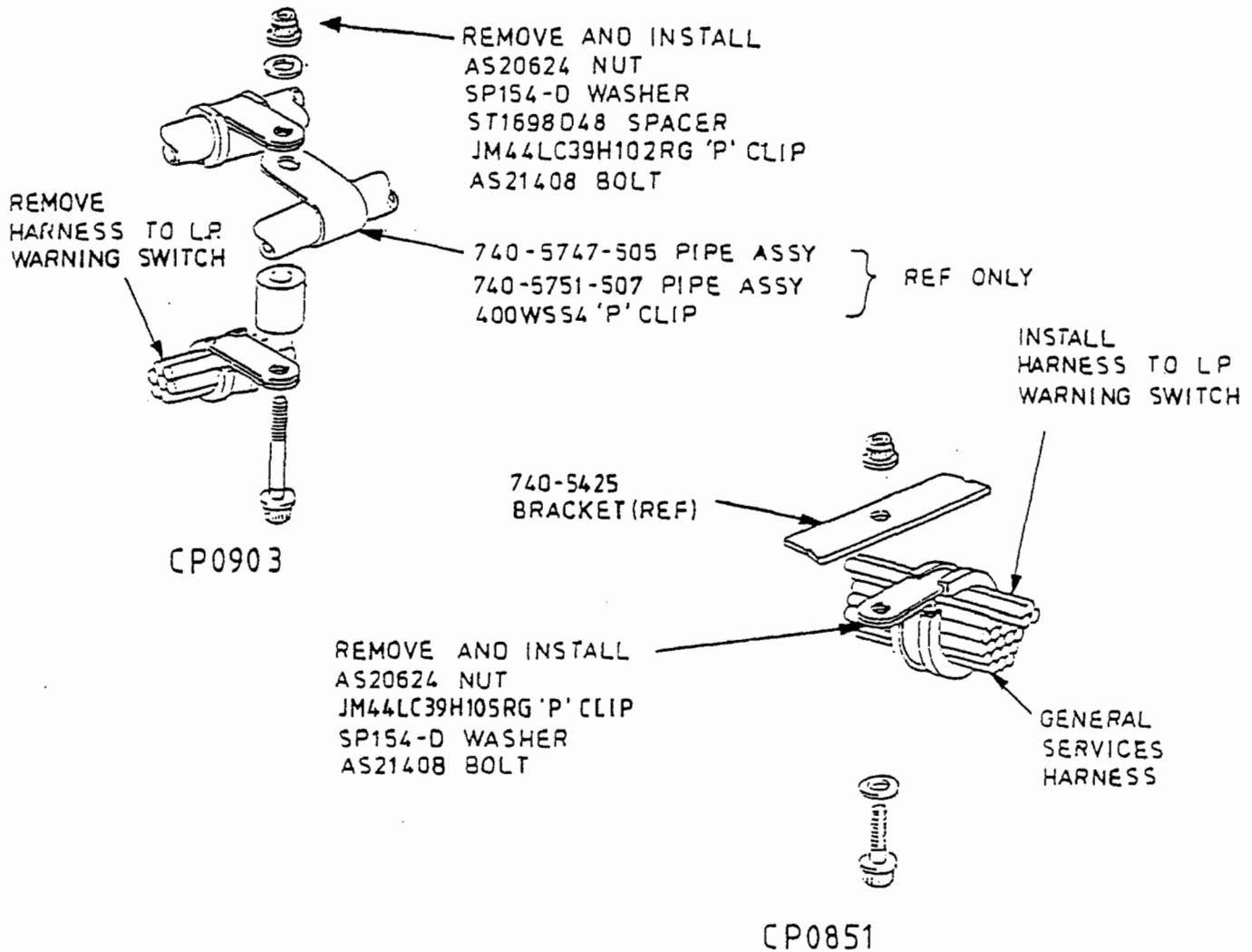
BEFORE



AFTER

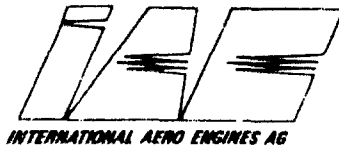
REVISED ROUTING OF THE LP WARNING SWITCH
FIGURE 3

SERVICE BULLETIN



DISASSEMBLY/ASSEMBLY OF CLIPPING POINTS
CP0851 AND CP0903

FIGURE 4



SERVICE BULLETIN

WARNING: DO NOT GET VARNISH ON YOUR SKIN AND ONLY USE IT IN AN AREA OPEN TO THE AIR. MAKE SURE THAT THE ENGINE IS COOL BEFORE YOU APPLY THE VARNISH. THE VARNISH HAS A LOW FLASH POINT. THE VARNISH IS POISONOUS.

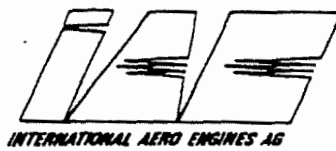
- (14) Attach the harness assembly for the LP warning switch to the general services harness with TG20 lacing tape; every 2.0 inches. Cut off any unwanted lacing tape from each knot and seal each knot with MS996 silicone varnish.
- (15) Cut and remove the tie tape at the separation of the harness assemblies (to P814 and 1074GK-A) from the main general services harness. Remove the harness assembly for the LP warning switch and attach the remaining harness back to the main harness.

NOTE: Repositioning of a hydraulic supply tube to gain clearance must not introduce stresses such that it could cause failures during systems operations.

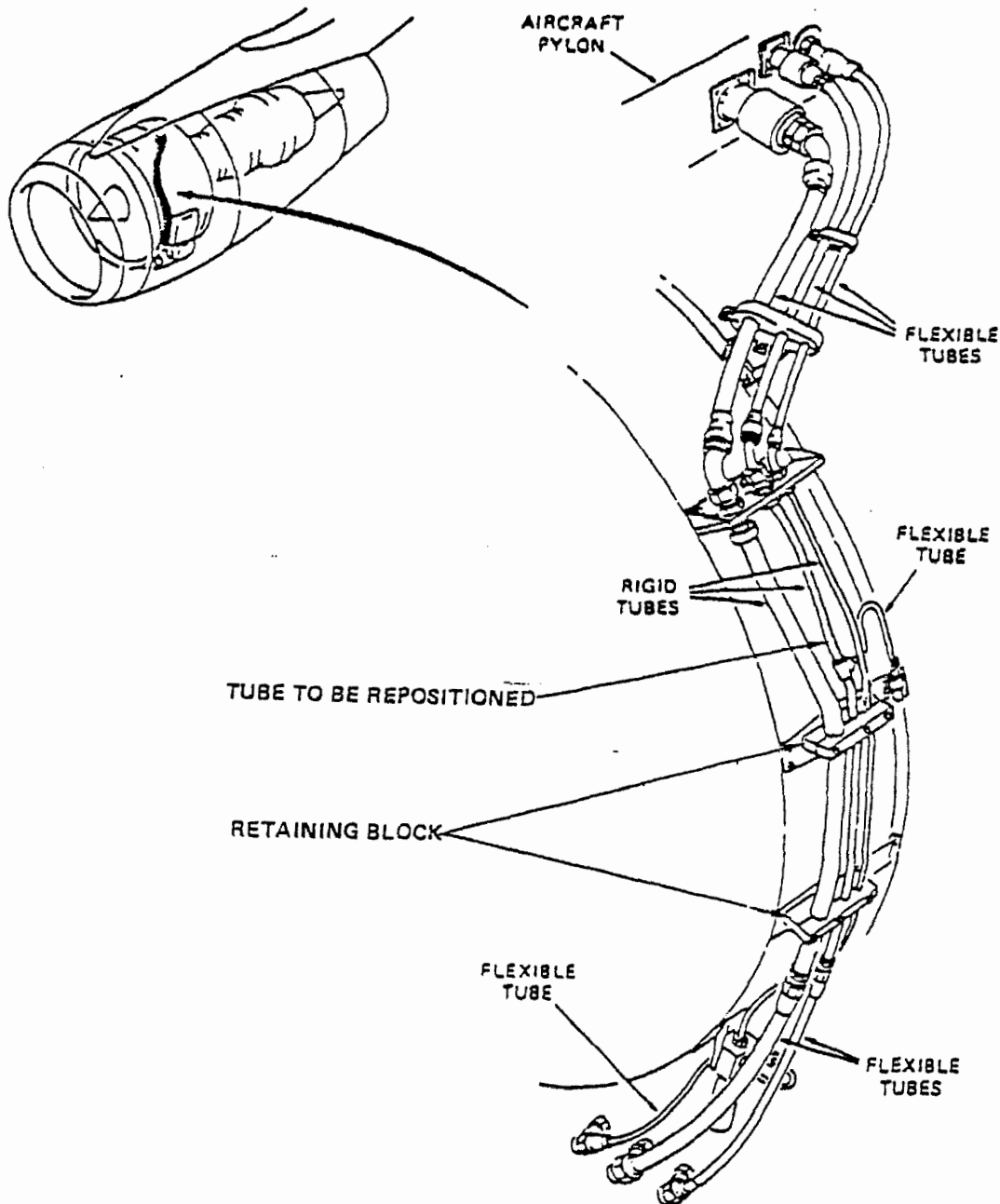
- (16) Remove the blanking plugs installed in paragraph 2 B (2). Install the new AE707910-1 hydraulic hose. (Refer to figure 2). Measure the clearance between the hydraulic hose and the engine where the hose lies closest to the engine. Minimum clearance of 0.078 inch (2.0 mm) must be maintained. Loosen the retaining hardware securing the rigid tube retaining blocks. Reposition the supply tube to gain at least minimum clearance. Secure the retaining blocks. Torque the two end couplings of the hose to 135-145 lb-in. (15.3-16.4 N.m). (Refer to Figure 5.)

C. Post-requisite Instructions

- (1) Remove all warning notices that were put out in paragraph 2.A.(1) and 2.A.(2).



SERVICE BULLETIN



Hydraulic Tube Installation
Figure 5

May 31, 1990

V2500-NAC-29-0001
Page 15



SERVICE BULLETIN

- R (2) Check fluid level and pressurize the green or yellow hydraulic system as applicable, with instructions in the A320 Aircraft Maintenance Manual, Task 29-10-00-200-001 and 29-10-00-863-001 or -002.
- R (3) Do an operational test of the green or yellow hydraulic system as applicable, with instructions in the A320 Aircraft Maintenance Manual, Task 29-11-00-710-001 or 29-13-00-710-002A.
- R (4) Check internal leakage of the hydraulic system with instructions in the A320 Aircraft Maintenance Manual, Task 29-11-00-220-001.

D. Post-modification Inspection Instructions

At the next 'A' check following incorporation of this Service Bulletin, perform a visual inspection of the work performed in this bulletin for any irregularities.

- (1) Particular attention should be given to the entire length of the hose assembly for witness marks indicative of chafing or interference with the fan case, adjacent structures, or components.
- (2) Report results of this inspection to the local IAE Field Representative.

E. Recording Instructions

- (1) A record of accomplishment is necessary.

R Spares Replacement Accomplishment Instructions.

R The following Accomplishment Instructions are for the replacement
R of the retrofit installation by new spare parts:-

R F. Pre-requisite Instructions

- R (1) Put a warning notice to tell persons not
R to start the engine.



SERVICE BULLETIN

WARNING: DO NOT TOUCH THE ENGINE COMPONENTS FOR A SHORT TIME AFTER THE ENGINE IS SHUT DOWN. THE COMPONENTS STAY HOT AND CAN CAUSE INJURY.

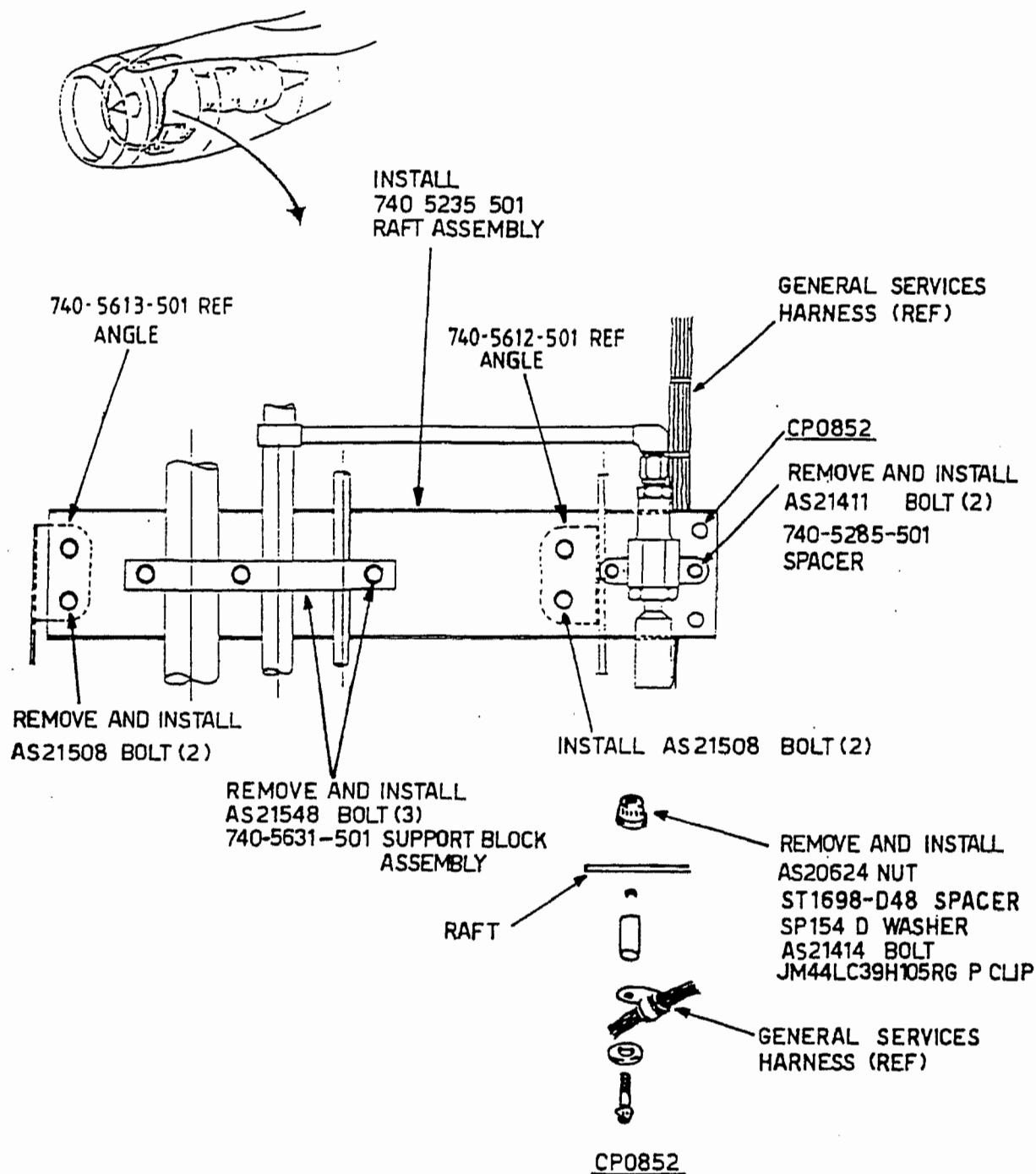
- (2) Open the left and right fan cowl doors with instructions in the A320 Aircraft Maintenance Manual, Task 71-13-00-010-010.

G. Rework or Modification Instructions

- (1) Remove two AS21411 bolts to release the LP warning switch and the 740-5285-501 spacer. (Refer to figure 2).
- (2) Disassemble clipping point CP0852.
- (3) Remove three AS21548 bolts to release the support block assembly.
- (4) Remove two AS21509 bolts and one AS21409 bolt to release the 740-5234-501 Raft extension from the 740-5603-501 Raft assembly (refer to figure (2)). Discard the Raft extension and the bolts.
- (5) Remove two AS21508 bolts to release the 740-5603-501 Raft assembly. Discard Raft assembly.
- (6) Install the 740-5235-501 Raft assembly to the 740-5613-501 and 740-5612-501 angles with four AS21508 bolts (Refer to figure 5). Torque the bolts to 100 lb-in (11.3 N.m).
- (7) Install the 740-5631-501 Support block assembly to the 740-5235-501 Raft assembly with three AS21548 bolts. Torque the bolts to 100 lb-in (11.3 N.m).
- (8) Install the LP warning switch and 740-5285-501 spacer to the Raft assembly with two AS21411 bolts. Torque the bolts to 40 lb-in (4.52 N.m).
- (9) Assemble clipping point CP0852 to the Raft Assembly. Torque nut to 40 lb-in (4.52 N.m).

SERVICE BULLETIN

R



INSTALLATION OF REPLACEMENT RAFT ASSEMBLY
FIGURE 6



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

R H. Post-requisite Instructions

- R (1) Close the left and right fan cowl doors as specified
R in the A320 Aircraft Maintenance Manual Task
R 71-13-00-410-010.
- R (2) Remove all warning notices displayed in the flight
R compartment (Ref Part B paragraph 2.F.(1)).

May 31, 1990
Rev 1, Draft 1

V2500-NAC-29-0001
Page 19



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

3. Material Information

NEW PN (ATA NO)	QTY	EST'D UNIT PRICE (\$)	KEYWORD	OLD PN (IPC NO)	INSTR/ DISPOS
--------------------	-----	--------------------------	---------	--------------------	------------------

Applicability: For each V2500 Nacelle to incorporate this Bulletin.

A. Kits associated with this Bulletin:

V2529001-551	1		Kit		(A)
--------------	---	--	-----	--	-----

consisting of:

AE707910-1	1		Hydraulic Hose		
740-5234-501	1		Raft Extension		
AS21414	1		Bolt		
ST1698-D48	1		Spacer		
AS21509	2		Bolt		
AS21411	2		Bolt		
740-5285-501	1		Spacer		

B. Parts affected by this Bulletin:

AE707910-1	1	Hydraulic	AE707877-1	(B)(1D)
(29-11-49)		Hose	(02-500)	
AS21509	2	Bolt	AS21508	(B)(1D)
(71-51-43)			(05-864)	
740-5234-501	1	Raft	--	(B)(2D)
		Extension		
ST1698-D48	1	Spacer	--	(B)(2D)
(71-51-43)		(01-272)		
AS21414	1	Bolt	--	(B)(2D)
740-5285-501	1	Spacer	---	(B)
(29-11-17)			(01-025)	
AS21411	2	Bolt	AS21409	(B)(1D)
(29-11-17)			(01-020)	
--				
--		Bracket	740-5425-501	(1D)
(71-51-43)			(05-970)	
--		Bolt	AS21408	(1D)
(71-51-43)			(01-254)	
--		Nut	AS41104	(1D)
(71-51-43)			(01-277)	
--		Washer	SP154-D	(1D)
(71-51-43)	1		(01-255)	
--		'P' Clip	JM44LC39H101RG	(1D)
			(01-257)	

May 31, 1990
Rev 1, Draft 1

V2500-NAC-29-0001
Page 20

**SERVICE BULLETIN**

R The following parts will be affected by spares installation as
R described in Paragraphs 2.E., 2.F., and 2.G. of this Bulletin.
R The new parts required for spares replacement can be purchased from
R Rohr International Sales Corporation, PO BOX 878, Chula
R Vista, CA 92012-0878, USA.

R	New				Old	
R	Part No	Estd Unit			Part No	Instr/
R	(ATA No)	Qty	Price (\$)	Keyword	(IPC) No	Dispos
R	740-5235-501	1		Raft Assy	{740-5603-501	(S1)
R	(71-51-43) ✓				{05-866) ✓	
					{740-5234-501	
R	AS21508	2		Bolt	AS21509	(S1)
R				Bolt	AS21409	(S1)

C. Instructions/Disposition Code Statements:

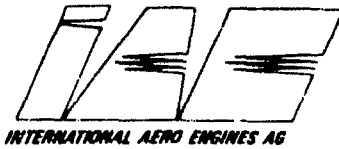
(A) Kits will be available May, 1990.

(B) New part supplied as detail of the Kits.

(1D) Discard the old part.

(2D) Not a production configuration part.

(S1) New parts coded (S1) must replace old parts coded
(S1) as a complete set per engine.



V2500 Propulsion System — Nacelle

SERVICE BULLETIN

- D. These materials are to be procured by the Operator or obtained from his stock.

<u>Part No</u>	<u>Keyword</u>	<u>Qty</u>	<u>Source</u>	<u>Vendor Code</u>
MS996	Silicone Varnish	AN	Davidson & Hardy Ltd 453 Antrim Road Belfast 15 Northern Ireland Tel No: (0232) 781611	
TG20 CoMat (02-159)	Lacing Tape	AN	Rohr Industries Inc Foot of 'H' St P.O. BOX 878 Chula Vista CA92012 USA	51563