International Aero Engines

SERVICE BULLETIN

NACELLE - EXHAUST - THRUST REVERSER, HYDRAULIC HOSE CLAMPING - ADDITION OF - CATEGORY CODE 6 - MOD.NAC-78-0050

NOTE: This Service Bulletin is issued for part number progression history only. It is not intended to be incorporated or kit parts ordered from the manufacturer. The intent of this modification is accomplished by the incorporation of Service Bulletin V2500-NAC-78-0115.

1. Planning Information

A. Effectivity

(1) Airplane - Airbus A320

(2) Nacelle - V2500-A1

This change was incorporated by the manufacturer on Thrust Reverser cum units (C/U) 130 and on.

The following Thrust Reversers were not modified at the manufacturer. They can be modified by incorporating this Service Bulletin.

T/R Cum Units (C/U)
6-129

B. Reason

(1) Condition

The thrust Reverser C-Duct opening actuator hydraulic hose can come into contact with hot engine components under certain operating conditions. This may cause the hose to chafe and age prematurely.

(2) Background

This condition has been reported by several operators.

(3) Objective

To support the hose so contact with hot engine parts is impossible.

(4) Substantiation

The new parts have been installed on a production engine and perform satisfactorily.

(5) Impact of Bulletin on Workshop Procedures:

Removal/Installation	Affected
Disassembly/Assembly	Affected
Cleaning	Not Affected
Inspection/Repair	Not Affected
Repair	Not Affected
Testing	Not Affected

(6) Supplemental Information

None

C. Description

This modification adds three clamps to the Thrust Reverser Door opening actuator hydraulic hose to keep it from touching the engine. This modification is to be done on both the left and the right hand Thrust Reverser halves.

D. Approval

The part number changes and/or part modifications described in Paragraphs 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved for the equipment model(s) listed.

E. Compliance

Category 6

Accomplish when the Nacelle subassembly (i.e. accessories, components) is disassembled sufficiently to afford access to the affected part to all affected spare parts.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

VENUE	ESTIMATED MANHOURS
(1) In Service	N/A
(1) In Shop	N/A

G. Material Cost and Availability

The parts to accomplish this Service Bulletin are not available from the manufacturer. See Material Cost and Availability Information in Service Bulletin V2500-NAC-78-0115.

H. Tooling Cost and Avaialability

None Required.

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

(1) Internal Reference No.

90VN009/A

(2) Other References

IAE V2500 Standard Practices/Processes Manual (SPP-V2500-1IA) 70-09-00

L. Other Publications Affected

A320/V2500 Power Plant Illustrated Parts Catalog (PIP-V2500-1IA) 78-32-49
78-32-79
78-36-49

A320/V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA) 78-32-49
78-32-79
78-36-49

A320/V2500-A1/A321/V2500-A5 Engine Manual (E-V2500-1IA) 78-32-49
78-32-79
78-36-49

A320/A321 Aircraft Maintenance Manual 78-36-49

2. Accomplishment Instructions

A. Pre-requisite Instructions

None.

B. Rework or Modification Instructions

NOTE: Do these procedures for the left and the right thrust reverser halves.

(1) Modify the attachment of the opening actuator hose.

(a) Remove the screws, washers, and clamps that attach the hose to the heat shield. Keep one NAS604-8 screw, discard the remainder of the remainder of the hardware. Refer to Figure 1.

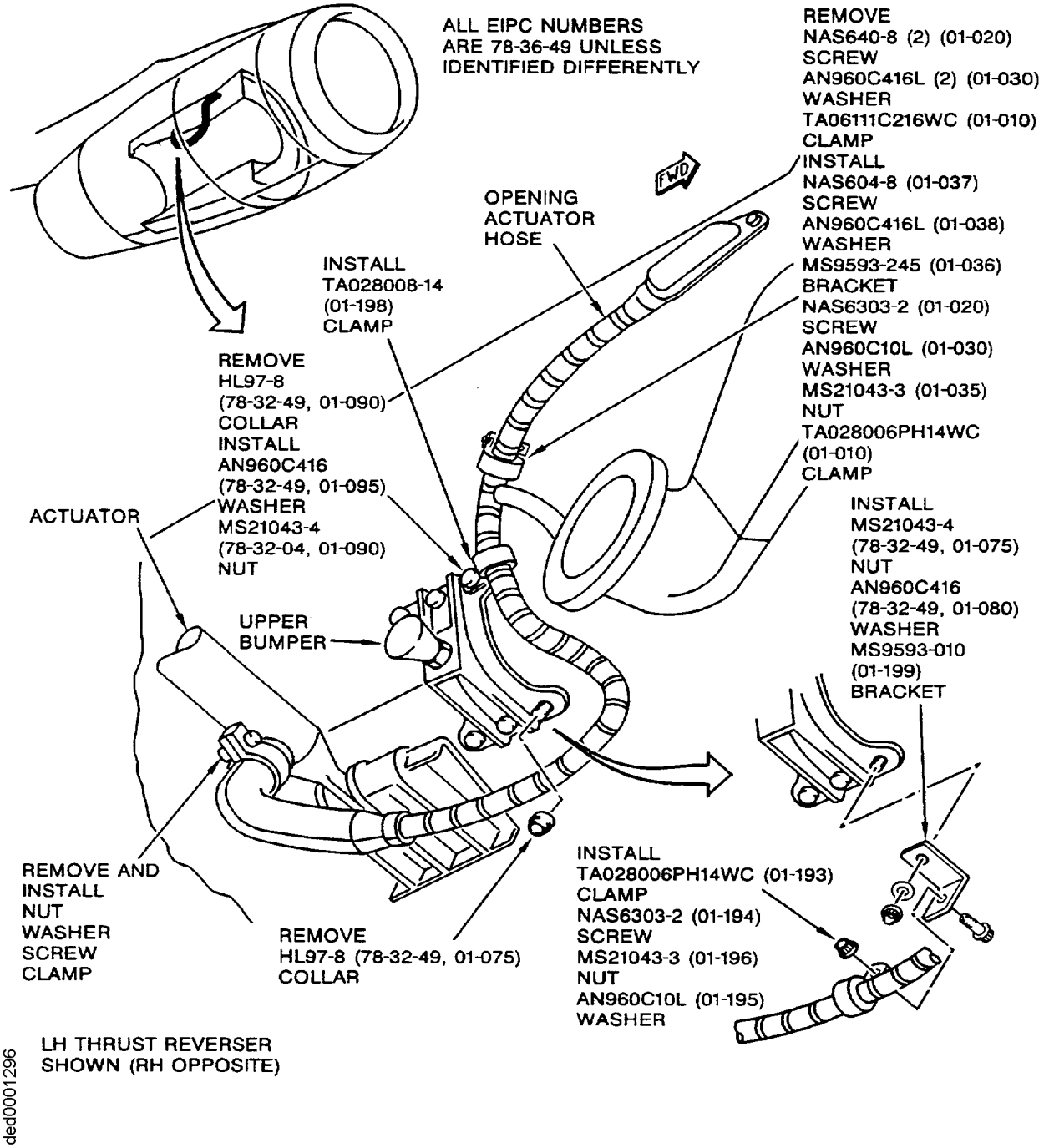
(b) Remove the screw, washer, nut and clamp from the hose end cover attached to the actuator. Keep the hardware.

(c) Remove the collars from the two Hi-Lok pins on the upper bumper.

(d) Install the MS9593-010 bracket (long side on the bumper) on the lower hi-lok pin on the upper bumper with AN960C416 washer and MS21043-4 nut. Tighten the nut to a torque of 50-70 lb-in (5.6 -7.9 N.m).

(e) Attach the hose to the bracket with the TA028006PH14WC clamp, NAS6303-2 screw, AN960C10L washer, and MS21043-3 nut. Tighten the nut fingertight.

(f) Attach the hose to the upper hi-loc pin with the TA028008-14 clamp, AN960C416 washer, and MS21043-4 nut. Tighten the nut fingertight.



Thrust Reverser Opening Actuator Hose Clamping Modification
Fig.1

(g) Attach the MS9593-245 bracket to the heat shield with the NAS604-8 screw and AN960C416L washer in the forward hole.

(h) Attach the hose to the MS9593-245 bracket with the TA028006PH14WC clamp, NAS6303-2 screw, AN960C10L washer, and MS21043-3 nut. Tighten the NAS604-8 screw to a torque of 50-70 lb-in. (5.6-7.9 N.m) and tighten the MS21043-3 nut fingertight.

(i) Put the hose and the clamps into position to minimize stress and preload on the hose.

(j) Tighten the nuts that attach the clamp and bracket to the bumper to a torque of 50-70 lb-in. (5.6-7.9 N.m). Tighten the nuts that attach the clamps to the brackets to a torque of 20-25 lb-in. (2.3-2.8 N.m).

(k) Attach the hose end cover to the hose with the clamp, screw, washer, and nut. Tighten the nut to a torque of 20-25 lb-in (2.3-2.8 N.m).

C. Post-requisite Instructions

None.

D. Recording Instructions

(1) A record of accomplishment is necessary. Write in the applicable records and metal stamp, vibroetch, or electroetch on the thrust reverser data plate that service bulletin V2500-NAC-78-0050 has been done. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

3. Material Information

Applicability: For each V2500 Nacelle 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.)	INSTR/ DISPOS
AN960C10L (78-36-49)	1		Washer	--- (01-030) (01-195) (02-030) (02-195)	(S1)
--- (78-36-49)	2		Washer	AN960C416L (01-030) (02-030)	(S1)(1D)
AN960C416 (78-32-49) (78-32-79)	1		Washer	--- (01-080) (01-095) (01-080) (01-095)	(S1)
AN960C416L (78-36-49)	1		Washer	--- (01-038) (02-038)	(S1)
MS21043-3 (78-36-49)	1		Nut	--- (01-035) (01-196) (02-035) (02-196)	(S1)
MS21043-4 (78-32-49) (78-32-79)	1		Nut	HL97-8 (01-075) (01-090) (01-075) (01-090)	(S1)
MS9593-245 (78-36-49)	1		Bracket	--- (01-036) (02-036)	(S1)

MS9593-010 (78-36-49)	1	Bracket	--- (01-199) (02-199)	(S1)
NAS604-8 (78-36-49)	1	Screw	--- (01-037) (02-037)	(S1)
NAS6303-2 (78-36-49)	1	Screw	--- (01-020) (01-194) (02-020) (02-194)	(S1)
--- (78-36-49)	2	Screw	NAS604-8 (01-020) (02-020)	(S1)(1D)
TA028006PH14WC	1	Clamp	TA06111C216WC (01-010) (01-193) (02-010) (02-193)	(S1)(1D)
TA02008-14 (78-36-49)	1	Clamp	--- (01-198) (02-198)	(S1)

C. Instruction/Disposition Code Statements

(A) Kit not available.

(B) Old part will no longer be available.

(C) New part is available.

(1D) Part deleted. May be used in other locations.

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

D. Material Required to Incorporate This Bulletin:

None.