V2500 Propulsion System - Nacelle

SERVICE BULLETIN

Date: May 2, 2001

Subject: Transmittal of Revision 1 to Service Bulletin Number V2500-NAC-78-0166

Service Bulletin Revision History:

Event	Date
Basic Issue	July 24/00
Revision 1	May 02/00

Reasons for issuance of Revision:

(1) To clarify instructions in Paragraph 3.A.(5) and Figure 1.

Effect on Past Compliance:

(1) None.

List of Effective Pages:

Page No.	Rev No.	Date
1	1	May 02/01
2 thru 7	basic	July 24/00
8 thru 11	1	May 02/01
12 and 13	basic	July 24/00

V2500 Propulsion System - Nacelle

SERVICE BULLETIN

NACELLE - EXHAUST – LOCKOUT FEATURE, AFT CASCADE SUPPORT RING, THRUST REVERSER, - INSPECTION/REWORK

MODEL APPLICATION

V2500-A1
V2500-A5

BULLETIN INDEX LOCATOR

78-00-00

Compliance Category Code

6

Internal Reference No.

JG 98VN604

NACELLE - EXHAUST – LOCKOUT FEATURE, AFT CASCADE SUPPORT RING, THRUST REVERSER, - INSPECTION/REWORK

1. Planning Information

A. Effectivity

(1) Aircraft

(a) Airbus A319
(b) Airbus A320
(c) Airbus A321

(2) Nacelle

(a) V2500-A1/A5 thrust reversers with cum unit and serial numbers prior to 1464001.

B. Concurrent Requirements

(1) If applicable, it is recommended that you incorporate Service Bulletin V2500-NAC-78-0076 before you incorporate this service bulletin.

C. Reason

(1) Problem

Some operators have reported inability to install the thrust reverser lockout pin after the translating sleeve has been retracted to the stowed position with the manual drive mechanism.

(2) Background

Because of engineering tolerance stack-up it is possible for the lockout pin feature in the aft cascade support ring to be located 0.25 inch too far forward. This results in misalignment with the lockout pin features in the translating sleeve outer panel and inner acoustic panel.

(3) Objective

To make sure the thrust reverser lockout pin can be installed after the translating sleeves are retracted to the stowed position with the manual drive mechanism.

(4) Substantiation

By analysis.

(5) Effect 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

D. Description

(1) The actions directed by this service bulletin are as follows:

a. The translating sleeves are retracted to the stowed position with the manual drive mechanism.

b. The thrust reverser lockout pin is installed.

c. If the lockout pin can be installed, no further action is required.

d. If the lockout pin can not be installed, the rigging of the translating sleeve is checked and adjusted if necessary.

e. If the lockout pin still can not be installed, the thickness of the aft cascade support ring lockout lug is inspected.

f. If the thickness of the lug is as specified, the lockout pin hole in the lug is enlarged.

g. If the thickness of the lug is thinner than specified, operators are directed to contact their IAE and/or BFGoodrich representative.

E. Compliance

Category 6

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

F. Approval

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

G. Manpower

VENUE			ESTIMATED MANHOURS
(1)	In Service/Shop		
	(a)	To gain access	0.25 M/Hrs
	(b)	To inspect fit of lockout pin	0.50 M/Hrs
	(c)	To check and adjust rigging (if required)	1.00 M/Hrs
	(d)	To re-work aft cascade support ring	1.00 M/Hrs
	(d)	To return to service	0.25 M/Hrs
		Total	3.00 M/Hrs

NOTE: Manhours estimate is provided for planning purposes only. No labor reimbursement is provided under the terms of this service bulletin offering.

H. Weight and Balance

(1)	Weight change	None
(2)	Moment arm	No effect
(3)	Datum	Engine Front Mount Centreline

I. Electrical Load Data

Not affected.

J. Software Accomplishment Summary

Not applicable.

K. References

Manual	Chapter/Section
A320/A321 Aircraft Maintenance Manual	78-30-00 78-31-00
IAE Standard Practices/Processes Manual (SPP-V2500-1IA)	70-09-00
Service Bulletin V2500-NAC-78-0076	

L. Other Publications Affected

Manual	Chapter/Section
A320/V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA)	78-32-40 78-32-70
A320/V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA)	78-32-40 78-32-70
A320/V2500-A1 Power Plant Illustrated Parts Catalog (PIP-V2500-1IA)	78-32-40 78-32-70
A320/A321/V2500-A5 Power Plant Illustrated Parts Catalog (PIP-V2500-2IA)	78-32-40 78-32-70

M. Interchangeability of Parts

(1) Affected - Refer to Section 2 Material Information.

2. Material Information

A. Material Cost and Availability

None.

B. Kits associated with this Bulletin:

None.

C. Parts affected by this Bulletin:

NEW PART NO. (ATA NO.)	QTY	EST'D UNIT PRICE	KEYWORD	OLD PART NO. (IPC NO.)	INSTR/ DISPOS
740-0409-505 (78-32-40)	1		Ring Assy, Aft	740-0409-503 (01-050)	(A)(B)(1D)(S1)
740-0409-506 (78-32-70)	1		Ring Assy, Aft	740-0409-504 (01-060)	(A)(B)(2D)(S1)

D. Instruction/Disposition Code Statements

(A) New part will be available October 2000.
(B) Old part will no longer be available.
(1D) Old part number, 740-0409-503 can be re-worked and re-identified as 740-0004-1AS and is then acceptable alternate for part number 740-0409-505.
(2D) Old part number, 740-0409-504 can be re-worked and re-identified as 740-0004-2AS and is then acceptable alternate for part number 740-0409-506.
(S1) New part may be used in place old part but not vice versa.

E. Materials Required to Incorporate this Service Bulletin:

CoMat 01-438	Solvent
CoMat 02-099	Lint free cloth
CoMat 06-073	Metal marking ink
CoMat 07-028	Chromate conversion coating for aluminum
CoMat 07-139	Catalyst
CoMat 07-140	Epoxy primer
CoMat 07-144	Thinner

NOTE: To identify the consumable materials, refer to the Overhaul Processes and Consumable Index PCI-V2500-1IA.

F. Tooling - Cost and Availability

None required.

3. Accomplishment Instructions

A. Pre-Requisite Instructions

None.

B. Re-Work or Modification Instructions

NOTE: This procedure is the same for the left and right thrust reverser halves. References for the right thrust reverser half appear in parenthesis.

(1) Manually extend, then retract the thrust reverser translating sleeves. Refer to the Aircraft Maintenance Manual, Chapter 78-31-00, Page Block 201.

(2) Attempt to install the thrust reverser lockout pin.

(a) If you can install the lockout pin, go to step 3.C.

(b) If you can not install the lockout pin go to step 3.B.(3).

(3) Extend then retract the thrust reverser translating sleeves with power. Refer to the Aircraft Maintenance Manual, Chapter 78-31-00, Page Block 201.

(4) Attempt to install the thrust reverser lockout pin.

(a) If you can install the lockout pin, go to step 3.B.(8).

(b) If you can not install the lockout pin go to step 3.B.(5).

R (5) Check the dimension (gap) between the translating sleeve and the fan cowl as shown in Figure 1.

R (a) Measure the gap between the translating sleeve and the fan cowl at 8 to 10 places equally spaced around the circumference.

R (a) If the gaps are within the limits in Figure 2, go to step 3.B.(8).

R (b) If the gaps are not within the limits in Figure 2, you must adjust the thrust reverser actuator and translating sleeve rigging. Refer to the Aircraft Maintenance Manual, Chapter 78-30-00, Page Block 501 then go to step 3.B.(6).

(6) Manually extend, then retract the thrust reverser translating sleeves. Refer to the Aircraft Maintenance Manual, Chapter 78-31-00, Page Block 201.

(7) Attempt to install the thrust reverser lockout pin.

(a) If you can install the lockout pin, go to step 3.C.

(b) If you can not install the lockout pin go to step 3.B.(8).

(8) Remove the translating sleeves. Refer to the Aircraft Maintenance Manual, Chapter 78-32-46 (78-32-76), Page Block 401.

(9) Check the thickness of the aft cascade support ring lockout lug as shown in Figure 2.

(a) If the thickness is within the limits in Figure 2, go to step 3.B.(10).

(b) If the dimension is not within the limits in Figure 2, contact your IAE or BFGoodrich representative.

(10) Make the hole in the aft cascade support ring lockout lug larger as shown in Figure 2.

WARNING: SOLVENT (COMAT 01-438) IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

(11) Clean the modified area of the aft cascade support ring with a lint free cloth (CoMat 02-099) made moist with solvent (CoMat 01-438).

WARNING: CONVERSION COATING (COMAT 07-028) IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

(12) Apply conversion coating (CoMat 07-028) the bare metal areas of the aft cascade support ring.

WARNING: PRIMER (COMAT 07-140), CATALYST (COMAT 07-139), AND THINNER (COMAT 07-144) ARE CLASSIFIED AS HAZARDOUS MATERIALS WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THESE PRODUCTS SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THESE PRODUCTS, CAREFULLY

READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH RECOMMENDATIONS.

(13) Mix the primer (CoMat 07-140), catalyst (CoMat 07-139), and thinner (CoMat 07-144). Refer to the manufacturer's instructions.

(14) Apply the primer to the bare metal of the aft cascade support ring.

(15) Re-identify the 740-0409-503 (740-0409-504) aft cascade support ring as 740-0004-1AS (740-0004-2AS). Use ink (CoMat 06-073) and a rubber stamp. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

(16) Install the translating sleeves. Refer to the Aircraft Maintenance Manual, Chapter 78-32-46 (78-32-76), Page Block 401.

(17) Manually extend, then retract the thrust reverser translating sleeves. Refer to the Aircraft Maintenance Manual, Chapter 78-31-00, Page Block 201.

(18) Attempt to install the thrust reverser lockout pin.

(a) If you can install the lockout pin, go to step 3.C.

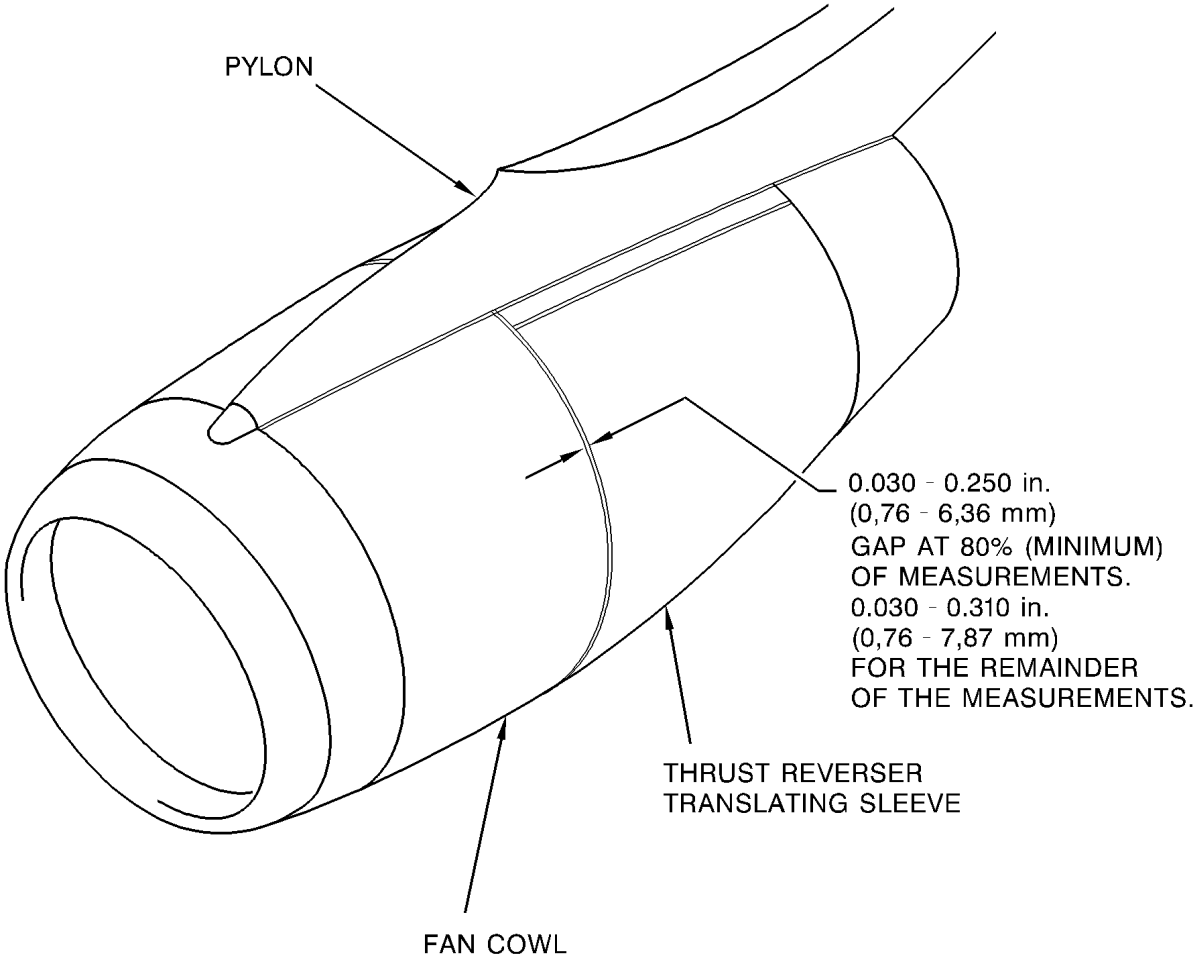
(b) If you can not install the lockout pin, contact your IAE or BFGoodrich representative.

C. Recording Instructions

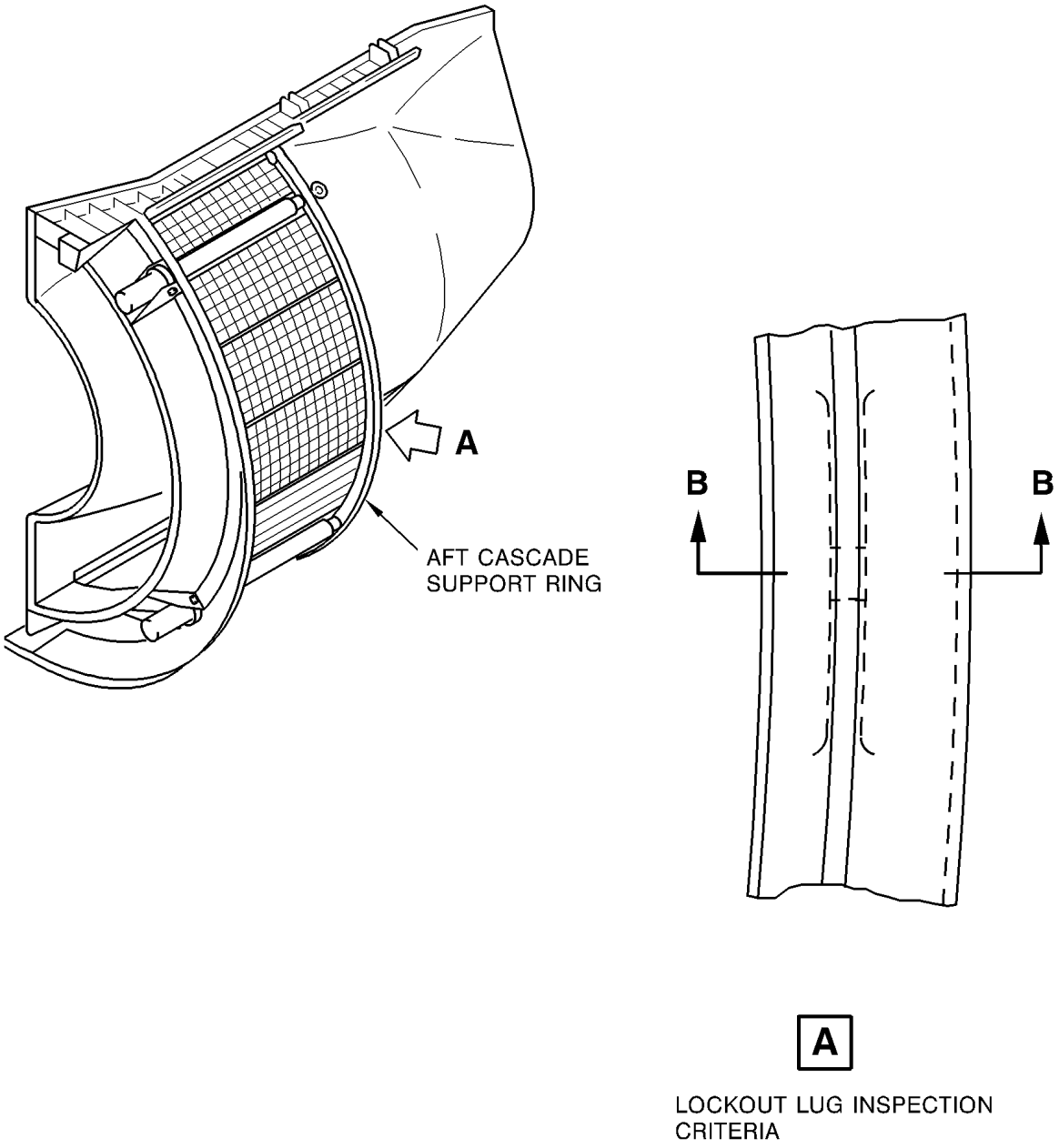
A record of accomplishment is necessary. Write in the applicable records and metal stamp, vibroetch or electroetch on the thrust reverser that Service Bulletin V2500-NAC-78-0166 has been done. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

D. Post-Requisite Instructions

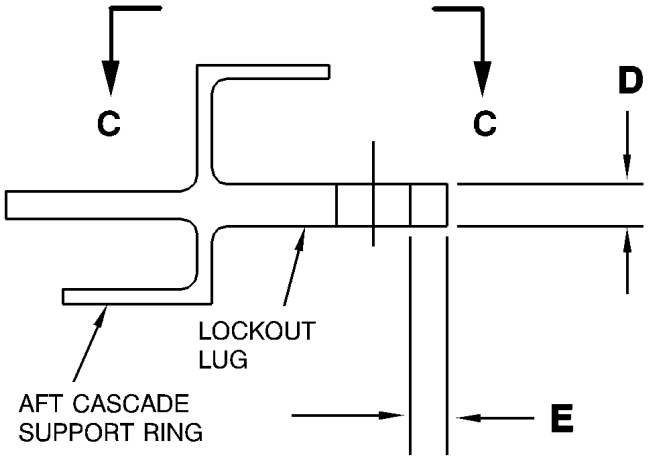
None.



Thrust Reverser Translating Sleeve Rigging Check Dimensions
Figure 1



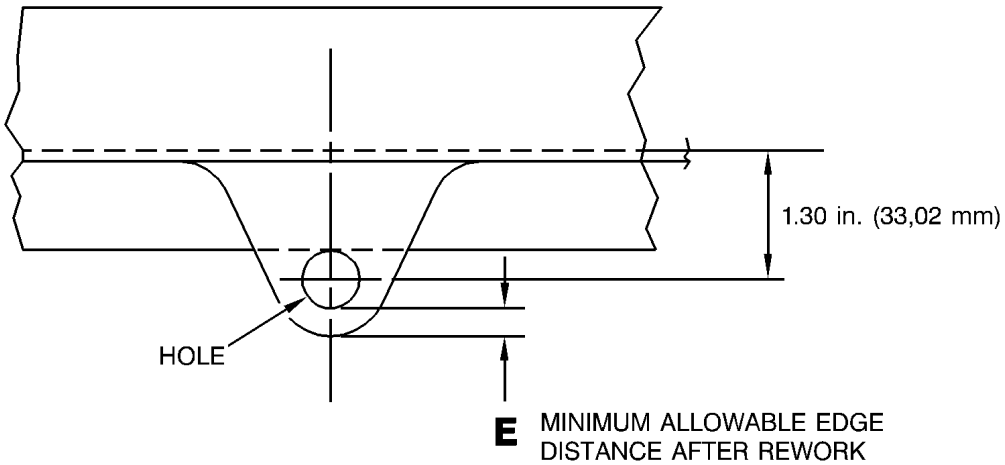
Aft Cascade Support Ring Lockout Feature Lug Dimension Check and Pin Hole Enlargement
Figure 2 (Sheet 1)



SECTION **B–B**
VIEW ROTATED 96° CW

TABLE 1

D	E
0.260 in. (6,60 mm)	0.340 in. (8,64 mm)
0.265 in. (6,73 mm)	0.332 in. (8,43 mm)
0.270 in. (6,89 mm)	0.323 in. (8,20 mm)
0.275 in. (6,99 mm)	0.315 in. (8,0 mm)
0.280 in. (7,11 mm)	0.307 in. (7,80 mm)
0.285 in. (7,24 mm)	0.298 in. (7,57 mm)
0.290 in. (7,37 mm)	0.290 in. (7,37 mm)
0.296 in. (7,52 mm)	0.280 in. (7,11 mm)
> 0.296 in. (7,52 mm)	0.280 in. (7,11 mm)



VIEW **C–C**

VSB692

Aft Cascade Support Ring Lockout Feature Lug Dimension Check and Pin Hole Enlargement
Figure 2 (Sheet 2)